Boulder County

Community Planning & Permitting

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BOULDER COUNTY PLANNING COMMISSION
PUBLIC HEARING

December 20, 2023 at 1:30 p.m.

Boulder County Courthouse, 3rd Floor,
1325 Pearl Street, Boulder
Virtual and in-person

PUBLIC HEARING

STAFF PLANNER: Pete L'Orange, Planner II

DATE ISSUED: December 13, 2023

Docket SI-22-0001: Terry Lake Sanitary Sewer

Request:	Areas and Activities of State Interest (1041) review for the westward extension of an existing sanitary sewer located on Gay Street just north of Highway 66 to provide service for future development of parcels along Highway 66 from Gay Street to Hover Road, known as the Terry Lake Neighborhood.
Location:	2080 Hwy 66 (parcel no. 120521000021), 12734 Longford Drive (parcel no. 120521000019), 9911 Ute Road (parcel no. 120521000023), 10161 Ute Hwy (parcel no. 120521000010), and 12822 N 95th Street (parcel no. 120521000008), located north of Highway 66 approximately 1/2 mile west of Highway 66 and US 287, in Section 21, Township 3N, Range 69W.
Zoning:	Agricultural (A)
Agent:	Stephanie Thomas, Project Manager, Northern Engineering Jeff Mark, President, The Landhuis Co
Property Owners:	Maple Leaf Investors LLC (10161 Ute Hwy); Puma 66 Investors LLLP (9911 Ute Rd [Longmont]); John A & Anne T Newell Trust (0 Ute Rd); Jack W. Dickens Jr Trust (12734 Longford Dr); Ernesto Gonzalez, et al (12822 N 95th St); Babcock Land Corp (2080 Hwy 66)

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Claire Levy *County Commissioner* **Marta Loachamin** *County Commissioner* **Ashley Stolzmann** *County Commissioner*

SUMMARY AND RECOMMENDATION:
The applicants have proposed the extension of an existing sanitary sewer on the north side of Highway 66, between Gay Street and Hover Street. The proposed sanitary sewer extension would serve future development north of Highway 66, in an area known as the Terry Lake Neighborhood. Staff recommends approval with conditions.

DISCUSSION:
The area known as the Terry Lake neighborhood is located on the northern side of Longmont, north of Highway 66 roughly between Gay Street and Hover Street. It is an area which has been identified as a Longmont Community Service Area, a designation for areas which have been identified as suitable and appropriate for annexation into a municipality. As part of the area's designation as Community Service Area, it falls under the Boulder County/City of Longmont Intergovernmental Agreement (IGA). This IGA specifies the scope and criteria of the 1041 review for this kind of project. It is anticipated that the area will be annexed by the City of Longmont at some point in the future. The Terry Lake area has been identified in the City of Longmont's comprehensive plan as an area for annexation and development as a mixed-used neighborhood (see Figure 1 below).

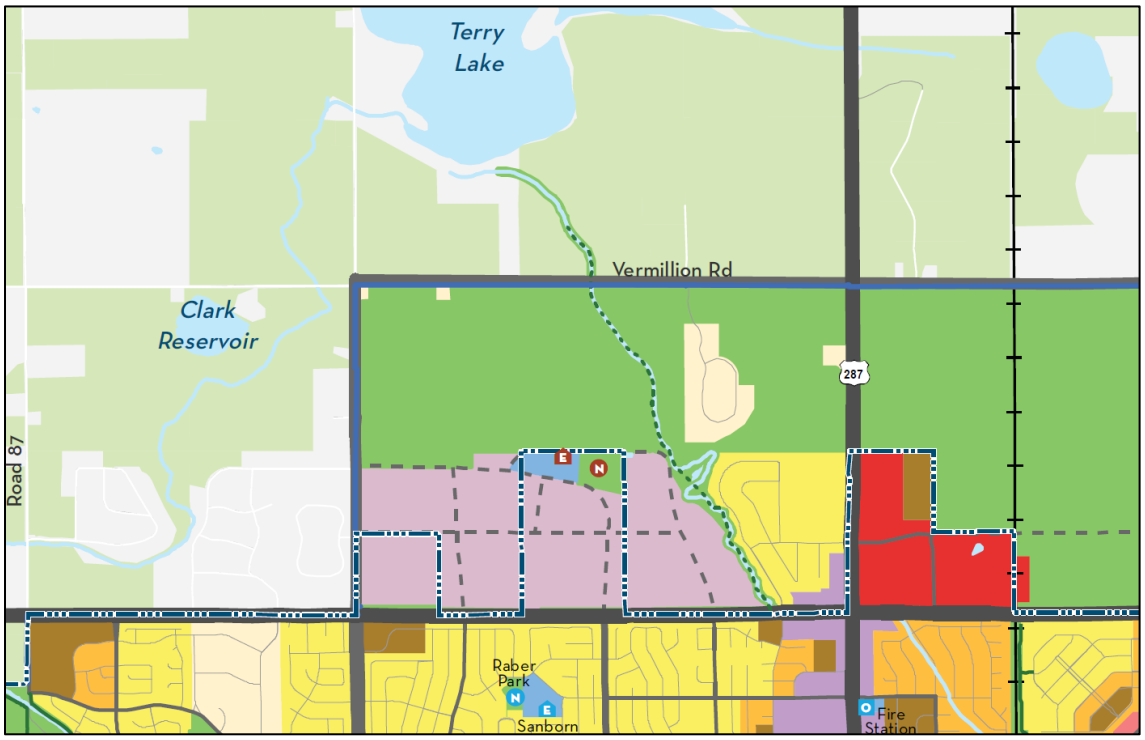


Figure 1: Terry Lake Mixed-Use Neighborhood (area indicated in light purple) as identified in the City of Longmont Comprehensive Plan.

The parcels in the proposed project area are mostly undeveloped and are used for agricultural purposes. The area immediately south of the subject parcels (on the south side of Highway 66) is within the City of Longmont, and is mostly a well-established residential neighborhood. The area north of the subject parcels is either County-owned designated Open Space, or owned by City of Longmont with a County-held Conservation Easement. Immediately east of the project area is an established church and the Willis Heights subdivision. West of the project area, across N. 95th Street,[1] is the Blue Mountain Vista subdivision.

The proposed project would install new sanitary sewer infrastructure, connecting to existing sewer infrastructure at the eastern end of the project area (approximately Gay Street). The applicants'

[1] Hover Street becomes N. 95th Street on the north side of Highway 66.

original preferred alignment for the new sewer infrastructure would then extend west along Highway 66, before being routed north for approximately 1,200 feet before once again running westward (see Figure 2 below). Staff and the Boulder County Historic Preservation Advisory Board raised concerns that this original proposed alignment would require the removal of a group of existing structures located at 10161 Ute Highway which have been determined to be eligible for local landmark status. Staff and the Historic Preservation Advisory Board requested that the applicants consider a change in alignment which would avoid these structures or that the applicants provide sufficient mitigation for the loss of these historic resources. The applicants subsequently submitted revised plans (see Attachment B) with a new alignment that does not require the removal of the structures at 10161 Ute Highway (see Figure 3 below).

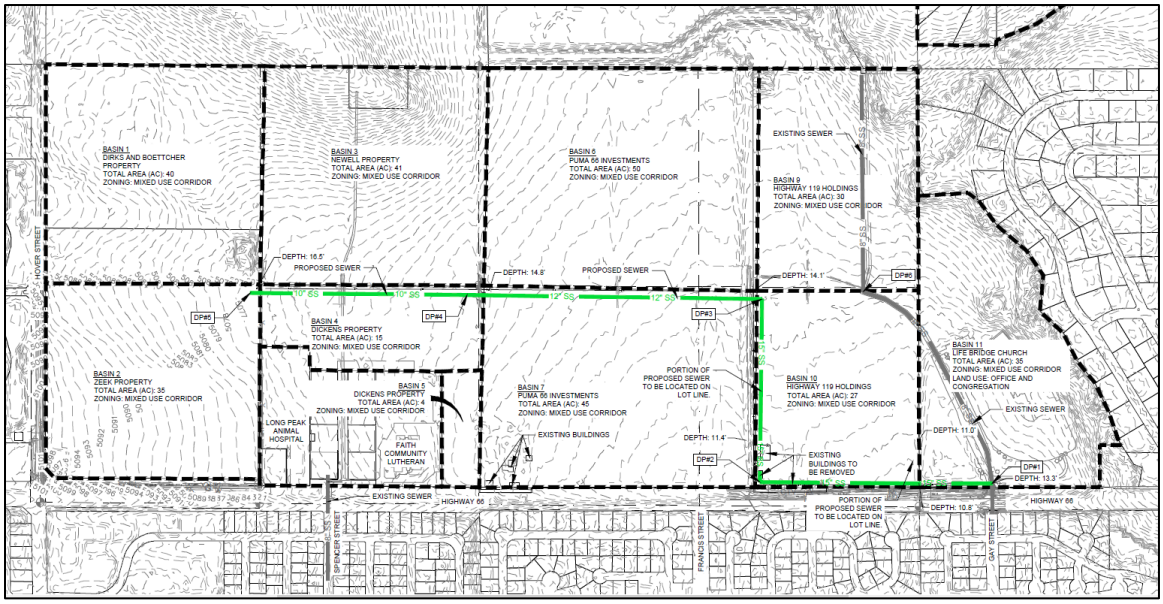


Figure 2: Original proposed Terry Lake Sanitary Sewer alignment (indicated in green).

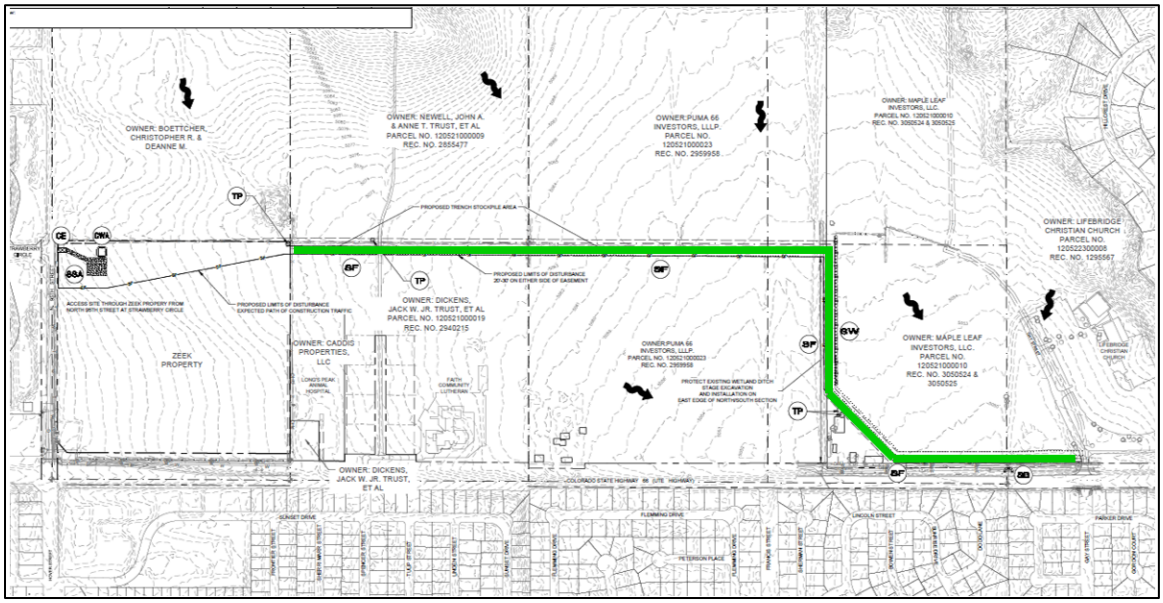


Figure 3: Revised proposed Terry Lake Sanitary Sewer alignment (indicated in green).

The total length of the proposed project is approximately 5,200 linear feet, and will impact approximately 11.6 acres of land during construction.

The Boulder County Comprehensive Plan identifies several important resources on the subject parcels: Agricultural Lands of National and Statewide Importance; Riparian areas; and Viewshed Protection Scores between 1.55 and 2 out of 5 (see Figure 4 below). Additionally, all of the subject parcels are located within the City of Longmont Influence Area (see Figure 5 below).

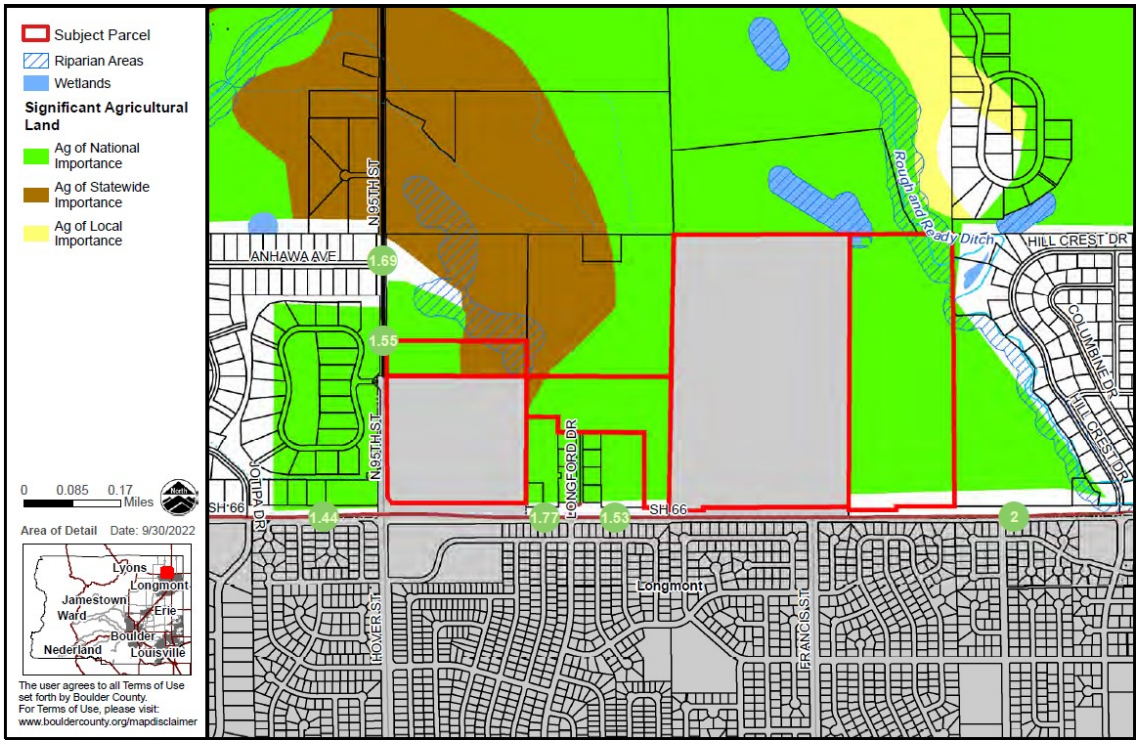


Figure 4: Boulder County Comprehensive Plan map with the subject parcels indicated in red.

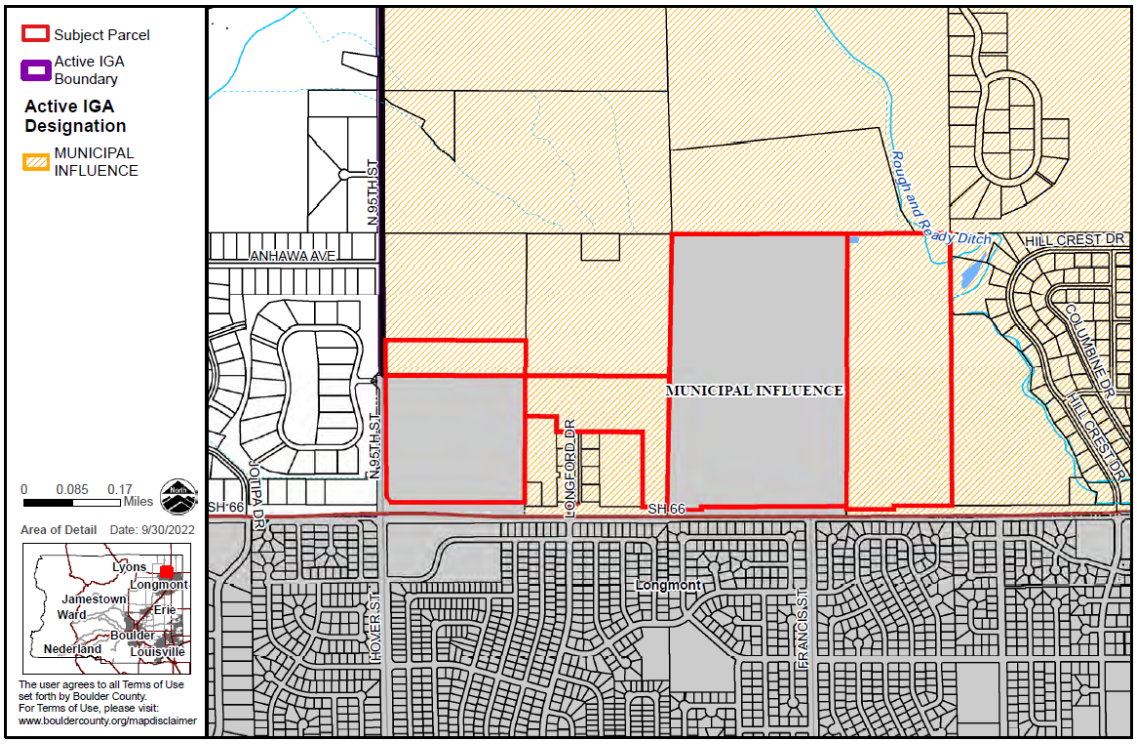


Figure 5: Boulder County Planning Areas map with Municipal Influence Area indicated in orange and the subject parcels indicated in red.

REFERRAL RESPONSES:
The application was referred to the standard agencies, departments and adjacent property owners within 1,500 feet of the three proposed alignments. Copies of all responses received by Community Planning and Permitting are attached. A summary of each response follows:

Boulder County Community Planning and Permitting – Access and Engineering Team – This team reviewed the application materials and noted that a Boulder County Stormwater Quality Permit (SWQP) will be required. They also noted that if any staging of materials or equipment occurs within the county right-of-way, a staging plan will be required. They stated that since none of the proposed work will be located within the Boulder County right-of-way, a Boulder County Utility Construction permit is not required.

Boulder County Historic Preservation Program – A subcommittee for the Historic Preservation Advisory Board (HPAB) reviewed the application materials and determined that the structures at 10161 Ute Highway are associated with the Nishida family, an early Asian farming family in the Longmont area, and are eligible for designation as local landmark structures. The HPAB subcommittee have officially requested an alternative alignment which would not require the removal of the of the structures at 10161 Ute Highway. The subcommittee also recommended that the City of Longmont's historic preservation commission evaluate the structures at 9911 Ute Highway. Historic Preservation Staff reviewed the revised alignment and determined that the concerns of HPAB had been sufficiently addressed.

Boulder County Parks and Open Space – Natural Resource Planner – The Natural Resource Planner reviewed the application materials and determined that there would be no anticipated adverse impacts to natural resources as a result of the project, provided that construction work does not occur under wet or moist soil conditions. The Natural Resource Planner also suggested several additional conditions of approval which would prevent adverse impacts resulting from the proposed project. These include the separation of top-/sub-soils during construction, a weed management plan, parcel-by-parcel revegetation plans, and erosion control measures.

Lumen/Century Link – This agency noted that they own aerial facilities along Highway 66, but did not express any specific concerns.

Xcel Energy – This agency reviewed the application materials and noted that there are Public Service Company of Colorado owned and operated natural gas and electric distribution and transmission facilities in areas of the project. They recommended that the applicants contact Colorado 811 before any work begins.

Longs Peak Water Conservation District – This agency reviewed the application materials and determined that they did not have any concerns related to the sanitary sewer as proposed. The agency did note, however, that future development in the area would require detailed discussions about water usage.

Colorado Division of Water Resources – This agency reviewed the application materials and noted that an official Notice of Intent will need to be filed for any dewatering of wells (if necessary). They also noted that if there are any impacts on the Rough and Ready Ditch company's ability to provide service, the applicants would be required to work with the ditch company to mitigate those impacts.

Adjacent Property Owners – Approximately 548 notices were sent; to date, staff has received three responses. One response was in opposition, stating concerns about new development resulting in increased traffic on Highway 66; one response expressing concern about the potential for impacts to wildlife along the Rough & Ready Ditch; and one asking of the county had any plans to expand sewer service into the Willis Heights Subdivision.

The following agencies reviewed the proposal and had no conflicts/no comment: Boulder County Building Safety & Inspection Services Team; Boulder County Public Health; Boulder County Parks & Open Space – Real Estate Team; Boulder County Conservation Easement Team; Colorado Geological Society; City of Longmont Fire Department; and City of Longmont Planning.

The following agencies did not respond: Boulder County Long Range Planning; Boulder County Public Works; Northern Colorado Water Conservancy District; Poudre Valley REA; Rough & Ready Ditch Company; Colorado Department of Public Health; Colorado Parks & Wildlife; Colorado Public Utilities Commission; Colorado Department of Transportation; History Colorado; and Hygiene Volunteer Fire District.

CRITERIA ANALYSIS:
The project is being reviewed under Article 8-511 of the Boulder County Land Use Code, which sets general criteria for Activities of State Interest. The project is subject to 1041 review per Article 8-308.A.2 for major extensions of existing domestic water and sewage treatment systems. Per Article 8-210.O the Code, "domestic water and sewage treatment systems" means "a major domestic water or sewage treatment system, and includes wastewater treatment plants, water supply systems, and water treatment plants"; the Code goes on to define "water supply systems" as "the system of pipes, structures, and facilities through which a water supply is obtained, treated, and sold or distributed…" Additionally, per Article 8-210.T, "extension" is defined as "a major extension and is an increase in hydraulic capacity, an upgrade in treatment or transmission capability, an increase in facility size, or a replacement of an existing facility in a new or altered location." This project involves the extension of an existing pipe system related to an existing sewage treatment system. As such, staff finds the proposed project meets the definition of a major extension of existing sewage treatment systems as discussed above.

The proposed project is located within the Longmont Planning Area Intergovernmental Area (IGA). Per the terms of this IGA, 1041 permit reviews are limited to direct, site-specific impacts (unless otherwise specifically noted in the IGA). As such, staff's analysis is limited to the direct impacts of the proposed project as they relate to the subject parcels, and does not consider other potential impacts, such as future development projects which might connect to the proposed sewer extension. Additionally, the IGA states that the proposed projects do not have to demonstrate compliance with a number of provisions under Section 8-511; these include Article 8-511.B.3 and 10 through 14.

Staff reviewed the project in accordance with the applicable criteria noted above and finds the following:

8-511 Standards for Approval of a Permit Application

A. General Approval Requirements

1. **A permit application for development of a matter of state interest may not be approved unless the applicant satisfactorily demonstrates that the proposal, including all mitigation measures proposed by the applicant, complies with all of the applicable criteria set forth in this Article. If the proposal does not comply with all of the applicable criteria, the permit shall be denied, unless the Board determines that reasonable conditions can be imposed on the permit which will enable the permit to comply with the criteria.**

2. **If the Board determines at the public hearing that sufficient information has not been provided to it to allow it to determine if the applicable criteria have been met, the Board may continue the hearing until the specified additional information has been received. The Board shall adopt a written decision on a permit application as soon as practicable after the completion of the permit hearing.**

As discussed below, staff finds the proposed project can meet all of the criteria for approval under this Article, subject to the various recommended conditions of approval.

Therefore, as conditioned in the criterion below, staff finds these criteria can be met.

B: Standards for Approval of All Permit Applications

1. **The applicant has obtained or will obtain all property rights, permits, and approvals necessary for the proposal, including surface, mineral, and water rights. The Board may, in its discretion, defer making a final decision on the application until necessary property rights, permits and approvals for the proposal are obtained.**

   The majority of the proposed project is located on private property. The applicants have submitted documentation of easements through these private properties. A portion of the proposed project also runs along the north side of Highway 66; the work will be located within the public utility easements. As such, staff finds that the applicants have demonstrated the appropriate access rights for the proposed project.

   Building permits and grading permits, plan review and inspection approvals are required for all structures and grading per the adopted building code. As the plans submitted and reviewed under this application are 30 percent plans, to ensure that the project ultimately meets all of the criteria for review of Activities of State Interest, staff recommend as a condition of approval that the applicants submit 90 percent plans for review and approval by the Community Planning and Permitting staff.

   The project requires Army Corps review and approval as outlined in Section 404 of the Clean Water Act. As part of this review, the applicants must also demonstrate that the project complies with Section 106 of the National Historic Preservation Act and Section 7 of the Endangered Species Act. Per the application materials submitted by the applicants, these consultations are already underway. Staff recommends that as a condition of approval, the applicants must provide documentation of clearance from the Army Corps of Engineers to the county with materials submitted for permitting.

   As the proposed project also involves parcels located within municipal boundaries of the City of Longmont, the project will require review and approval by the City; this review is underway.

   Finally, per the referral response from the Access & Engineering Team, the proposed project will result in more than one acre of ground disturbance. As such, it will require a Stormwater Quality Permit (SWQP) . Staff recommends as condition of approval that the applicants obtain a SWQP permit prior to any work commencing.

   Therefore, as conditioned, staff finds this criterion can be met.

2. **The applicant has the necessary expertise and financial capability to develop and operate the proposal consistent with all requirements and conditions.**

   Staff has not identified any concerns related to the applicants' expertise or financial capability to carry out the proposed project; no referral agencies have responded with any such concerns.

Therefore, staff finds this criterion is met.

3. **Adequate water supplies, as determined from the Colorado Department of Health, are available for the proposal if applicable.**

   Per the Longmont Planning Area IGA, the proposed project does not need to demonstrate compliance with this criterion. Therefore, staff finds this criterion is not applicable.

4. **The proposal will not cause unreasonable loss of significant agricultural lands as identified in the Comprehensive Plan, or identifiable on or near the site.**

   Nearly all of the project is located in areas which have been identified in the Boulder County Comprehensive Plan as Agricultural Land of National and/or Statewide importance. However, the area of actual disturbance is proposed to be relatively small and of an appropriate size for the proposed work.

   Additionally, while the intent of the proposed project is to allow the eventual development of the subject parcels as part of a mixed-use Neighborhood as identified in the City of Longmont Comprehensive Plan (see Figure 1 above), per the terms of the IGA, the county's review of the proposed work is limited to direct, site specific, impacts of the proposal. As such only the construction of the proposed sanitary sewer lines is under consideration through this review. Per the referral response from the Natural Resources Planner, the proposed work should be undertaken in such a way that the soil on the subject parcels is not damaged or deteriorated. First, heavy machinery can permanently damage soil structure if used under wet soil conditions (including snow). As such, staff recommends as a condition of approval that no movement of soil or driving of equipment over field soil may occur during wet soil conditions (work within already dug trenches can continue). Additionally, to ensure that the condition of the most agriculturally valuable soil, the topsoil, is protected, staff recommends as a condition of approval that all topsoil and subsoil be separated, which must occur during dry soil conditions. Finally, to ensure that the soil is protected once it is replaced, staff recommends as a condition of approval that a parcel by parcel (owner by owner) Revegetation Plan, including species to be used, be submitted for review approval by Community Planning & Permitting staff.

   Therefore, as conditioned, staff finds this criterion is met.

5. **The proposal shall not significantly degrade or pose a significant hazard to any aspect of the environment, including environmental resources and open space areas as identified in the Comprehensive Plan, and other features or elements that are deemed to be significant components of the natural environment worthy of preservation. For purposes of this section, the following aspects of the environment shall be considered:**

   a. **Air quality: The proposal shall not significantly deteriorate air quality. In determining impacts to air quality, these considerations shall apply.**
      i. **Changes to seasonal ambient air quality.**
      ii. **Changes in visibility and microclimates.**
      iii. **Applicable air quality standards.**

      Staff has not identified any potential significant impacts to air quality and no referral agencies have responded with any such concerns.

Therefore, staff finds this criterion is met.

b. Visual quality. The proposal shall not significantly degrade visual quality. In determining impacts to visual quality, these considerations shall apply.

i. Visual changes to ground cover and vegetation, waterfalls and streams, or other natural features.
ii. Interference with viewsheds and scenic vistas.
iii. Changes in appearances of forest canopies.
iv. Changes in landscape character types or unique land formations.
v. Compatibility of building and structure design and materials with surrounding land uses.

Per the Longmont IGA, this criterion only applies to locating, constructing, and operating the sewer system. The proposed sewer lines will be located underground and are not anticipated to have any long-term visual impacts once construction and revegetation (as conditioned in Criterion B.4 above) are completed. No referral agencies have responded with any concerns related to visual impacts.

Therefore, as conditioned in Criterion B.4 above, staff finds that this criterion can be met.

c. Surface water quality. The proposal shall not significantly degrade surface water quality. In determining impacts to surface water quality, these considerations shall apply.

i. Changes to existing water quality, including patterns of water circulation, temperature, conditions of the substrate, extent and persistence of suspended particulates and clarity, odor, color or taste of water.
ii. Applicable narrative and numeric water quality standards.
iii. Increases in point and non-point source pollution loads.
iv. Increase in erosion.
v. Increases in sediment loading to waterbodies.
vi. Changes in stream channel or shoreline stability.
vii. Changes in stormwater runoff flows.
viii. Changes in trophic status or in eutrophication rates in lakes and reservoirs.
ix. Changes in the capacity or functioning of streams, lakes or reservoirs.
x. Changes in flushing flows.
xi. Changes in dilution rates of mine waste, agricultural runoff and other unregulated sources of pollutants.

There are no existing surface waters within the boundaries of the proposed work. The Rough and Ready Ditch is located east of the project and cuts through the northeastern corner of the easternmost subject parcel, 10161 Ute Highway (see Figure 4 above). However, the project area is located well away from the ditch and is not anticipated to have any impacts on these surface waters.

As discussed above, the proposed work will require a Stormwater Quality Permit (SWQP) as the project will result in more than one acre of ground disturbance.

Therefore, as conditioned in Criterion B.1 above, staff finds this criterion can be met.

d. Groundwater quality. The proposal shall not significantly degrade groundwater quality. In determining impacts to groundwater quality, these considerations shall apply.

i. **Changes in aquifer recharge rates, groundwater levels and aquifer capacity including seepage losses through aquifer boundaries and at aquifer-stream interfaces.**
ii. **Changes in capacity and function of wells within the impact area.**
iii. **Changes in quality of well water within the impact area.**

As identified by the Colorado Division of Water Resources, there is the potential for groundwater transmission along the sanitary sewer trench; however, as noted in the application materials and by the Colorado Division of Water Resources, the applicants plan to install groundwater barriers upstream from all manhole covers to prevent any such transmission. As such, staff finds the potential for significant degradation of groundwater quality has been sufficiently mitigated and no impacts are anticipated.

Therefore, staff finds this criterion can be met.

e. **Wetlands and riparian areas. The proposal shall not significantly degrade the quality of wetlands and riparian areas. In determining impacts to wetlands and riparian areas, these considerations shall apply.**
i. **Changes in the structure and function of wetlands.**
ii. **Changes to the filtering and pollutant uptake capacities of wetlands and riparian areas.**
iii. **Changes to aerial extent of wetlands.**
iv. **Changes in species' characteristics and diversity.**
v. **Transition from wetland to upland species.**
vi. **Changes in function and aerial extent of floodplains.**

Per the Longmont IGA, this criterion only applies to locating, constructing, and operating the sewer system. The Boulder County Comprehensive Plan map (see Figure 4 above) indicates a small riparian area at the very western end of the proposed pipeline project area. With the recommended condition of approval prohibiting work under wet/moist soil conditions as discussed in Criterion 4 above, staff does not anticipate the proposed project to result in any significant impacts to the riparian area. There is another small riparian area located in the northeast corner of 10161 Ute Highway; however, this is located well outside the project area and will not be impacted by the proposed project.

Therefore, as conditioned in Criterion B.4 above, staff finds that this criterion can be met.

f. **Terrestrial and aquatic animal life. The proposal shall not significantly degrade the quality of terrestrial and aquatic animal life. In determining impacts to terrestrial and aquatic animal life, these considerations shall apply.**
i. **Changes that result in loss of oxygen for aquatic life.**
ii. **Changes in flushing flows.**
iii. **Changes in species composition or density.**
iv. **Changes in number of threatened or endangered species.**
v. **Changes to habitat and critical habitat, including calving grounds, mating grounds, nesting grounds, summer or winter range, migration routes, or any other habitat features necessary for the protection and propagation of any terrestrial animals.**
vi. **Changes to habitat and critical habitat, including stream bed and banks, spawning grounds, riffle and side pool areas, flushing flows, nutrient**

accumulation and cycling, water temperature, depth and circulation, stratification and any other conditions necessary for the protection and propagation of aquatic species.

vii. Changes to the aquatic and terrestrial food webs.

Per the Longmont IGA, this criterion only applies to locating, constructing, and operating the sewer system. Staff has not identified any potential adverse impacts to any animal life as a result of the proposed project; additionally, no referral agencies have responded with any such concern.

Therefore, staff finds that this criterion can be met.

g. Terrestrial and aquatic plant life. The proposal shall not significantly degrade the quality of terrestrial and aquatic plant life. In determining impacts to terrestrial and aquatic plant life, these considerations shall apply.

i. Changes to habitat of threatened or endangered plant species.

ii. Changes to the structure and function of vegetation, including species composition, diversity, biomass, and productivity.

iii. Changes in advancement or succession of desirable and less desirable species, including noxious weeds.

iv. Changes in threatened or endangered species.

Per the Longmont IGA, this criterion only applies to locating, constructing, and operating the sewer system. Staff has not identified any plant species of specific concern on the subject parcels. However, to ensure that the proposed project does not result in any negative impacts to plant life in the project area, staff recommends a parcel-by-parcel revegetation plan as a condition of approval, as discussed in Criterion B.4 above.

Therefore, as conditioned in Criterion B.4 above, staff finds that this criterion can be met.

h. Soils and geologic conditions. The proposal shall not significantly degrade soils and geologic conditions. In determining impacts on soils and geologic conditions, these considerations shall apply.

i. Changes to the topography, natural drainage patterns, soil morphology and productivity, soil erosion potential, and flood hazard areas.

ii. Changes to stream sedimentation, geomorphology, and channel stability.

iii. Changes to lake and reservoir bank stability and sedimentation, and safety of existing reservoirs.

iv. Changes to avalanche areas, mudflows and debris fans, and other unstable and potentially unstable slopes.

v. Exacerbation of seismic concerns and subsidence.

Per the Longmont IGA, this criterion only applies to the resolution of floodplain issues. There are no designated floodplains within the project area or on the subject parcels. As such, staff finds this criterion is not applicable.

i. The proposal shall not degrade the quality of any other Environmental Resources as defined in Article 18 of this Code.

The Environmental Resources defined in Article 18 of the Code include the following: Critical Wildlife Habitats and Wildlife Migration Corridors;

Environmental Conservation Areas; High Biodiversity Areas; Natural Landmarks and Natural Areas; Preble's Meadow Jumping Mouse Conservation Areas; Rare Plant Areas and Significant Natural Communities; Wetlands and Riparian Areas; and Boulder County Species of Special Concern. None of these resources are identified within the project area or on the subject parcels. Therefore, staff finds this criterion is not applicable.

6. **The proposal will not have a significant adverse effect on the quality or quantity of recreational opportunities and experience.**

   Per the Longmont IGA, this criterion only applies to locating, constructing, and operating the sewer system. The proposed project is not anticipated to have any adverse effects on the quality or quantity of recreational opportunities in Boulder County. At this time, there are no defined recreational opportunities within the project area. Future plans for the widening of Highway 66 are anticipated to include the installation of bicycle lanes; however, staff finds the potential bicycle lanes will not be impacted by the proposed sewer line location, construction, or operation.

   Therefore, staff finds this criterion is met.

7. **The proposal will not cause unreasonable loss of significant cultural resources, including but not necessarily limited to historical structures or sites and archaeological artifacts or sites, as identified in the Comprehensive Plan or identifiable on or near the site.**

   Per the Longmont IGA, this criterion only applies to locating, constructing, and operating the sewer system. As discussed above, staff and the Boulder County Historic Preservation Advisory Board raised concerns that the original proposed alignment would require the removal of a group of existing structures located at 10161 Ute Highway which have been determined to be eligible for local landmark status.. The applicants subsequently submitted revised plans (dated August 15, 2023; see Attachment B) with a new alignment that does not require the removal of the structures at 10161 Ute Highway (see Figure 3 above).

   Therefore, based on the revised site plans dated August 15, 2023, staff finds this criterion is met.

8. **The proposal or its associated transmission collector or distribution system will not create blight, or cause other nuisance factors such as excessive noise or obnoxious odors.**

   Per the Longmont IGA, this criterion only applies to locating, constructing, and operating the sewer system. Staff has not identified any blight, excessive noise, or obnoxious odors which might result from the proposed project; additionally, no referral agencies have responded with any such concerns.

   Therefore, staff finds this criterion is met.

9. **The proposal will not be subject to significant risk from floods, fires, earthquakes or other disasters or natural hazards.**

   Staff have not identified any flood, fire, earthquake, or other disasters or natural hazards which might impact the proposed project; additionally, no referral agencies have

responded with any such concerns.

Therefore, staff finds that this criterion is met.

10. **The proposal or its associated transmission collector or distribution system will not create an undue financial burden on existing or future residents of the County.**

    Per the Longmont Planning Area IGA, the proposed project does not need to demonstrate compliance with this criterion. Therefore, staff finds this criterion is not applicable.

11. **The proposal will not have a significant adverse effect on the capability of local government to provide services or exceed the capacity of service delivery systems.**

    Per the Longmont Planning Area IGA, the proposed project does not need to demonstrate compliance with this criterion. Therefore, staff finds this criterion is not applicable.

12. **The planning, design and operation of the proposal will reflect appropriate principles of resource conservation, energy efficiency and recycling or reuse.**

    Per the Longmont Planning Area IGA, the proposed project does not need to demonstrate compliance with this criterion. Therefore, staff finds this criterion is not applicable.

13. **For those applications for which the Director has required information on the environmental impacts and costs of alternatives under Section 8-507(D)(7)(b), above, the proposal represents the least damaging alternative of reasonable cost among the alternatives analyzed.**

    Per the Longmont Planning Area IGA, the proposed project does not need to demonstrate compliance with this criterion. Therefore, staff finds this criterion is not applicable.

14. **The proposal is in accordance with the Boulder County Comprehensive Plan and any applicable intergovernmental agreement affecting land use and development, including but not limited to any applicable land use designations. In cases where a person who is not a service provider with a County-approved service plan or service area, proposes a development within an approved service area, the Board shall not be compelled to consider the development be in compliance with the applicable adopted comprehensive plan or intergovernmental planning agreement simply by virtue of the fact that the development is located within, or is proposed to serve, an approved service area.**

    Per the Longmont IGA, it is necessary for existing "water and sewer transportation and treatment facilities" to occasionally be expanded to serve development within the Longmont Municipal Influence area (see Figure 5 above); also, per the IGA, the county has agreed to recognize applications for such projects "as being in conformance with this comprehensive development plan."

    Additionally, per the IGA, the proposed project does not have to demonstrate compliance with this criterion. As such, staff finds this criterion is not applicable.

15. **The proposal represents the complete, reasonably foreseeable development for the subject property as required under Section 8-501.D., above, except that the Board may approve development constituting less than the complete development provided that the Applicant clearly demonstrates that a lesser proposal constitutes a discrete**

phase of the complete development as supported by the applicable master planning document required under Subsection 8-501.D., which can be logically and adequately reviewed as a separate project under the applicable criteria of these Regulations. Amendments to approvals of applications submitted after the effective date of Subsection 8-501.D. (February 27, 2003), shall be subject to the further requirements of Subsection 8-501.E., above.

The project includes all reasonably foreseen actions the applicant will need to complete for development and implementation of the project. While the submitted application represents 30 percent plans and while there are additional revisions and reviews which will be required as the project is finalized, staff has determined that the application as submitted demonstrates that it is a phase of the complete development. As discussed under Criterion B.1 above, staff recommends as a condition of approval that the applicants submit 90 percent plans for review and approval prior to any permit application.

Therefore, as conditioned in Criterion B.1 above, staff finds that this criterion can be met.

D: Additional standards for approval of site selection and construction of major new domestic water and sewage treatment systems and major extensions of existing domestic water and sewage treatment systems.

1. **New domestic water and sewage treatment systems and major extensions of existing domestic water and sewage treatment systems shall be constructed in areas which will result in the proper utilization of existing treatment plants within the County and will ensure the orderly development of domestic water and sewage treatment systems of adjacent communities within the County.**

   Per the Longmont IGA, this criterion only applies to locating, constructing, and operating the sewer system. The proposed sanitary sewer line is in an identified municipal influence area, immediately adjacent to existing urban development. Additionally, the proposed line is an extension of an existing sanitary sewer system and will connect to the existing treatment plant. As such, staff finds it will support the orderly development of a sewage treatment system within the City of Longmont.

   Therefore, staff finds this criterion is met.

2. **Major extensions of domestic water and sewage treatment systems shall be permitted in those areas in which the anticipated growth and development that may occur as a result of such extension can be accommodated within the financial and environmental capacity of the area to sustain such growth and development.**

   Per the Longmont IGA, this criterion only applies to locating, constructing, and operating the sewer system. As discussed above, the Terry Lake neighborhood is in the City of Longmont influence area and has been identified in the City of Longmont Comprehensive Plan as an appropriate area for annexation into the City and to be developed as a mixed-used neighborhood. It is located immediately adjacent to an already developed portion of the City. As such, it is an area which has been determined as appropriate for, and capable of, future development.

   Therefore, staff finds this criterion is met.

3. **Existing water and sewage treatment systems servicing the area must be at or near operational capacity.**

Per the Longmont IGA, this criterion only applies to locating, constructing, and operating the sewer system. There are no existing sewage treatment systems (e.g., sanitary sewer lines) serving the subject parcels. Per the application materials, an existing 8-inch sewer line is stubbed north of Highway 66 from Spencer Street (see Figure 6 below); however, per the application materials, this sewer line does not have the capacity to accommodate potential development on the subject parcels. As such, extending that line is not a viable option for the Terry Lake neighborhood.

Therefore, staff finds this criterion is met.

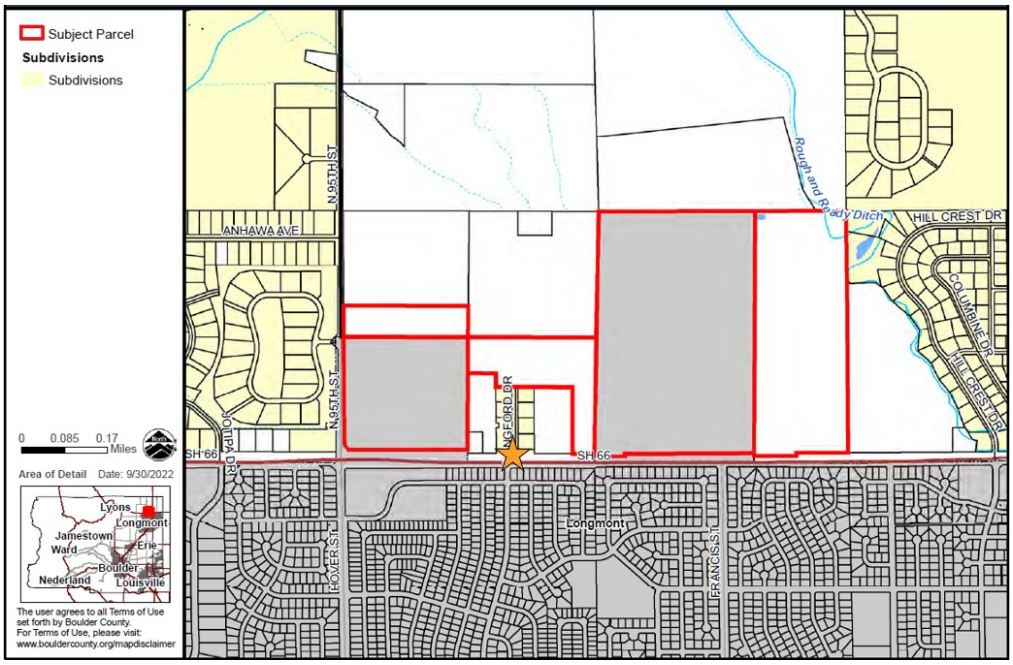


Figure 6. Location map with subject parcels indicated in red and existing sewer stub indicated by orange star.

4. **The scope and nature of the proposal will not compete with existing water and sewage services or create duplicate services.**

   Per the Longmont IGA, this criterion only applies to locating, constructing, and operating the sewer system. The proposed project will connect to an existing larger sewage treatment system. As such, staff finds it will not compete with that existing system and would not duplicate any services.

   Therefore, staff finds this criterion is met.

5. **The age of existing domestic water and sewage treatment systems, operational efficiency, state of repair or level of service is such that replacement is warranted.**

   No existing sewage treatment system is being replaced. As such, staff finds this criterion is not applicable.

6. **Existing facilities cannot be upgraded or expanded to meet waste discharge permit conditions of the Colorado Water Control Division.**

   No existing facility is being upgraded or expanded to meet any Colorado Water Control

Division discharge permit conditions. Therefore, staff finds this criterion is not applicable.

RECOMMENDATION:

For the reasons described above, Community Planning & Permitting staff recommends that the Planning Commission recommend that the Board of County Commissioners **CONDITIONALLY APPROVE Docket SI-22-0001: Terry Lake Sanitary Sewer** with the following conditions:

1. ***Prior to permit application submission***, the applicants shall submit to Community Planning and Permitting staff 90% plans for each construction package for review and approval. These plans must include, at a minimum: clearly delineated boundaries for areas of disturbance; locations and details on erosion control measures; staging areas; and revegetation locations.

2. ***Prior to permit application submission,*** the applicants must submit a parcel by parcel (owner by owner) Revegetation Plan, including species to be used, for review and approval by Community Planning & Permitting staff.

3. ***At permit application submission,*** the applicants must apply for a Boulder County Stormwater Quality Permit (SWQP). The SWQP must be issued prior to any work commencing.

4. ***At permit application submission,*** the applicants must provide to Boulder County documentation of compliance with Section 404 of the Clean Water Act, Section 106 of the National Historic Preservation Act, and Section 7 of the Endangered Species Act.

5. No movement of soil or driving of equipment over field soil may occur during wet soil conditions; only work within already dug trenches can continue.

6. All topsoil and subsoil be separated. This must occur during dry soil conditions. Topsoil must be restored to existing grade level before revegetation.

7. The applicants shall be subject to the terms, conditions, and commitments of record in the file for **Docket SI-22-0001: Terry Lake Sanitary Sewer.**

Boulder County Land Use Department
Courthouse Annex Building
2045 13th Street • PO Box 471 • Boulder, Colorado 80302
Phone: 303-441-3930
Email: planner@bouldercounty.org
Web: www.bouldercounty.org/lu
Office Hours: Mon., Wed., Thurs., Fri. 8 a.m. to 4:30 p.m.
Tuesday 10 a.m. to 4:30 p.m.

Shaded Areas for Staff Use Only
Intake Stamp

Planning Application Form

The Land Use Department maintains a submittal schedule for accepting applications. Planning applications are accepted on Mondays, by appointment only. Please call 303-441-3930 to schedule a submittal appointment.

Project Number	Project Name
	TERRY LAKE REGIONAL SANITARY SEWER

☐ Appeal	☐ Modification of Site Plan Review	☐ Road Name Change	☐ Special Use (Oil & Gas development)
☐ Correction Plat	☐ Modification of Special Use	☐ Road/Easement Vacation	☒ State Interest Review (1041)
☐ Exemption Plat	☐ Preliminary Plan	☐ Site Plan Review	☐ Subdivision Exemption
☐ Final Plat	☐ Resubdivision (Replat)	☐ Site Plan Review Waiver	☐ Variance
☐ Limited Impact Special Use	☐ Rezoning	☐ Sketch Plan	☐ Other:
☐ Limited Impact Special Use Waiver		☐ Special Use/SSDP	
☐ Location and Extent			

Location(s)/Street Address(es) MULTIPLE PROPERTIES (SEE ATTACHEMNT)				
PARCEL NUMBERS: 120521000021, 120521000019, 120521000023, 120521000010, 120521000008				
Subdivision Name N/A				
Lot(s) N/A	**Block(s)** N/A	**Section(s)** 21	**Township(s)** 3N	**Range(s)** 69 W OF P.M.
Area in Acres 11.6	**Existing Zoning** -LONGMONT MIXED-USE -BOULDER COUNTY UNINCORPORATED	**Existing Use of Property** UNDEVELOPED - AGRICULTURAL		**Number of Proposed Lots** N/A
Proposed Water Supply N/A		**Proposed Sewage Disposal Method** N/A		

Applicants:

Applicant/Property Owner MULTIPLE PROPERTIES, MULTIPLE OWNERS (SEE ATTACHMENT)			**Email**
Mailing Address			
City	**State**	**Zip Code**	**Phone**
Applicant/Property Owner/Agent/Consultant JEFF MARK, PRESIDENT - THE LANDHUIS COMPANY			**Email** JMARK@LANDHUISCO.COM
Mailing Address 212 N. WAHSATCH AVENUE, SUITE 301			
City COLORADO SPRINGS	**State** COLORADO	**Zip Code** 80903	**Phone** (719) 635-3200
Agent/Consultant STEPHANIE THOMAS, PROJECT MANAGER - NORTHERN ENGINEERING			**Email** STEPHANIE@NORTHERNENGINEERING.COM
Mailing Address 301 N. HOWES STREET, SUITE 100			
City FORT COLLINS	**State** COLORADO	**Zip Code** 80521	**Phone** (970) 568-5412

Certification (Please refer to the Regulations and Application Submittal Package for complete application requirements.)

I certify that I am signing this Application Form as an owner of record of the property included in the Application. I certify that the information and exhibits I have submitted are true and correct to the best of my knowledge. I understand that all materials required by Boulder County must be submitted prior to having this matter processed. I understand that public hearings or meetings may be required. I understand that I must sign an Agreement of Payment for Application processing fees, and that additional fees or materials may be required as a result of considerations which may arise in the processing of this docket. I understand that the road, school, and park dedications may be required as a condition of approval.

I understand that I am consenting to allow the County Staff involved in this application or their designees to enter onto and inspect the subject property at any reasonable time, without obtaining any prior consent.

All landowners are required to sign application. If additional space is needed, attach additional sheet signed and dated.

Signature of Property Owner	**Printed Name** JEFF MARK	**Date** 4/1/22
Signature of Property Owner	**Printed Name**	**Date**

The Land Use Director may waive the landowner signature requirement for good cause, under the applicable provisions of the Land Use Code.

Property Addresses and Ownership

Address: 2080 Highway 66, Longmont, Colorado (Longmont Annexed)
Ownership: Babcock Land Corp
Mailing Address: 212 N. Wahsatch Avenue, Suite 301, Colorado Springs, CO 80903
Contact: Jeff Mark
Phone: 719-635-3200

Address: 12734 Longford Drive (Unincorporated Boulder County)
Ownership: Jack Dickens Trust
Mailing Address: 4419 Maxwell Avenue, Longmont, Colorado 80503
Contact: Lynn Trumble
Phone: 303-530-4402

Address: 9911 Ute Road, Longmont, Colorado (Longmont Annexed)
Ownership: Puma 66 Investors
Mailing Address: 4100 E. Mississippi Avenue, Suite 500, Denver, Colorado 80246
Contact: Larry Jacobsen
Phone: 303-748-5466

Address: 10161 Ute Highway, Longmont, Colorado (Unincorporated Boulder County)
Ownership: Maple Leaf Investors LLC
Mailing Address: 1500 W. Hampton Avenue Suite 3H, Sheridan, Colorado 80110
Contact: Mark Rehm

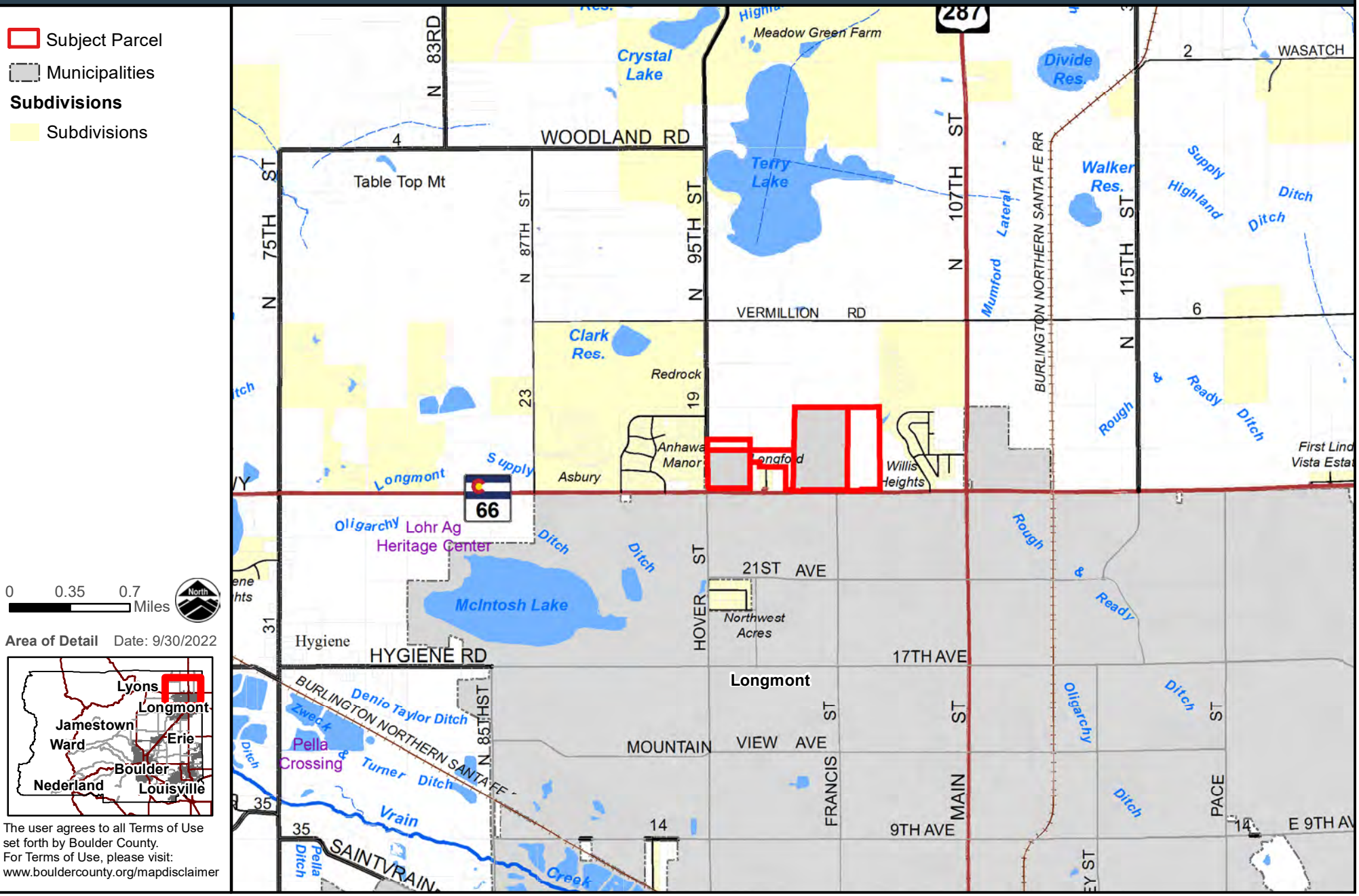
Address: 10345 Ute Highway, Longmont, Colorado (Unincorporated Boulder County)
Ownership: Lifebridge Christian Church
Mailing Address: 10345 Ute Highway, Longmont, Colorado 80504
Contact: Kevin King
Phone: 303-776-2927

Community Planning & Permitting

2045 13th Street, Boulder, CO 80302 303-441-3930 www.bouldercounty.org

Vicinity

Terry Lake Regional Sanitary Sewer



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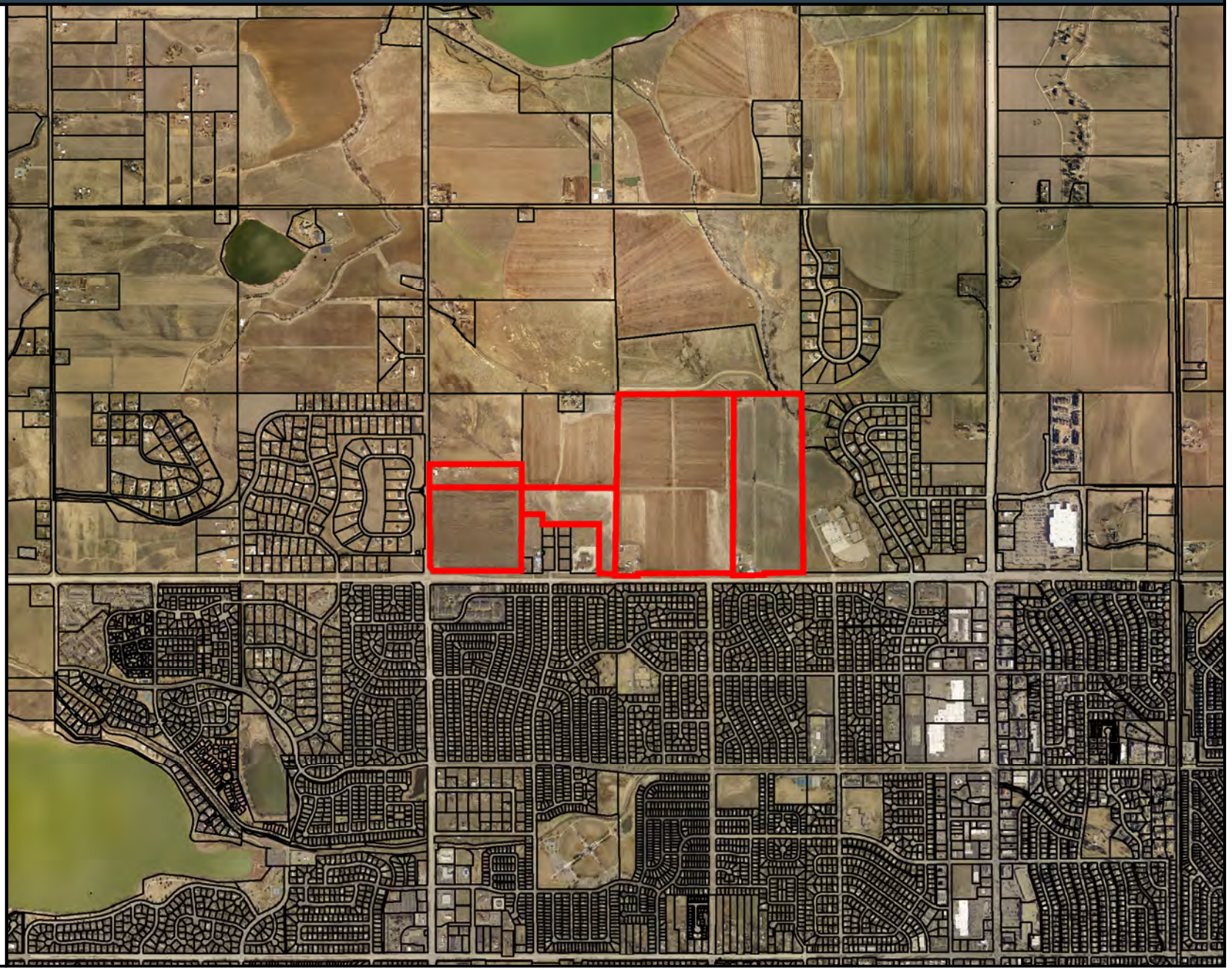
Aerial

Terry Lake Regional Sanitary Sewer

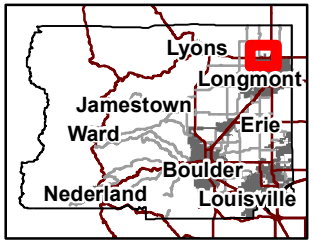
Subject Parcel



0 0.15 0.3 Miles

North

Area of Detail Date: 9/30/2022



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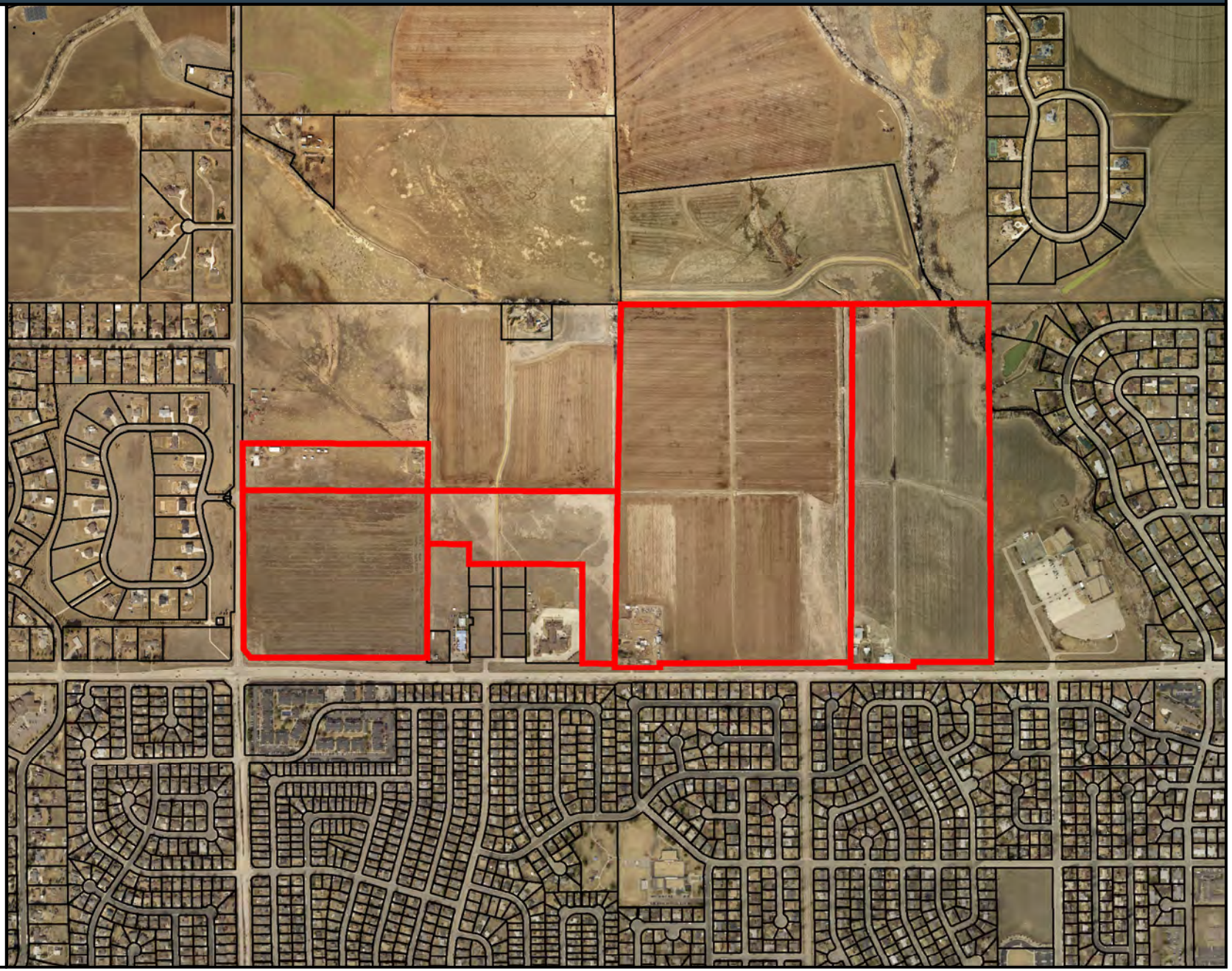
Aerial

Terry Lake Regional Sanitary Sewer



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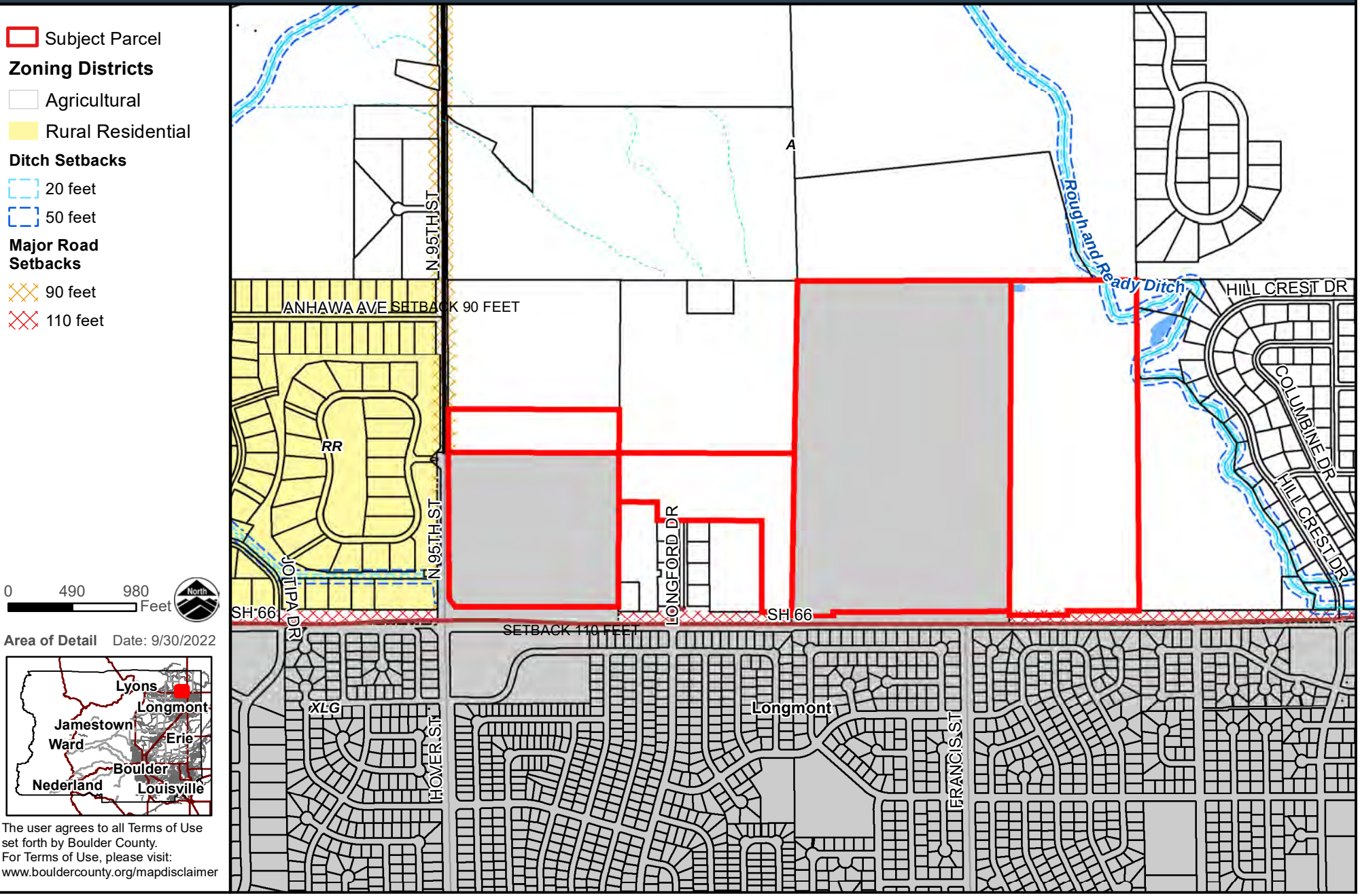
Zoning

Terry Lake Regional Sanitary Sewer



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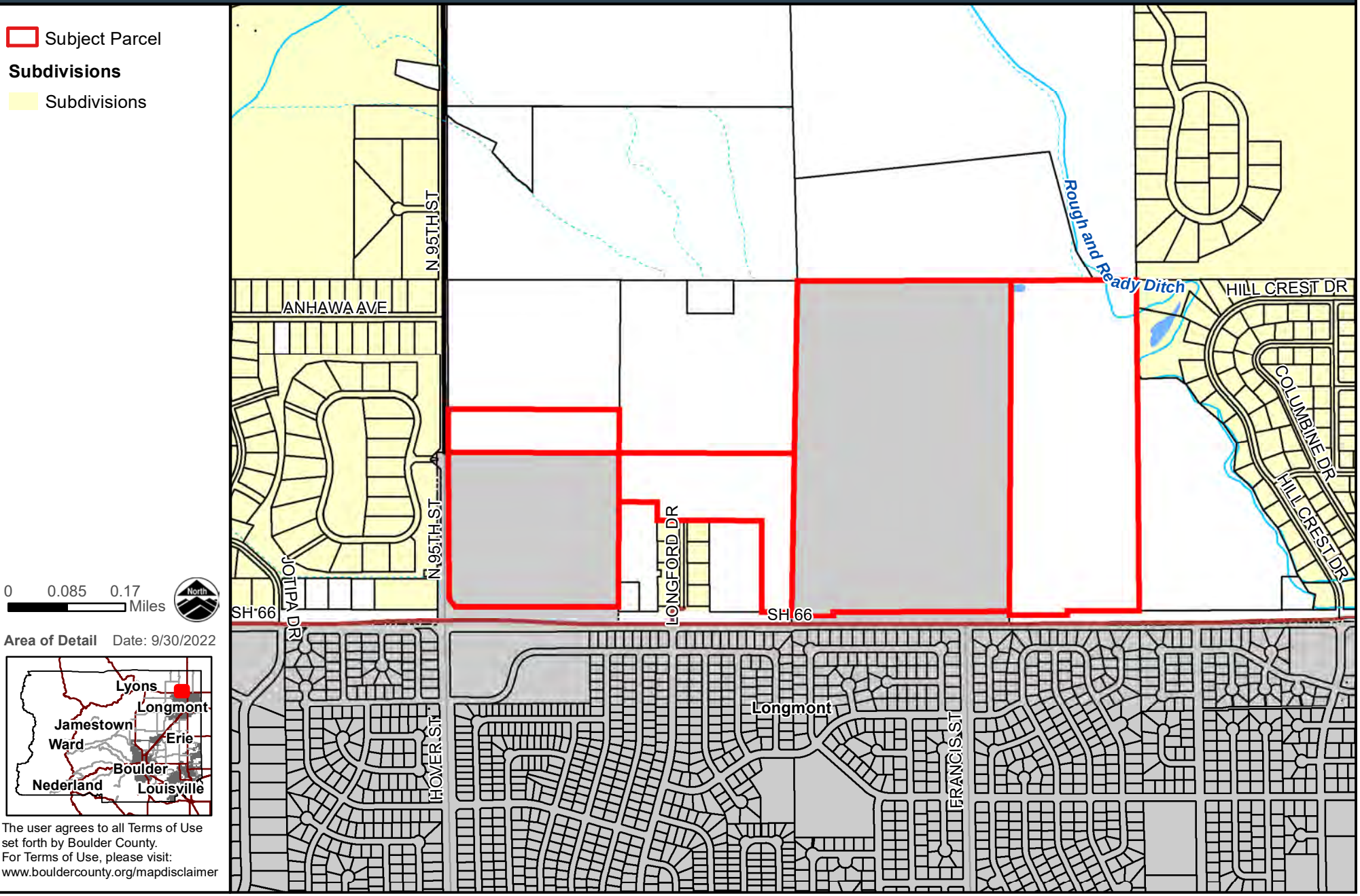
Location

Terry Lake Regional Sanitary Sewer



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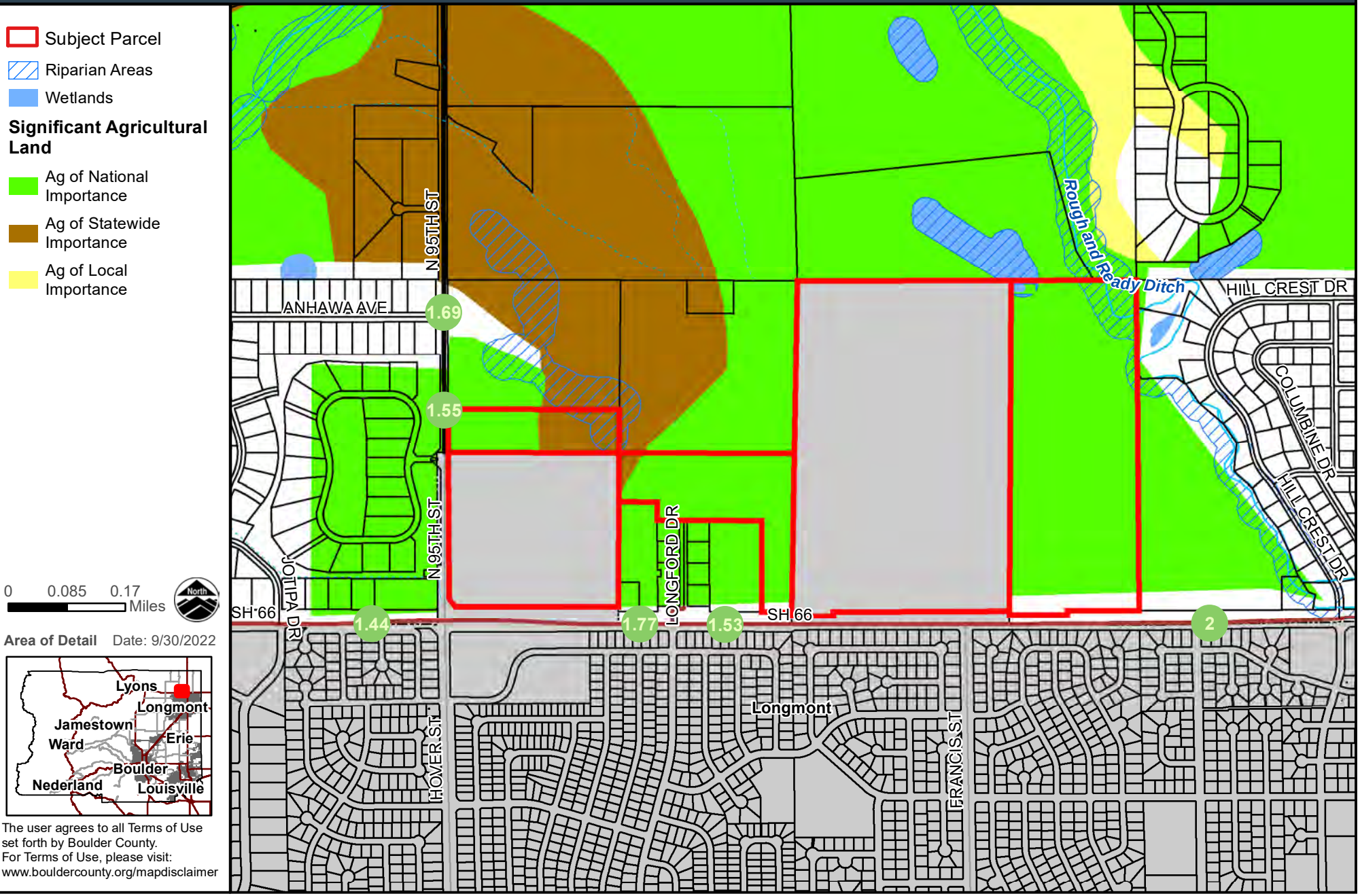
Comprehensive Plan

Terry Lake Regional Sanitary Sewer



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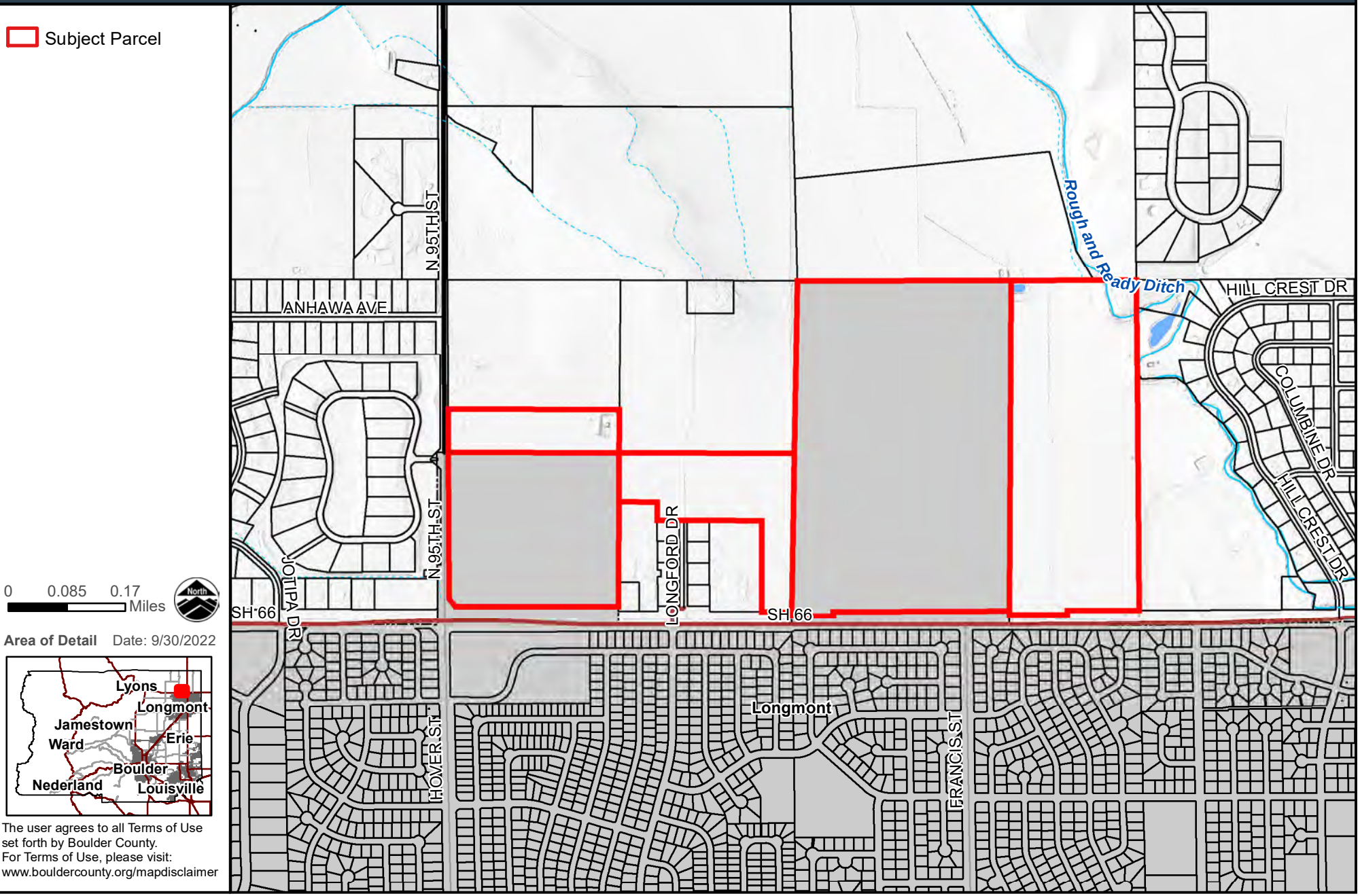
Elevation Contours

Terry Lake Regional Sanitary Sewer



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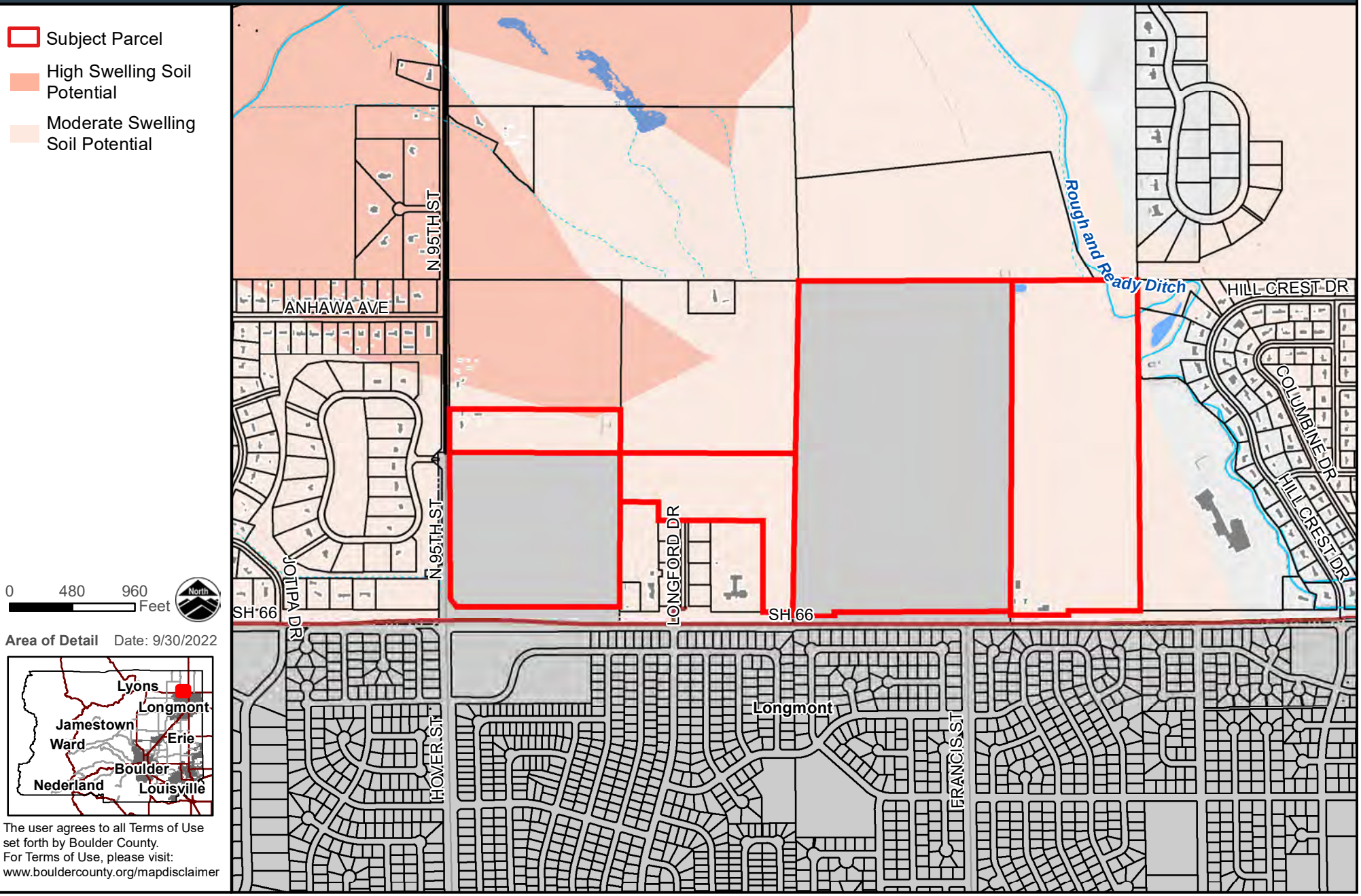
Geologic Hazards

Terry Lake Regional Sanitary Sewer



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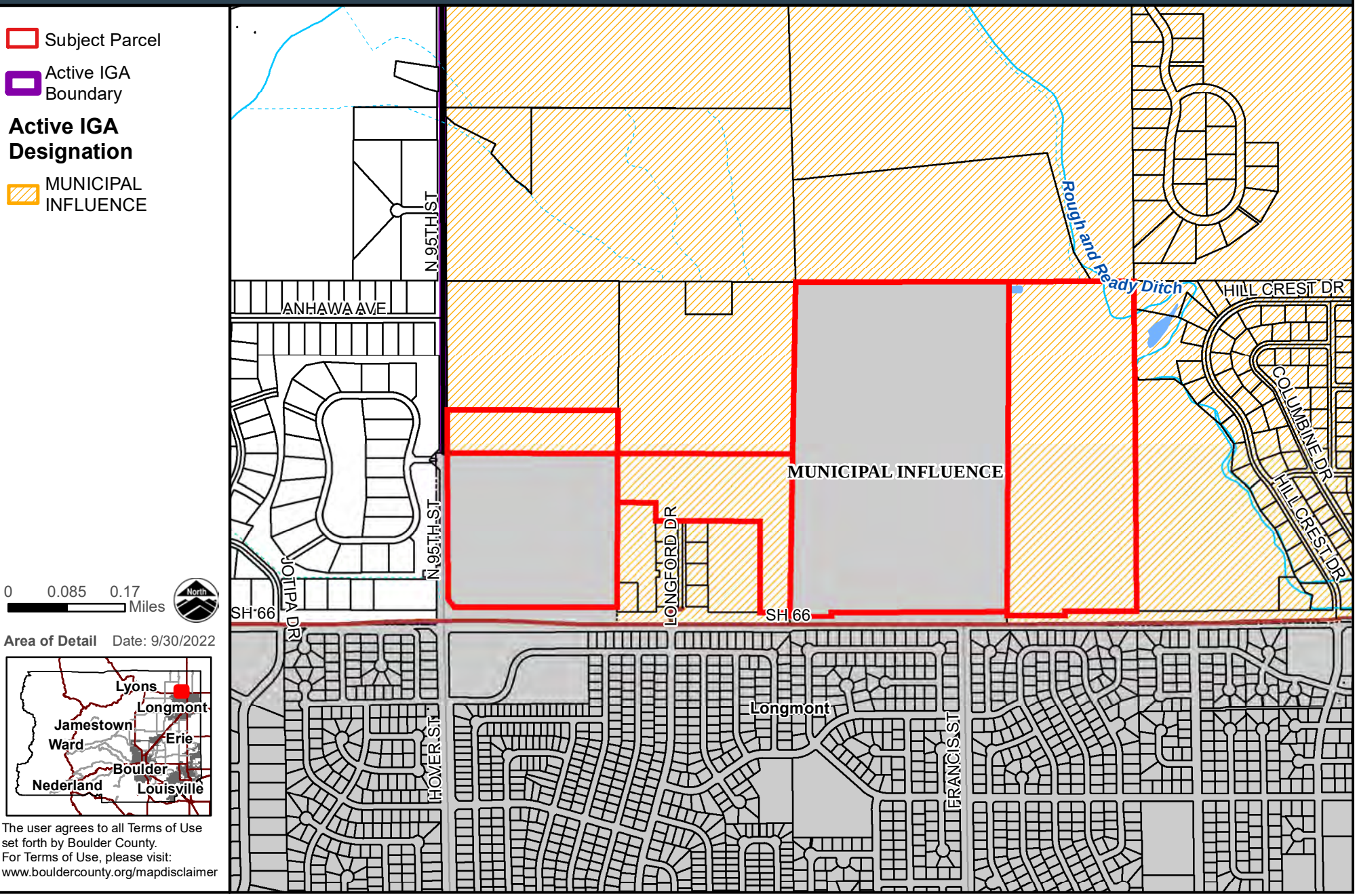
Planning Areas

Terry Lake Regional Sanitary Sewer



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Community Planning & Permitting

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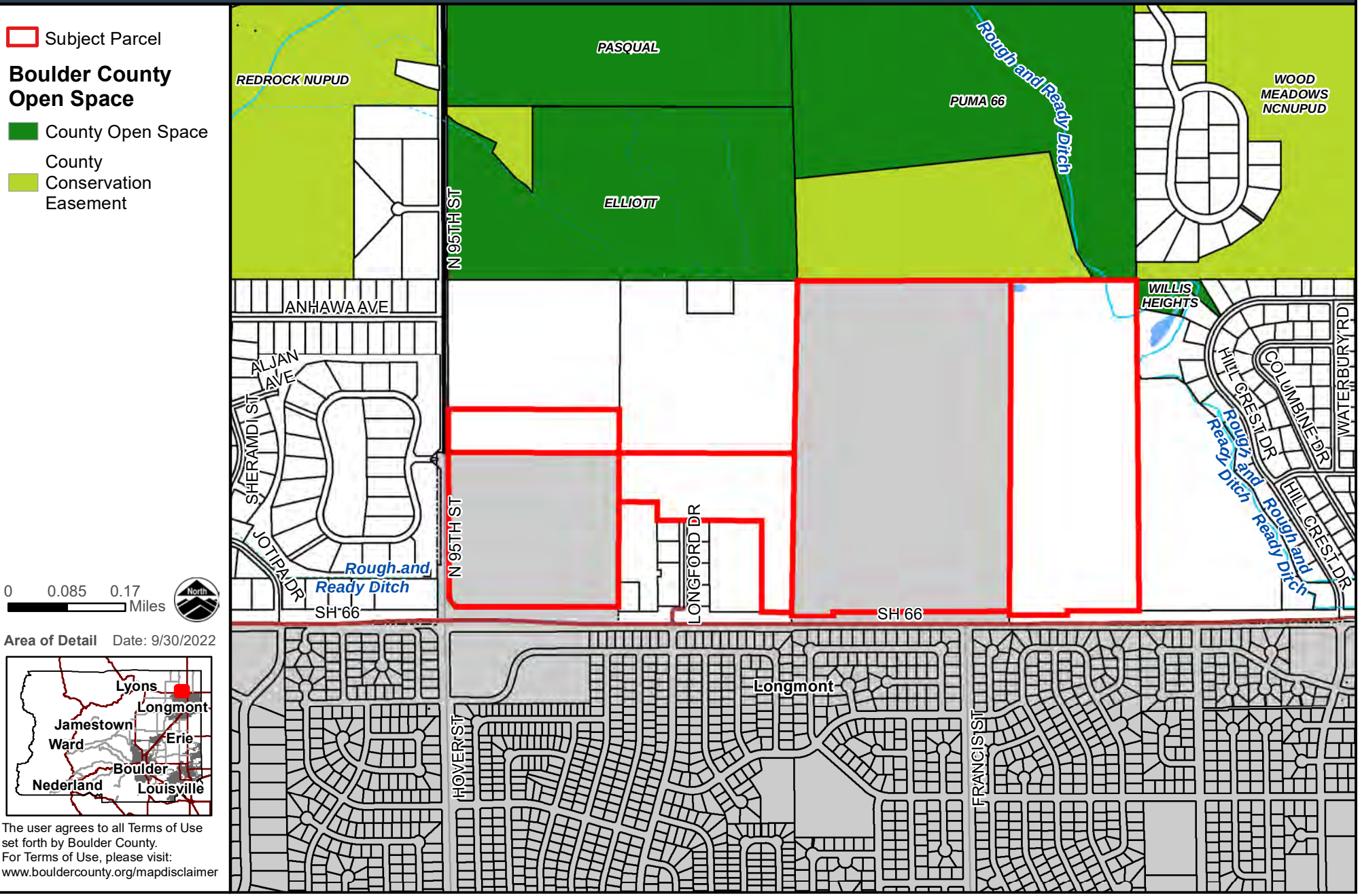
Public Lands & CEs

Terry Lake Regional Sanitary Sewer



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April 4th, 2022

Boulder County Land Use Department
2045 13th Street, P.O. Box 471
Boulder, CO 80302

RE: TERRY LAKE REGIONAL SANITARY SEWER
LONGMONT, COLORADO
NE PROJECT #: 911-016

Dear Staff:

Northern Engineering Services is pleased to submit this development application package for the Terry Lake Regional Sanitary Sewer project, in accordance with Boulder County application submittal requirements, for your review. The Terry Lake Neighborhood is located in the southern half of Section 21, Township 3 North, Range 69 West of the 6th P.M., in Longmont, CO and Boulder County unincorporated open space.

This narrative is provided to detail how this proposed improvement complies with the Boulder County application submittal requirements or reference the relevant documents that address said requirements. All provided submittal materials have been approved for construction by the City of Longmont pending permit approval from Boulder County.

This package includes public improvement utility plans, sewer capacity analysis, title commitments, stormwater pollution control plans (SPCP), environmental and habitat conservation assessments, and other necessary documentation.

Overview

The proposed project is contained within the area designated as "*Terry Lake Mixed-Use*" by the ***Envision Longmont Multimodal & Comprehensive Plan*** (https://www.longmontcolorado.gov/home/showpublisheddocument/15099/636080740290800000)

The Terry Lake Regional Sanitary Sewer project proposes to extend westward the existing sanitary sewer located on Gay Street just north of Highway 66. The regional sewer will provide sewer service for the future development of parcels along Highway 66 from Gay Street to Hover Road, known as the Terry Lake Neighborhood. Collaboration with the existing adjacent properties has begun, and easements have been recorded along the sewer alignment.; however, this proposal addresses only the installation of the regional sewer main meant to service future development in the region.

The designed sewer capacity is capped based on capacity of the existing sewer downstream. As such, each future development's density is capped. This is further detailed in the provided *Sewer Capacity Analysis Report* (Northern Engineering, Dec. 15, 2021). The sewer extension is expected to have minimal short-term and no long-term disturbance on the undeveloped properties. The sanitary sewer has been designed in accordance with Longmont City Standards and 10-States Wastewater Standards where applicable.

The proposed sewer improvements will impact 11.6 acres of land during construction but result in no permanent surface impacts to the area after completion. The provided *Public Improvement Plans* (Northern Engineering, Feb. 2, 2022) are designed to the City of Longmont engineering standard, and detail contact information for the relevant applicants and the extent of existing utility infrastructure in the affected area. The

contact information for consultants who provided separate relevant reports and analyses will appear on those reports respectively.

Description of Need

The proposed public improvement will not immediately serve any existing users or communities but will be installed to provide service for future developments in the Terry Lake Neighborhood. The existing sewer capacity at Gay Street has been studied and any future increase in demands are detailed in the *Sewer Capacity Analysis Report*. The density of any future developments are to be designed to be in compliance with the existing sewer capacity.

Environmental Impacts

Land Use

The *Envision Longmont Multimodal and Comprehensive Plan* designates the area's zoning as mixed-use; however, the Terry Lake Regional Sanitary Sewer project described in this application will not change the land use or condition for any of the affected properties shown in the Terry Lake Neighborhood. The region's soil properties are described in the provided geotechnical report titled *Subsurface Soil Investigation – CO SH 66 Terry Lake Sanitary Sewer* (Rocky Mountain Group, Dec. 3, 2021), and the proposed sewer improvements will have no impact on the agricultural productivity capability of the affected land after completion.

There will similarly be no impact to transportation infrastructure in the affected area as it pertains to existing rights-of-way for transmission, distribution, or collector networks.

Provided with this application are the legal descriptions of the recorded utility easements, the Property Owner and Record Numbers of which are as follows: Dickens-Trumble@66jc - 3866798, Lifebridge Christian Church – 3866799, Maple Leaf Investors, LLC – 3895929, Puma66 Investors – 3892088. All easements described are recorded within the real property records of Boulder County.

Water Resources

Available local GIS and FEMA data do not identify the area of the Terry Lake Neighborhood as residing within or near any recognized floodplain, and therefore does not require additional consideration in regard to flood hazards.

The Terry Lake Regional Sanitary Sewer project area is located approximately one mile south of Terry Lake and ¾ miles southeast of Clark Reservoir. Aside from these named bodies of water there is no permanent surface water on or in the vicinity of the proposed site. The drainage pattern of the involved properties trends southeast, and as such stormwater from the site is not conveyed in the direction of any nearby surface water before reaching established stormwater drainage infrastructure.

Existing groundwater depths in the area have been identified in the borings performed for and illustrated in the geotechnical report *Subsurface Soil Investigation – CO SH 66 Terry Lake Sanitary Sewer*. Groundwater depth encountered along the sewer alignment ranges from 2' to 14'. The sanitary sewer is to be installed with groundwater barriers matching City of Longmont specifications upstream of all manholes to prevent the transmission of groundwater along the sanitary sewer trench once the installation is completed.

Terrestrial and Aquatic Life

The existing habitats of terrestrial and aquatic animal and plant life are detailed in the provided conservation plan titled *Terry Lake Regional Sewer Project – Species and Habitat Characterization Plan* (Cedar Creek Associates, Inc., July 2022). The only wildlife observed in the field survey were characterized as "unidentified songbirds", and the site was deemed unlikely to occupy or cross the path of any habitat or migration corridor for any sensitive, unique, or regionally protected species. It is required that the site be surveyed by a qualified biologist directly prior to commencement of construction activity – particularly if that activity should begin between March 1st to July 31st, which is nesting season for most bird species in the area – to verify that the observed condition in the *Terry Lake Regional Sewer Project – Species and Habitat Characterization Plan* have remained consistent.

There is no expected impact on any protected plant habitat or special status species with the proposed sewer improvements, and the provided *Stormwater Pollution Control Plans* (Northern Engineering, Feb. 4, 2022) further detail the erosion control and environmental protection measures approved by the City of Longmont for all construction phases.

The *Terry Lake Regional Sewer Project – Species and Habitat Characterization Plan* also identified the areas directly west of and parallel to the north-south section of the sewer alignment, as well as the area following the north shoulder of Highway 66, as being wetlands, both of which currently serve as irrigation ditches. Provided in this package is an Approved Jurisdictional Determination (ADJ) from the Army Corps of Engineers, wherein the wetland ditches in the area were determined to be non-jurisdictional to the waters of the United States (*Corps File No. NWO-2021-01941-DEN*). Notwithstanding, the sewer design will call for the segment crossing the path of the wetland ditch to be installed by boring underneath and encasing for stability to preserve the integrity of the ditch.

We have also conducted a *Tree Inventory Appraisal* (The Birdsall Group, Feb. 2, 2022) which details the condition of all known trees adjacent to the sanitary sewer alignment. The *Tree Inventory Appraisal* also details which trees will be preserved and which are designated for removal.

By project closeout the disturbed soil will be restored with native seeding, the areas classified as wetland ditches will have been protected throughout, and all trees designated for preservation will have been protected. Should a survey of a qualified biologist identify any terrestrial species habitat prior to beginning construction, the contractor shall be responsible for abiding by any regulations associated with the presence of said species. However, there are currently no identified animal habitats that will be impacted by the proposed improvements.

Air Quality

The proposed installed sanitary sewer improvements are not expected to produce any additional daily trips in the area once completed and will otherwise have no permanent effect on air quality in the region.

Environmental Resources

As designed, the Terry Lake Regional Sanitary Sewer project is not in the vicinity of, nor will it have an impact on any environmental features that have been classified as natural hazards, public outdoor recreation or open space areas, or areas of unique geologic, historic, or archaeological significance.

Four unoccupied buildings on one of the associated properties have been identified for demolition with this project. The report titled *Historic Resources Evaluation* (Centennial Archaeology, Jun. 29, 2021) indicated these buildings as having no historic significance despite their age.

Visual Aesthetics

The proposed sewer improvements will not have any negative effect on the viewshed, landscape, or vistas associated with the project area as it will not be changing the overall landscape of the area nor will be blocking any viewsheds.

The greatest change to the project landscape will be due to the demolition of the unoccupied buildings. As a part of the *Historic Resources Evaluation*, the existing buildings were assessed to be in poor condition, and the physical and historical integrity of the property was found to be diminished beyond qualification for any historic landmark eligibility. Due to the condition of the buildings, we believe the demolition of the buildings will contribute positively to the visual aesthetic of the area.

Transportation Impacts

The proposed sewer improvements will have no long-term effect on traffic in the area, as no transportation facilities or roads will be constructed, altered or improved in any fashion, and no new commercial or residential structures will be built as a part of these improvements. In the short term, construction vehicles accessing the site via Hover Street and Gay Street may result in minimal temporary impacts. The contractor shall be responsible for maintaining cleanliness of the public roads to be used for site access during construction activities and any repairs that become necessary as a result of construction activity.

Alternatives

Alternative alignments for the sanitary sewer were assessed as a part of this project. These alternatives assessed the topography of the area as it related to the serviceability of the parcels. After discussion with all affected property owners, a preferred alignment was decided. The chosen alternative impacts the least amount of ground, aligns with the future roadway shown in *Envision Longmont*, and coincides with existing access farm roads. This alternative is shown in the *Sewer Capacity Analysis Report*. At this time, the easements for the preferred alternative have been recorded with the City of Longmont.

If there are any questions, please feel free to contact us at your convenience.

Sincerely,
NORTHERN ENGINEERING SERVICES, INC.

Sterling Hallauer, EI
Project Engineer

Stephanie Thomas, PE
Project Manager

2000 0 2000 4000 6000 Feet

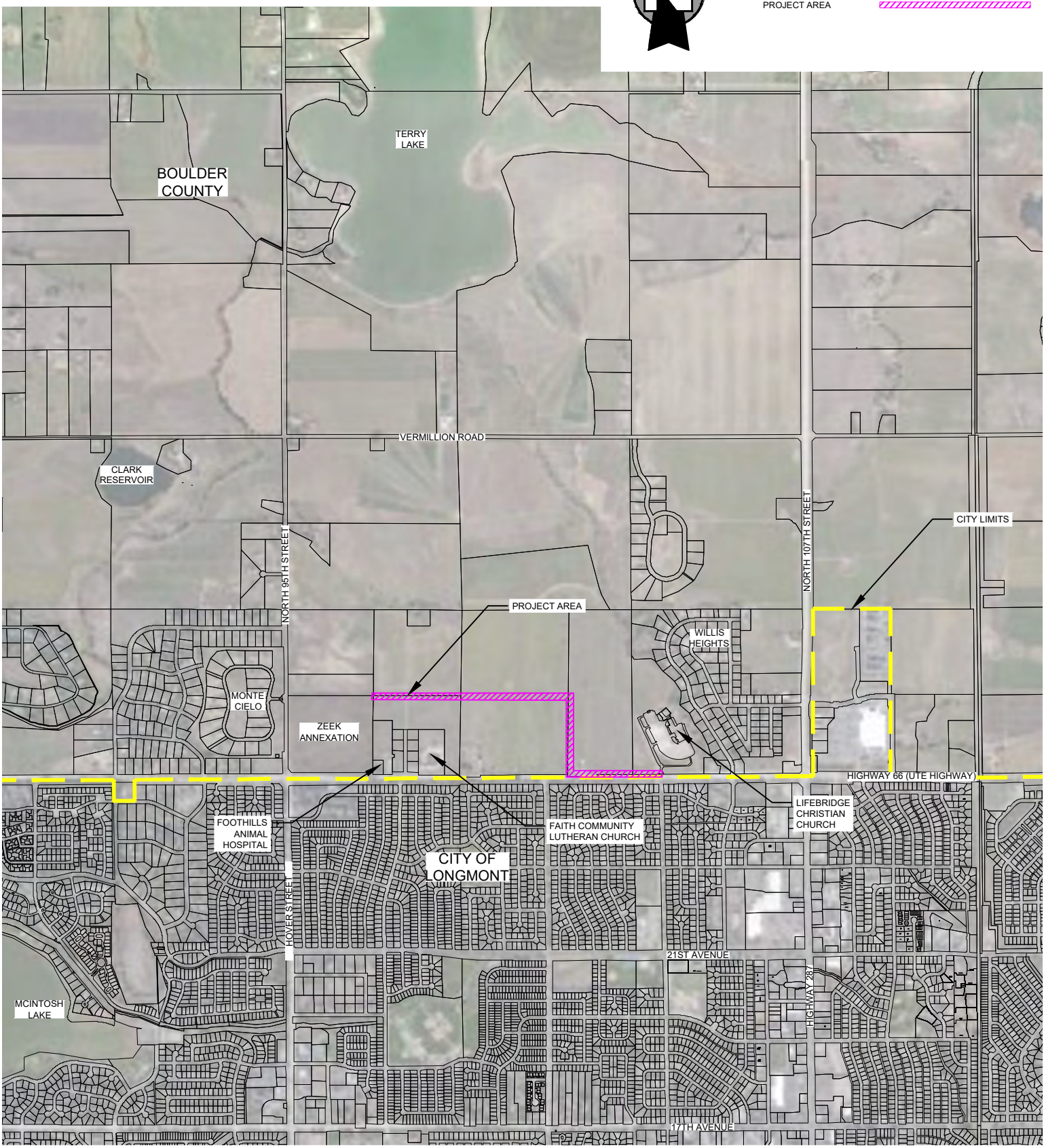
(IN FEET)
1 inch = 2000 ft.

LEGEND

CITY LIMITS

PARCELS

PROJECT AREA



TERRY LAKE REGIONAL SANITARY SEWER

LONGMONT, CO

07.09.21

NORTHERN ENGINEERING

VICINITY MAP

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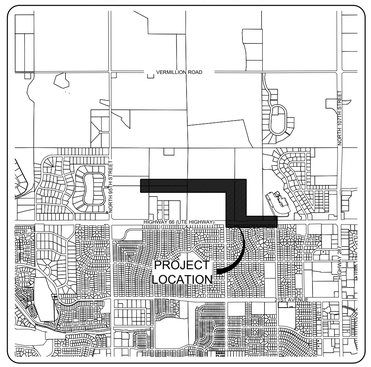
Attachment A - Application Materials

PUBLIC IMPROVEMENT PLANS

TERRY LAKE REGIONAL SANITARY SEWER

A TRACT OF LAND LOCATED IN THE SOUTHERN HALF OF SECTIONS 21 & 22, TOWNSHIP 3 NORTH, RANGE 69 WEST OF THE 6TH P.M., CITY OF LONGMONT, COUNTY OF BOULDER, COLORADO

FEBRUARY 2021



NORTH

VICINITY MAP

1"=2500'

PROJECT BENCHMARKS:

PROJECT DATUM: NAVD88

BENCHMARKS:
City of Longmont Benchmark "NGS U410"
1.45 miles W. of Hwy 287 on Hwy 66, 585' E. of the CL of N. 95th, (Hover Rd.), 93.2' N. of the CL of Hwy 66, and 5.6' E. of a utility pole. (rod in range box)
Elevation = 5090.10

City of Longmont Benchmark "F-030"
North side of Hwy 66 at North quarter of Section 28 at fence corner. $\frac{1}{2}$ mile east of Hover Rd. 50' West of the S.W. corner house. +/- 6' East of P.P.
Elevation = 5063.93

Basis of Bearings
The South line of the Southwest Quarter of the Southwest Quarter of Section 21 as bearing North 89°43'25" West.

FIELD SURVEY BY:

Original Field Survey:
Northern Engineering
Project No. 911-016
Date: May 22nd, 2017

Additional Field Survey:
Northern Engineering
Project No. 911-016
Date: Dec 1st, 2017

SUBSURFACE EXPLORATION BY:

Soilogic, Inc.
Preliminary Geotechnical Subsurface Exploration Report
Proposed Zeek Annexation
Northeast Corner of N. 95th Street and Colorado State Highway 66
Boulder County, Colorado
Soilogic Project # 14-1083
Date: May 20, 2014

CONTACT INFORMATION

PROJECT TEAM:

OWNER/APPLICANT
The Landhuis Company
Jeff Mark, President
212 N Wahsatch Ave, Suite #301
Colorado Springs, CO 80903
(719) 635-3200

SITE ENGINEER
Northern Engineering Services, Inc.
Stephanie Thomas, PE
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521
(970) 221-4158

SITE SURVEYOR
Northern Engineering Services, Inc.
Steven A. Lund, PLS
820 8th Street
Greeley, CO 80631
(970) 395-9880

UTILITY CONTACT LIST: *

UTILITY COMPANY	CONTACT INFORMATION
GAS---------- Xcel Energy----------	Donna George---------- donna.l.george@xcelenergy.com
ELECTRIC-------- Longmont Power and Communications----	Rocco Supino---------- (303) 651-8706
CABLE---------- Comcast----------	Marcus Petty----------marcus_petty@comcast.com
TELECOM-------- Centurylink----------	Christopher Janoski---------- christopher.janoski@centurylink.com
WATER---------- City of Longmont----------	Wes Lowrie---------- (303) 651-8814
WASTEWATER- City of Longmont----------	Doug Gossett---------- (303) 651-8922
STORMWATER- City of Longmont----------	Tyler Dell---------- (303) 651-8399

* This list is provided as a courtesy reference only. Northern Engineering Services assumes no responsibility for the accuracy or completeness of this list. In no way shall this list relinquish the Contractor's responsibility for locating all utilities prior to commencing any construction activity. Please contact the Utility Notification Center of Colorado (UNCC) at 811 for additional information.

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APPROVAL BLOCK

ENGINEERING REVIEW
CITY OF LONGMONT

☐ No Exceptions Taken
☐ Make Corrections Noted
☐ Rejected – See Checklist

Review is for general compliance with City of Longmont standards and requirements. The City of Longmont is not responsible for the correctness of design, dimensions, details, quantities and design safety.

REVIEW ENGINEER _____ DATE _____

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

GENERAL NOTES:

1. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY, OR EASEMENT SHALL CONFORM TO THE CITY OF LONGMONT CONSTRUCTION SPECIFICATIONS AND DESIGN STANDARDS.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS PRIOR TO COMMENCEMENT OF ANY WORK ON THE PROJECT.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER/DEVELOPER, AND THE CITY, OF ANY PROBLEMS IN CONFORMING TO THE APPROVED PLANS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO ITS CONSTRUCTION.
4. IT IS THE RESPONSIBILITY IF THE DEVELOPER DURING CONSTRUCTION ACTIVITIES TO RESOLVE CONSTRUCTION PROBLEMS DUE TO CHANGED CONDITIONS, OR DESIGN ERRORS ENCOUNTERED BY THE CONTRACTOR DURING THE PROGRESS OF ANY PORTION OF THE PROJECT. IF, IN THE OPINION OF THE CITY, THE MODIFICATIONS PROPOSED BY THE DEVELOPER, TO THE APPROVED PLANS, INVOLVE SIGNIFICANT CHANGES TO THE CHARACTER OF THE WORK, OR TO THE FUTURE CONTIGUOUS PUBLIC OR PRIVATE IMPROVEMENTS, THE DEVELOPER SHALL BE RESPONSIBLE FOR RESUBMITTING THE REVISED PLANS TO THE CITY OF LONGMONT FOR APPROVAL PRIOR TO ANY FURTHER ACCORDANCE WITH THE APPROVED PLANS, OR THE APPROVED REVISED PLANS, SHALL BE REMOVED AND RECONSTRUCTED ACCORDING TO THE APPROVED PLAN.
5. THE GRADING PLAN IS FOR ROUGH GRADING ONLY. CHANGES MAY BE NECESSARY TO BRING PLANS INTO CONFORMANCE WITH APPROVED FINAL DRAINAGE PLAN AND SITE PLAN.
6. A WATER TRUCK, IF CALLED FOR BY THE INSPECTOR, WILL BE PROVIDED, BY THE CONTRACTOR, TO KEEP DUST IN CHECK.
7. ANY SETTLEMENT OR SOIL ACCUMULATION, BEYOND THE PROPERTY LIMITS, DUE TO GRADING OR EROSION SHALL BE REPAIRED, BY THE CONTRACTOR, IMMEDIATELY.
8. NO GRADING SHALL TAKE PLACE IN DELINEATED FLOOD HAZARD AREAS UNTIL THE FINAL DRAINAGE PLAN HAS BEEN APPROVED AND ALL APPROPRIATE PERMITS HAVE BEEN OBTAINED.
9. ANY CONSTRUCTION DEBRIS, MUD TRACKING, SEDIMENT OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO OR, ACCUMULATE IN, THE FLOWLINES AND PUBLIC RIGHTS OF WAY OF THE CITY,, RESULTING FROM THE PROJECT, SHALL BE REMOVED IMMEDIATELY, BY THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY FIX ANY EXCAVATION, OR EXCESSIVE PAVEMENT FAILURE CAUSED BY THE PROJECT, AND SHALL PROPERLY BARRICADE THE SITE UNTIL CONSTRUCTION IS COMPLETE, FAILURE, BY THE CONTRACTOR, TO CORRECT ANY OF THE ABOVE WITHIN 48 HOURS OF WRITTEN NOTICE, BY THE CITY, SHALL CAUSE THE CITY TO ISSUE A STOP WORK ORDER (RED TAG) AND/OR DO THE WORK AND MAKE A CLAIM AGAINST THE PROJECT'S LETTER OF CREDIT FOR ANY COSTS INCURRED BY THE CITY.
10. THE CONTRACTOR SHALL BE SOLELY, AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS AT, AND ADJACENT TO THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, DURING THE PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE CITY TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON,, OR NEAR THE CONSTRUCTION SITE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION. APPENDIX - 11 - EFFECTIVE JULY 1, 2007
12. ALL UTILITY POLES SHALL BE RELOCATED PRIOR TO PLACEMENT OF ANY CONCRETE.
13. THE CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS PRIOR TO ADJUSTING ALL CLEANOUTS, MANHOLES, VALVES, BOXES, SURVEY MONUMENTS, AND ANY OTHER FIXTURES TO FINISHED GRADE PRIOR TO FINAL PAVING.
14. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGPERSONS, OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY IN ACCORDANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND THE LONGMONT SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
15. THE CONTRACTOR SHALL PROVIDE INGRESS AND EGRESS TO PRIVATE PROPERTY ADJACENT TO THE PROJECT THROUGHOUT THE PERIOD OF CONSTRUCTION. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL OBTAIN A WRITTEN AGREEMENT FROM THE PROPERTY OWNERS IMPACTED BY THIS ACCESS. UPON REQUEST, THE CONTRACTOR SHALL PROVIDE A COPY OF THESE WRITTEN AGREEMENTS TO THE CITY.
16. PRIOR TO FINAL PLACEMENT OF SURFACE PAVEMENT, ALL UNDERGROUND UTILITY MAINS SHALL BE INSTALLED AND SERVICE CONNECTIONS STUBBED OUT BEYOND CURB LINE, WHEN ALLOWED BY THE UTILITY. SERVICE FROM PUBLIC UTILITIES AND FROM SANITARY SEWERS SHALL BE MADE AVAILABLE FOR EACH LOT IN SUCH A MANNER THAT WILL NOT BE NECESSARY TO DISTURB THE STREET PAVEMENT, CURB, GUTTER, AND SIDEWALK WHEN CONNECTIONS ARE MADE.
17. REPRODUCIBLE COPIES OF "AS BUILT" PLANS SHALL BE SUBMITTED TO THE CITY OF LONGMONT PRIOR TO CONSTRUCTION ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.
18. THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR AT LEAST 24 HOURS PRIOR TO DESIRED INSPECTION.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE OF EROSION CONTROL DEVICES.
20. CONSTRUCTION STAGING AREAS WILL BE REQUIRED TO STAY WITHIN THE LIMITS OF CONSTRUCTION AND AS APPROVED IN THE STORMWATER MANAGEMENT PLAN.
21. THE APPROVED STORMWATER MANAGEMENT PLAN WILL BE REQUIRED ON SITE AT ALL TIMES.
22. THE CONTRACTOR SHALL OBTAIN A GROUNDWATER DISCHARGE PERMIT FROM THE STATE OF COLORADO PRIOR TO STARTING CONSTRUCTION.
23. DUE TO PORTIONS OF THE PROPOSED DEVELOPMENT EXISTING IN BOTH THE CITY OF LONGMONT AND UNINCORPORATED BOULDER COUNTY, CONTRACTOR SHALL OBTAIN NECESSARY APPROVALS AND PERMITTING FROM BOULDER COUNTY.

STORMWATER MANAGEMENT NOTES:

1. THE CONTRACTOR AND/OR AUTHORIZED AGENTS SHALL REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO OR, ACCUMULATE IN, THE FLOW LINES AND PUBLIC RIGHTS OF WAYS OF THE CITY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SAID REMOVAL SHALL BE CONDUCTED IN A TIMELY MANNER.
2. THIS CONSTRUCTION ACTIVITIES STORMWATER MANAGEMENT PLAN HAS BEEN SUBMITTED AND APPROVED AS PART OF AN APPLICATION FOR A STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES FILED WITH THE CITY OF LONGMONT. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS PLAN SHALL BE THE OBLIGATION OF THE PERMIT HOLDER UNTIL SUCH TIME AS THE PLAN IS PROPERLY COMPLETED AND THE PERMIT IS RELEASED.
3. THE CONTRACTOR SHALL PREVENT SEDIMENT, DEBRIS AND ALL OTHER POLLUTANTS FROM ENTERING THE STORM SEWER SYSTEM DURING ALL DEMOLITION, EXCAVATION, TRENCHING, BORING, GRADING OR OTHER CONSTRUCTION OPERATIONS THAT ARE PART OF THIS PROJECT. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, WETLANDS, ETC,, RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
4. THE CONTRACTOR SHALL LOCATE, INSTALL, AND MAINTAIN ALL EROSION CONTROL AND WATER QUALITY "BEST MANAGEMENT PRACTICES" AS INDICATED IN THE APPROVED STORMWATER MANAGEMENT PLAN.
5. THE DEVELOPER, GENERAL CONTRACTOR, GRADING CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL INSURE THAT ALL LOADS OF CUT AND FILL MATERIAL IMPORTED TO OR EXPORTED FROM THIS SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORT ON PUBLIC RIGHTS OF WAY.
6. SOILS THAT WILL BE STOCKPILED FOR MORE THAN 30 DAYS SHALL BE PROTECTED FROM WIND AND WATER EROSION WITHIN 14 DAYS OF STOCKPILE CONSTRUCTION. IF STOCKPILES ARE LOCATED WITHIN 100 FEET OF A DRAINAGEWAY, ADDITIONAL SEDIMENT CONTROLS SUCH AS TEMPORARY DIKES OR SILT FENCE SHALL BE REQUIRED.
7. APPROVED EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR OF THE DURATION OF THIS PROJECT. ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED FROM A BMP WHEN THE SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTIONING OF THE BMP.
8. MODIFICATION/TERMINATION OF A STORMWATER DISCHARGE PERMIT FOR CONSTRUCTION ACTIVITY BY THE DEVELOPER, CONTRACTOR OR THEIR AUTHORIZED AGENTS SHALL REQUIRE TIMELY NOTIFICATION OF AND APPROVAL FROM THE CITY OF LONGMONT.

POWER & COMMUNICATIONS NOTES:

1. WHERE CITY OF LONGMONT POWER & COMMUNICATIONS (LPC) OVERHEAD ELECTRIC FACILITIES EXIST IN THE DEVELOPMENT AREA, THE CONTRACTOR MUST KEEP ALL EQUIPMENT OPERATION A MINIMUM OF TEN FEET FROM EXISTING OVERHEAD ELECTRIC LINES. IF THIS IS NOT FEASIBLE, OR CONDITIONS WARRANT ADDITIONAL PROTECTION OR POLE STABILIZATION, THE CONTRACTOR MUST CONTACT THE LPC OPERATIONS CONSTRUCTION COORDINATOR AT 303-651-8386. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE PROTECTIVE COVERING AND/OR POLE STABILIZATION, 48 HOURS IN ADVANCE. SHOULD THE ELECTRIC FACILITIES BE DAMAGED, THE CONTRACTOR MUST CONTACT LPC AT 303-651-8386. ADDITIONALLY, ALL COSTS ASSOCIATED WITH REPAIRS WILL BE THE RESPONSIBILITY OF THE DEVELOPER.
2. WHERE EXISTING UNDERGROUND ELECTRIC CABLE EXISTS NEAR THE PROJECT WORK AREA, THEY CANNOT BE DE-ENERGIZED FOR CROSSING PURPOSES. THE CONTRACTOR MUST TAKE ALL PRECAUTION NECESSARY TO PROTECT THE CONSTRUCTION CREW. SHOULD THE CONTRACTOR DAMAGE THESE FACILITIES, CONTACT LONGMONT POWER & COMMUNICATIONS (LPC) IMMEDIATELY AT 303-651- 8386. LPC WILL REPAIR THE FACILITIES AND BILL THE DEVELOPER FOR COSTS ASSOCIATED WITH THE REPAIR OR REPLACEMENT OF THE CABLE.
3. STREETS, PARKING SURFACES AND SIDEWALKS CANNOT BE PAVED OR CONCRETE PLACED UNTIL THE CONDUIT CROSSING FOR USE BY LONGMONT POWER & COMMUNICATIONS (LPC) HAS BEEN INSTALLED. THE CONTRACTOR/DEVELOPER IS RESPONSIBLE FOR INSTALLING SLEEVES UNDER ROADWAYS, CULVERTS, DITCHES, SIDEWALKS AND EXISTING UTILITY FACILITIES FOR THE USE OF LPC'S FACILITIES. NOTIFICATION AND COORDINATION OF ANY DITCH CROSSING IS A DEVELOPER RESPONSIBILITY. GENERALLY, THESE INSTALLATIONS ARE TO HAVE A MINIMUM OF THIRTY-SIX INCHES OF COVER AND MUST CONFORM TO LPC STANDARDS.
4. THE CONTRACTOR SHOULD ORGANIZE THE UTILITY CONSTRUCTION FROM DEEPEST TO SHALLOWEST; THIS INCLUDES PRIVATE LIGHTING AND IRRIGATION. SHOULD LPC MOBILIZE FOR CONSTRUCTION EFFORTS AND FIND CONFLICTS WITH SHALLOW INSTALLATIONS, THE SCOPE OF THE PROJECT MAY REQUIRE EXTRA CHARGES.

SANITARY SEWER NOTES:

1. SEWER PIPE SHALL BE GREEN RIGID POLYVINYL CHLORIDE (PVC) ASTM D3034 (< 15") OR ASTM 679 (> 15") WITH WALL THICKNESS SDR 35. ALL SANITARY SEWER PIPES SHALL BE GREEN.
2. ALL LENGTHS OF SEWER LINE SHOWN ON THE MASTER UTILITY PLAN ARE FROM THE CENTER OF MANHOLE TO THE CENTER OF MANHOLE.
3. ALL SANITARY SEWER MANHOLES SHALL RECEIVE A WATERPROOF COATING.
4. ALL SANITARY SEWER MANHOLES ARE 4 FEET IN DIAMETER UNLESS OTHERWISE NOTED.
5. THE CONTRACTOR SHALL INSTALL TEMPORARY PLUGS IN THE MANHOLES AT THE POINTS OF CONNECTION TO THE EXISTING SEWER SYSTEMS. PLUGS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION ACCEPTANCE IS ISSUED, AT WHICH TIME THE CONTRACTOR SHALL REMOVE THEM.
6. SEWER SERVICES ARE TO BE EXTENDED 15 FEET INTO THE LOT AND MARKED WITH A 2X4. SERVICE LOCATIONS ARE TO BE CHISELED INTO THE CONCRETE WALK.
7. THE CONTRACTOR NEXT TO MANHOLES IN OPEN FIELDS OR UNPAVED AREAS SHALL INSTALL UTILITY MARKER SIGNS. THE SIGNS SHALL BE SPACED NO MORE THAN 400 FEET APART.
8. ALL SANITARY SEWER MANHOLES NOT WITHIN 2 FEET OF PAVEMENT SHALL HAVE AN ACCESS PATH. PATH SHALL SUPPORT THE IMPOSED LOAD OF 60,000 LB VEHICLES IN ALL WEATHER.

NATURAL RESOURCE PROTECTION NOTES:

1. IF CONSTRUCTION ACTIVITIES BEGIN DURING BIRD NESTING SEASON (MARCH 1 - AUGUST 31), THE DEVELOPER SHALL PROVIDE A NEST SURVEY NO SOONER THAN ONE WEEK (7 DAYS) BEFORE ANY STORMWATER CONSTRUCTION ACTIVITY PERMIT (SCAP) IS ISSUED FOR THE PROPERTY.
2. THE DEVELOPER SHALL FOLLOW ALL NESTING BIRD MITIGATION MEASURES RECOMMENDED BY COLORADO PARKS AND WILDLIFE SHOULD NESTING BIDS BE DISCOVERED DURING ANY NEST SURVEY.
3. THE DEVELOPER SHALL INSTALL ALL TREE PROTECTION FENCING SHOWN ON THE PUBLIC IMPROVEMENT PLAN AND CALL TO HAVE IT INSPECTED BEFORE ANY STORMWATER CONSTRUCTION ACTIVITY PERMIT (SCAP) IS ISSUED FOR THE PROPERTY.

Revisions:

No.	Date:
For REVIEW SET NOT FOR CONSTRUCTION	02.04.2022

These drawings are instruments of service provided by Northern Engineering Services, Inc. and are not to be used for any purpose or on any project unless signed and sealed by a Professional Engineer in the employ of Northern Engineering Services, Inc.

NORTHERN ENGINEERING
970.221.4158
northernengineering.com
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631

DATE: 02.04.2022
SCALE: N/A
REVIEWED BY: S. Thomas
PROJECT: 911-016
DESIGNED BY: S. Hollauer
DRAWN BY: S. Hollauer

TERRY LAKE REGIONAL SANITARY SEWER

COVER SHEET & GENERAL CONSTRUCTION NOTES

Sheet
CS1
1 of 8

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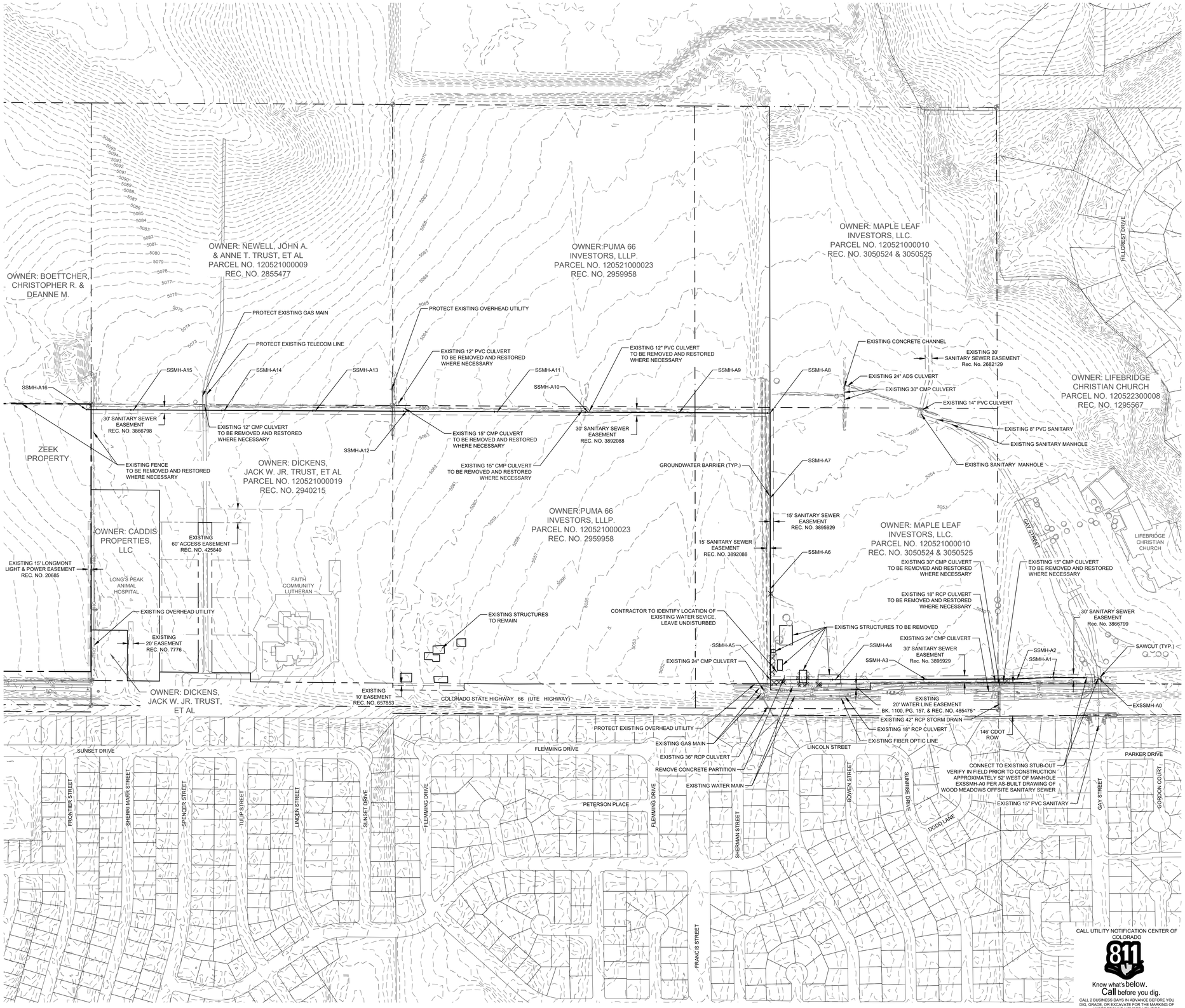
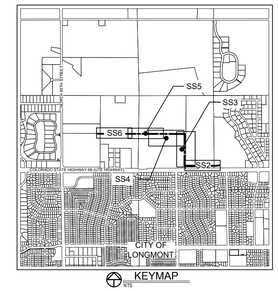


NORTH

200 0 200 400 600 Feet

(IN FEET)
1 inch =200 ft.



LEGEND:

EXISTING CONTOUR	4953	EXISTING WATER VALVE	WV
PROPOSED SANITARY SEWER		EXISTING FIRE HYDRANT	
PROPOSED GROUNDWATER BARRIER		EXISTING WATER METER	W
EXISTING WATER MAIN	W	EXISTING WATER MANHOLE	
EXISTING STORM DRAIN		EXISTING WATER VAULT	
EXISTING ELECTRIC	E	EXISTING WATER SPIGOT	
EXISTING TELEPHONE	T	EXISTING SANITARY MANHOLE	S
EXISTING GAS	G	EXISTING SANITARY CLEANOUT	
EXISTING OVERHEAD UTILITY	OHU	EXISTING STORM MANHOLE	D
EXISTING LOT LINE		EXISTING FLARED END SECTION	
EASEMENT LINE		EXISTING POWER POLE	
EXISTING TREES (TO REMAIN)		EXISTING UTILITY MARKER	
EXISTING TREES (TO BE REMOVED)			

NOTES:

1. THE SIZE, TYPE AND LOCATION OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THESE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE OF ALL UNDERGROUND UTILITIES IN THE AREA OF THE WORK. BEFORE COMMENCING NEW CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR ALL UNKNOWN UNDERGROUND UTILITIES.
2. ALL SANITARY MANHOLES FOR 8"-15" MAINS SHALL BE 4' DIAMETER, USE 5' DIAMETER FOR MAINS GREATER THAN 15".
3. ALL SANITARY MAINS, SERVICES AND UNDERDRAIN SHALL BE PIPE CLASS SDR 35.
4. ALL SANITARY SEWER CONSTRUCTION SHALL BE PER THE CITY OF LONGMONT DEVELOPMENT AND DESIGN STANDARDS, LATEST EDITION.
5. MAINTAIN 10' HORIZONTAL AND 18" VERTICAL MINIMUM SEPARATION BETWEEN ALL SANITARY SEWER MAINS, WATER MAINS & SERVICES.
6. SEWER LINE DIMENSIONS ARE CALCULATED TO THE CENTER OF MANHOLES.
7. REFER TO THE PLAT FOR LOT AREAS, TRACT SIZES, EASEMENTS, LOT DIMENSIONS, UTILITY EASEMENTS, OTHER EASEMENTS, AND OTHER SURVEY INFORMATION.
8. LIMITS OF STREET CUT ARE APPROXIMATE. FINAL LIMITS ARE TO BE DETERMINED IN THE FIELD BY THE CITY OF LONGMONT ENGINEERING INSPECTOR. ALL REPAIRS TO BE IN ACCORDANCE WITH CITY OF LONGMONT STREET REPAIR STANDARDS.
9. CONTRACTOR SHALL ADJUST EXISTING SANITARY SEWER AND STORM SEWER MANHOLES WITHIN THE RIGHT-OF-WAY PER TOWN STANDARDS. ALL MANHOLE RIM ELEVATIONS ARE TO BE ADJUSTED TO ¼" BELOW FINISHED GRADE. IF NECESSARY, CONE SECTIONS SHALL BE ROTATED TO PREVENT LIDS BEING LOCATED WITHIN VEHICLE OR BICYCLE WHEEL PATHS.
10. CONTRACTOR SHALL ADJUST EXISTING FRAME AND GRATES TO FINISHED GRADE PER TOWN STANDARDS.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING DEMOLITION, REMOVAL, REPLACEMENT, AND DISPOSAL OF ALL FACILITIES AND MATERIAL.
12. CONTRACTOR IS ENCOURAGED TO PERFORM DEMOLITION IN A MANNER THAT MAXIMIZES SALVAGE, RE-USE, AND RECYCLING OF MATERIALS. THIS INCLUDES APPROPRIATE SORTING AND STORING. IN PARTICULAR, DEMOLISHED CONCRETE, ASPHALT, AND BASE COURSE SHOULD BE RECYCLED IF POSSIBLE.
13. ALL SYMBOLS ARE ONLY GRAPHICALLY REPRESENTED AND ARE NOT TO SCALE.
14. CONTACT THE PROJECT SURVEYOR FOR ANY INQUIRIES RELATED TO THE EXISTING SITE SURVEY.
15. CONTRACTOR SHALL PROTECT EXISTING OVERHEAD UTILITY POLES IN PLACE DURING CONSTRUCTION.
16. CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE PATTERNS DURING CONSTRUCTION.

APPROVAL BLOCK

ENGINEERING REVIEW
CITY OF LONGMONT

☐ No Exceptions Taken
☐ Make Corrections Noted
☐ Rejected – See Checklist

Review is for general compliance with City of Longmont standards and requirements. The City of Longmont is not responsible for the correctness of design, dimensions, details, quantities and design safety.

REVIEW ENGINEER _____ DATE _____

Revisions:

No.		Date:
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NORTHERN ENGINEERING
970.221.4158
northernengineering.com
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631

DATE: 02.04.2022
SCALE: 1" = 200'
REVIEWED BY: S. Thomas
PROJECT: 911-016
DESIGNED BY: S. Hallauer
DRAWN BY: S. Hallauer

TERRY LAKE REGIONAL SANITARY SEWER
DEMOLITION & OVERALL SANITARY PLAN

Sheet
SS1
2 of 8

DRAWING FILENAME: D:\Projects\911-016\Dwg\Util\911-016_SAN-DS_OVERALL.dwg LAYOUT NAME: SS1 DATE: Feb 04, 2022 - 1:47pm CAD OPERATOR: sterling
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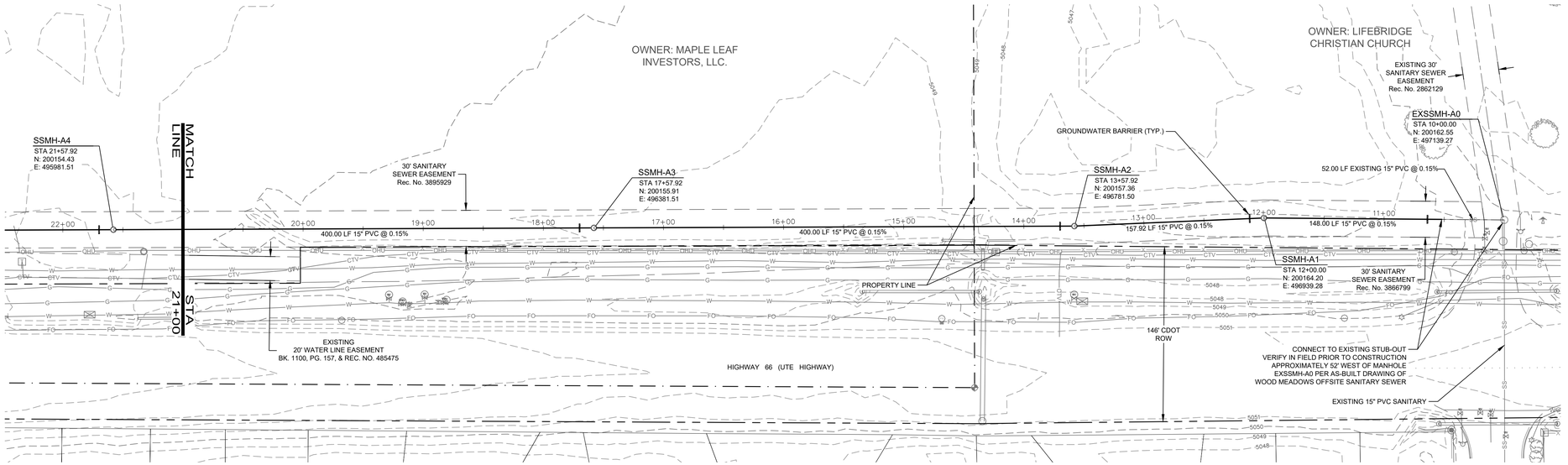
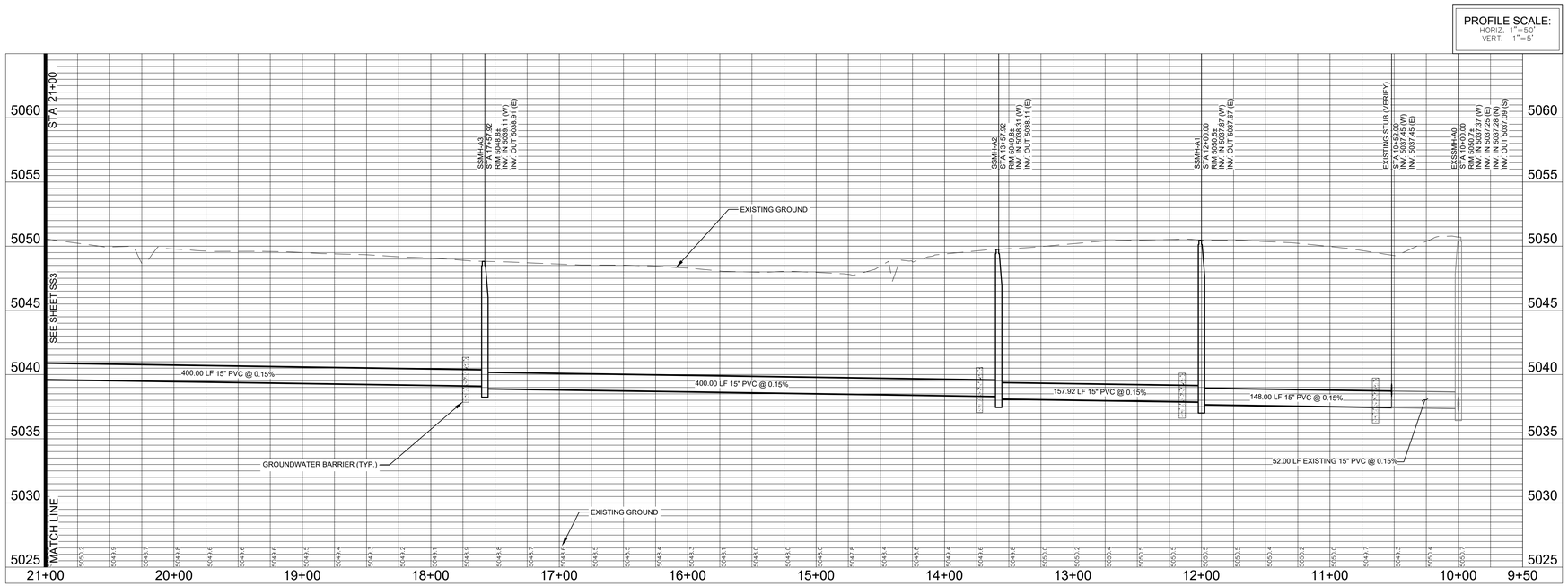


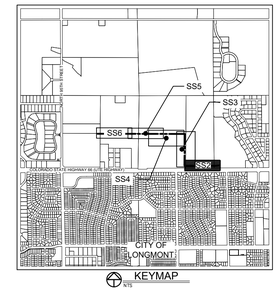
SANITARY LINE A



NORTH

50 0 50 100 150 Feet

(IN FEET)
1 inch = 50 ft.



LEGEND:

- EXISTING CONTOUR
- PROPOSED SANITARY SEWER
- PROPOSED GROUNDWATER BARRIER
- EXISTING WATER MAIN
- EXISTING STORM DRAIN
- EXISTING ELECTRIC
- EXISTING TELEPHONE
- EXISTING GAS
- EXISTING OVERHEAD UTILITY
- EXISTING FENCE
- EXISTING LOT LINE
- EASEMENT LINE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING WATER MANHOLE
- EXISTING WATER VAULT
- EXISTING WATER SPIGOT
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY CLEANOUT
- EXISTING STORM MANHOLE
- EXISTING FLARED END SECTION
- EXISTING POWER POLE
- EXISTING UTILITY MARKER

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APPROVAL BLOCK

ENGINEERING REVIEW
CITY OF LONGMONT

- ☐ No Exceptions Taken
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REVIEW ENGINEER _____ DATE _____

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NORTHERN ENGINEERING
970.221.4158
northernengineering.com
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631

PROJECT: 911-016
DESIGNED BY: S. Hallauer
DRAWN BY: S. Hallauer
DATE: 02.04.2022
SCALE: 1" = 50'
REVIEWED BY: S. Thomas

TERRY LAKE REGIONAL SANITARY SEWER
SANITARY LINE A PLAN & PROFILE

Sheet
SS2
3 of 8

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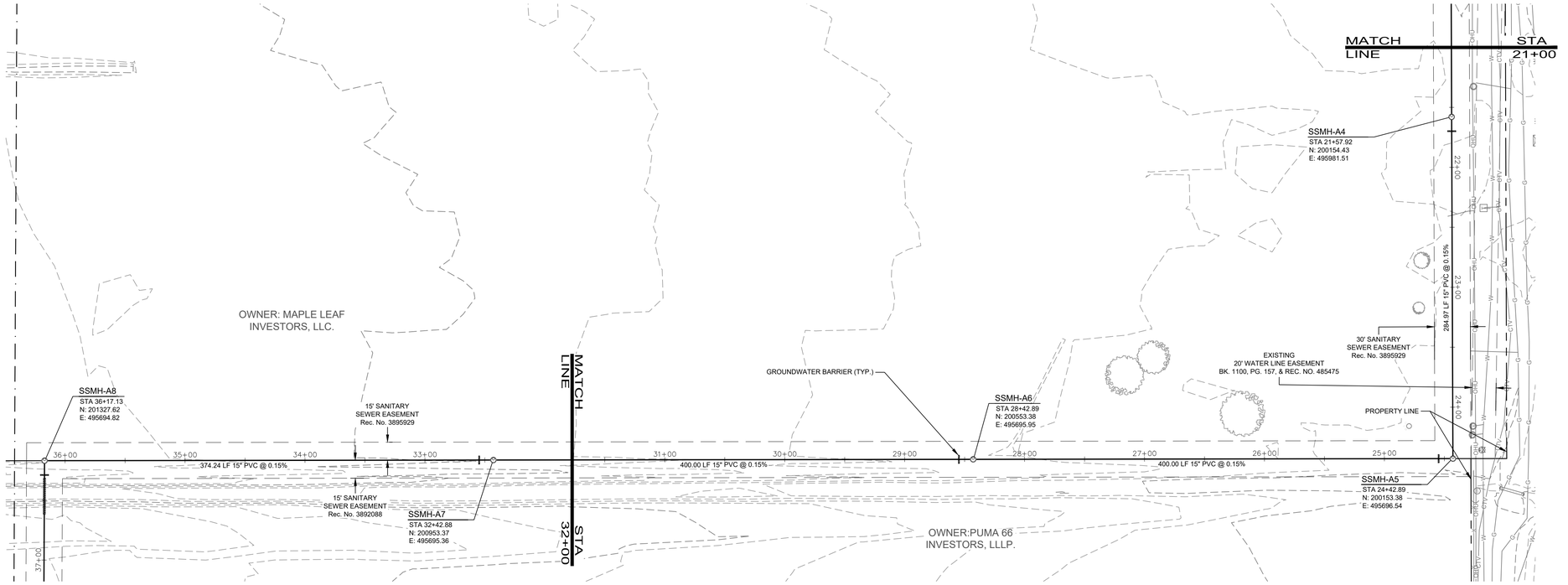
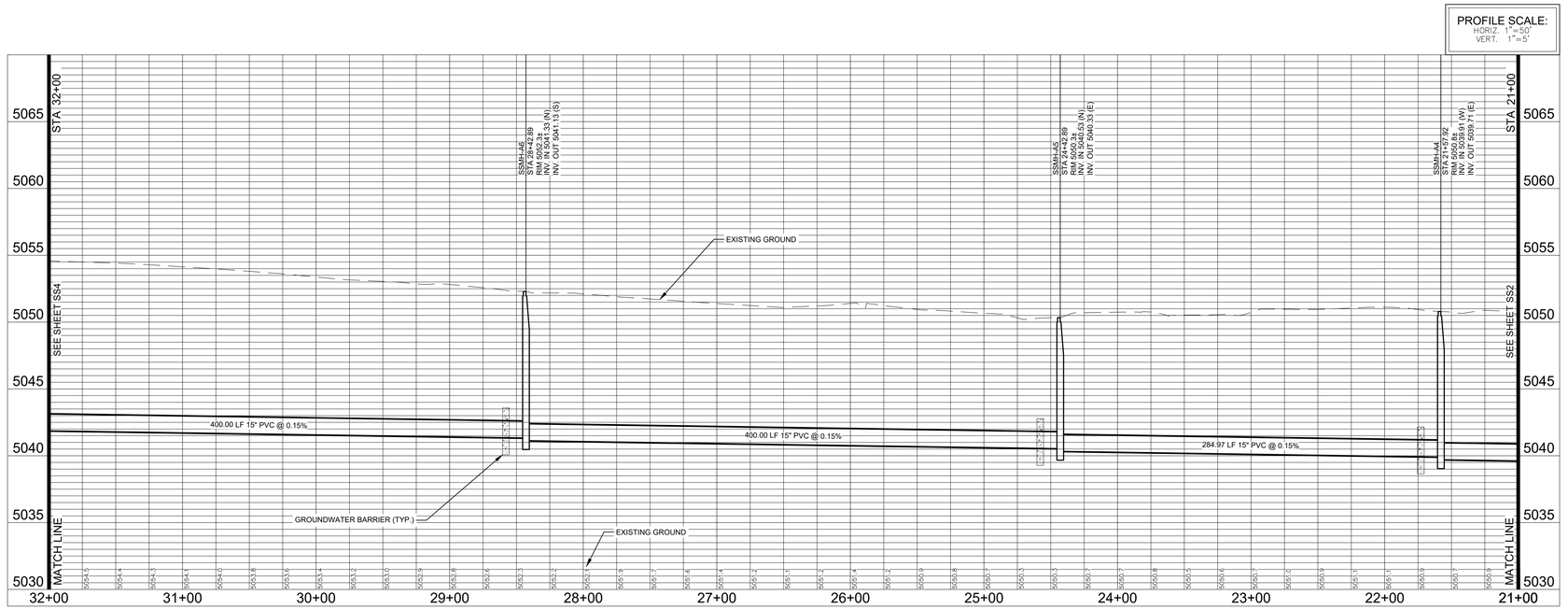


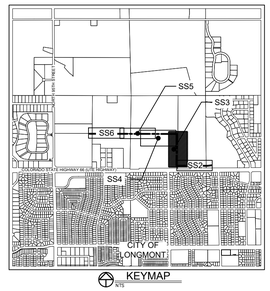
SANITARY LINE A



NORTH

50 0 50 100 150 Feet

(IN FEET)
1 inch = 50 ft.



LEGEND:

EXISTING CONTOUR	4953		
PROPOSED SANITARY SEWER			
PROPOSED GROUNDWATER BARRIER			
EXISTING WATER MAIN	W		
EXISTING STORM DRAIN			
EXISTING ELECTRIC	E		
EXISTING TELEPHONE	T		
EXISTING GAS	G		
EXISTING OVERHEAD UTILITY	OHU		
EXISTING FENCE	X		
EXISTING LOT LINE			
EASEMENT LINE			
EXISTING WATER VALVE	WV	EXISTING SANITARY MANHOLE	S
EXISTING FIRE HYDRANT		EXISTING SANITARY CLEANOUT	CO
EXISTING WATER METER	W	EXISTING STORM MANHOLE	D
EXISTING WATER MANHOLE	W	EXISTING FLARED END SECTION	
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Revisions:
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GREELEY: 820 8th Street, 80631

DATE: 02.04.2022
SCALE: 1" = 50'
REVIEWED BY: S. Thomas
PROJECT: 911-016
DESIGNED BY: S. Hallauer
DRAWN BY: S. Hallauer

TERRY LAKE REGIONAL SANITARY SEWER

SANITARY LINE A
PLAN & PROFILE

Sheet
SS3
4 of 8

DRAWING FILENAME: D:\Projects\911-016\dwg\Utl\911-016_SAN-05.dwg LAYOUT NAME: SS3 DATE: Feb 04, 2022 - 1:43pm CAD OPERATOR: sterling
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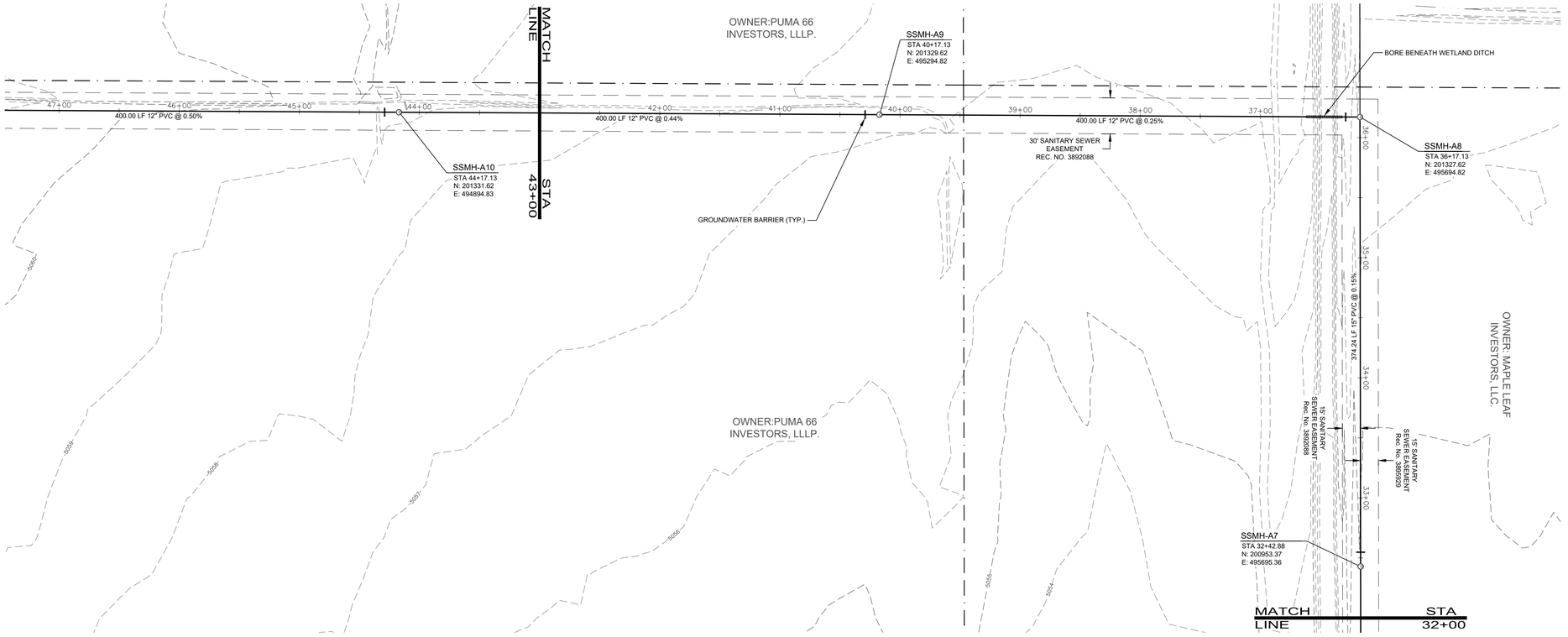
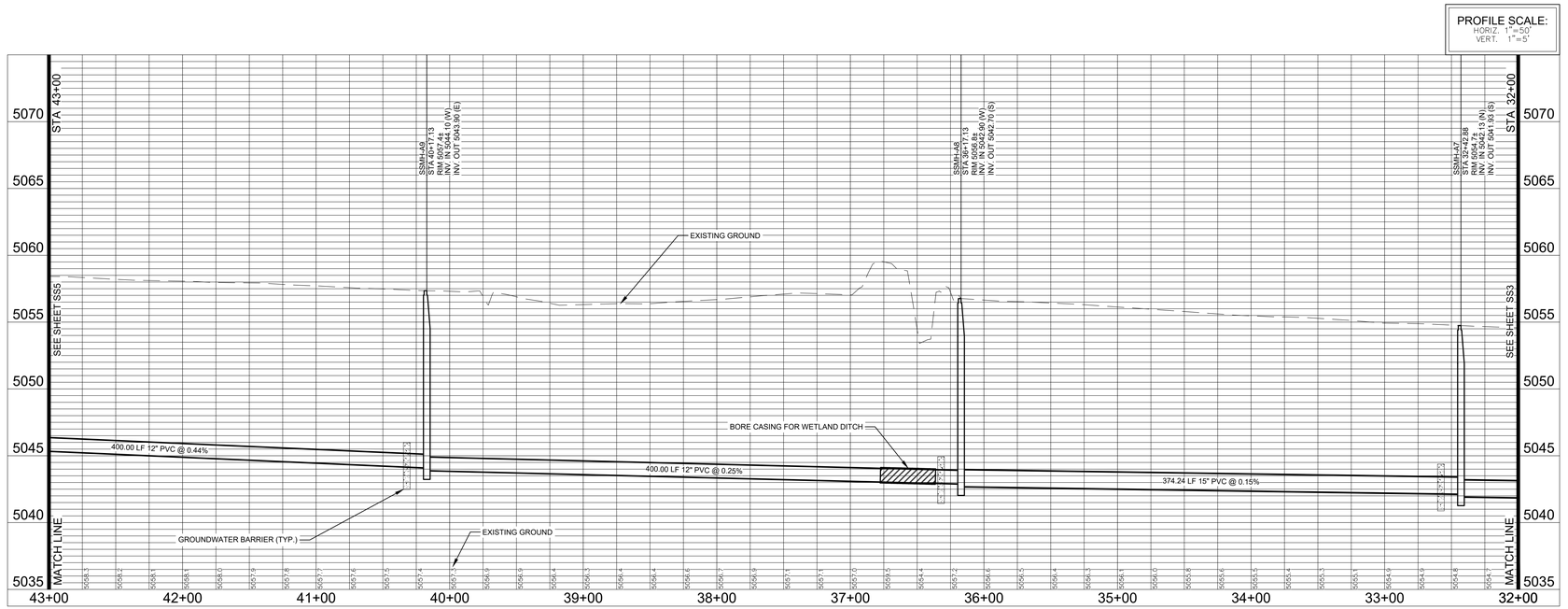
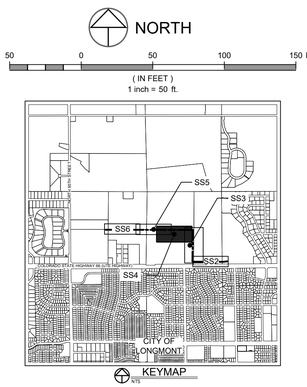


SANITARY LINE A





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- PROPOSED GROUNDWATER BARRIER
- EXISTING WATER MAIN — W
- EXISTING STORM DRAIN
- EXISTING ELECTRIC — E
- EXISTING TELEPHONE — T
- EXISTING GAS — G
- EXISTING OVERHEAD UTILITY — OHU
- EXISTING FENCE — X
- EXISTING LOT LINE
- EASEMENT LINE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING WATER MANHOLE
- EXISTING WATER VAULT
- EXISTING WATER SPIGOT
- EXISTING SANITARY MANHOLE
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GREELEY: 820 8th Street, 80631
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northernengineering.com

PROJECT: 911-016
DESIGNED BY: S. Hallauer
DRAWN BY: S. Hallauer
DATE: 02.04.2022
SCALE: 1" = 50'
REVIEWED BY: S. Thomas

TERRY LAKE REGIONAL SANITARY SEWER

SANITARY LINE A PLAN & PROFILE

Sheet
SS4
5 of 8

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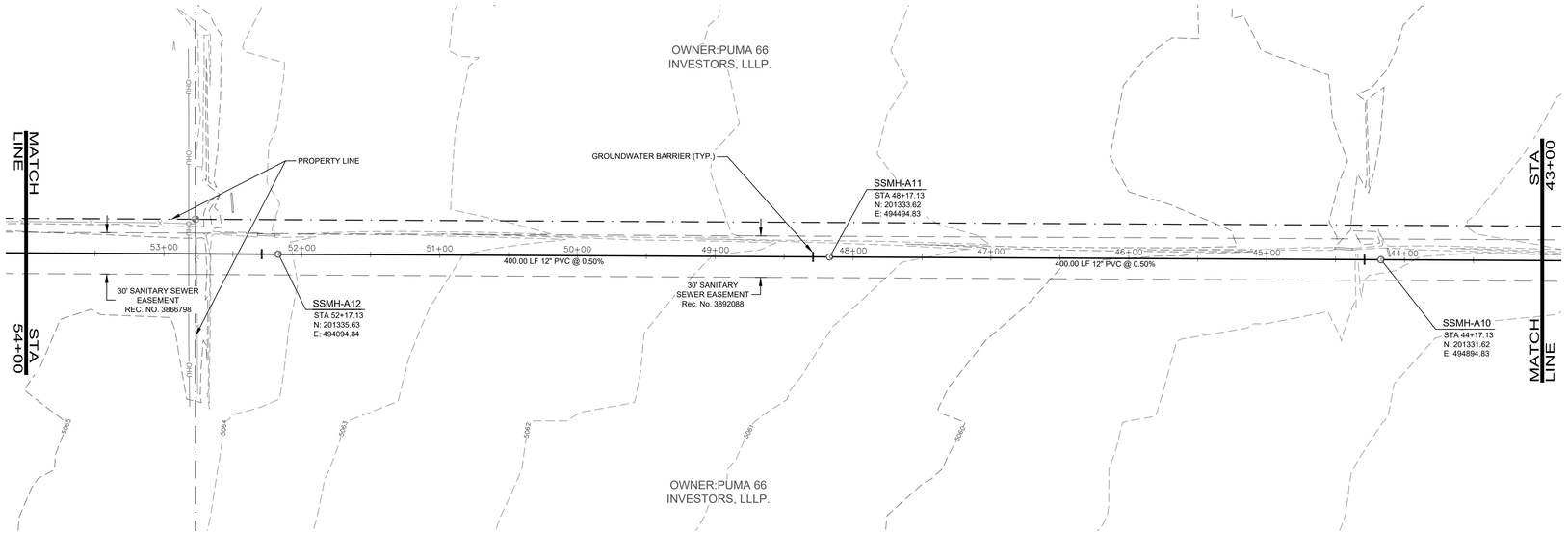
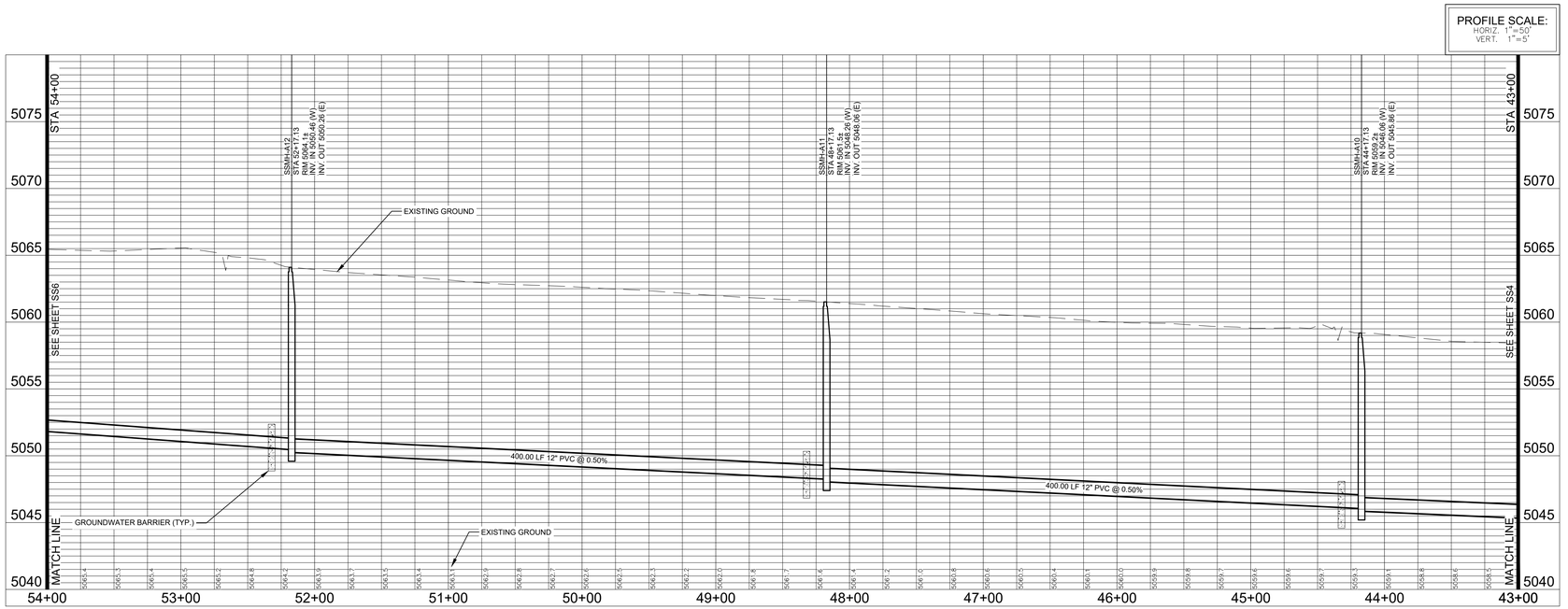


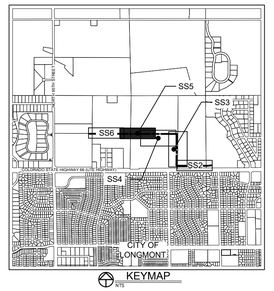
SANITARY LINE A



NORTH

50 0 50 100 150 Feet

(IN FEET)
1 inch = 50 ft.



LEGEND:

EXISTING CONTOUR	4953		
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PROPOSED GROUNDWATER BARRIER			
EXISTING WATER MAIN	W		
EXISTING STORM DRAIN			
EXISTING ELECTRIC	E		
EXISTING TELEPHONE	T		
EXISTING GAS	G		
EXISTING OVERHEAD UTILITY	OHU		
EXISTING FENCE	X		
EXISTING LOT LINE			
EASEMENT LINE			
EXISTING WATER VALVE	WV	EXISTING SANITARY MANHOLE	S
EXISTING FIRE HYDRANT		EXISTING SANITARY CLEANOUT	SCO
EXISTING WATER METER	W	EXISTING STORM MANHOLE	D
EXISTING WATER MANHOLE	WM	EXISTING FLARED END SECTION	
EXISTING WATER VAULT		EXISTING POWER POLE	
EXISTING WATER SPIGOT		EXISTING UTILITY MARKER	WM WM W

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SANITARY LINE A
PLAN & PROFILE

Sheet
SS5
6 of 8

DRAWING FILENAME: D:\Projects\911-016\dwg\ssh\911-016_SAN-05.dwg LAYOUT NAME: SS5 DATE: Feb 04, 2022 - 1:43pm CAD OPERATOR: sterling
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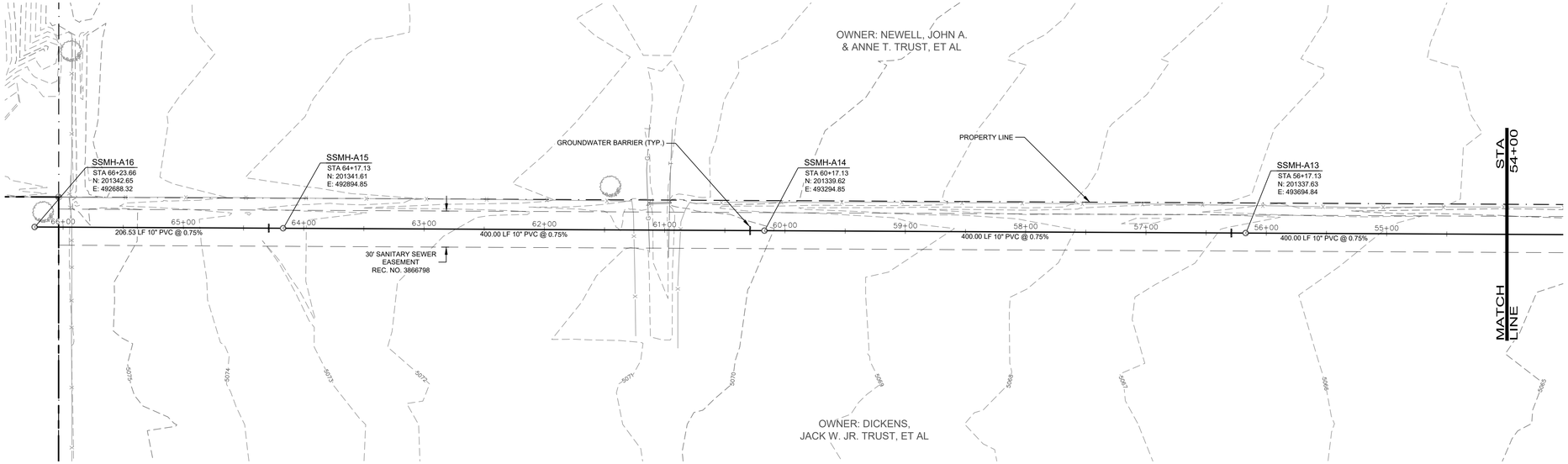
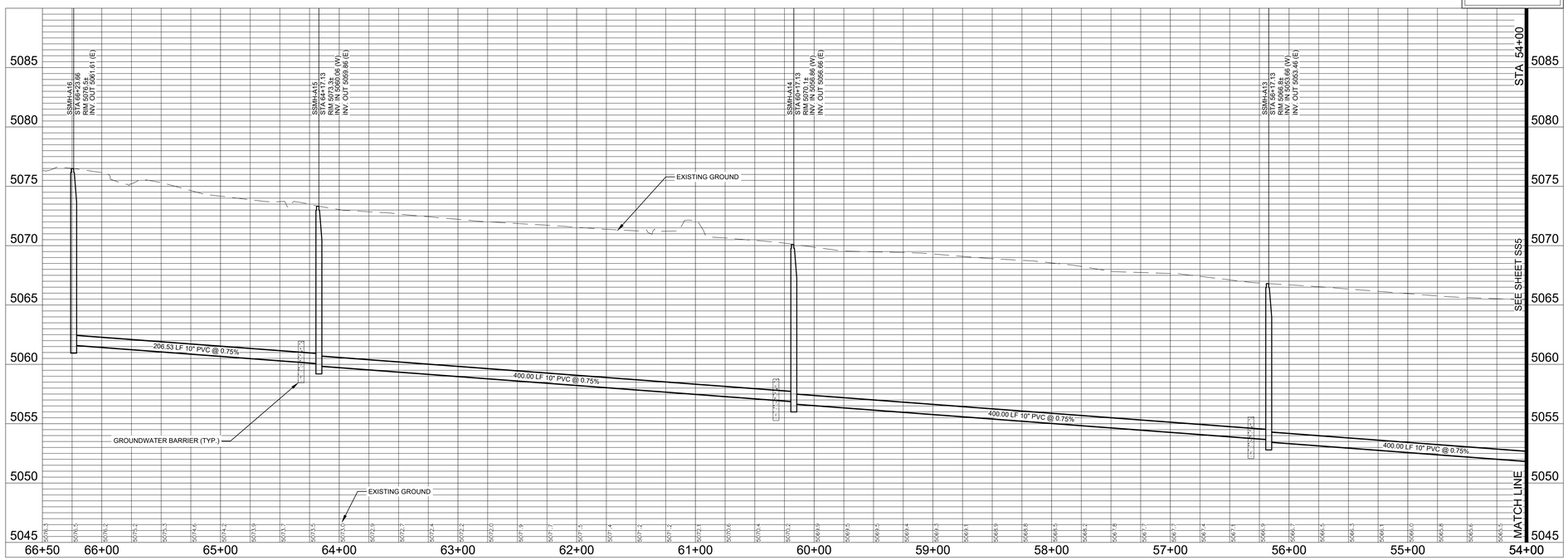
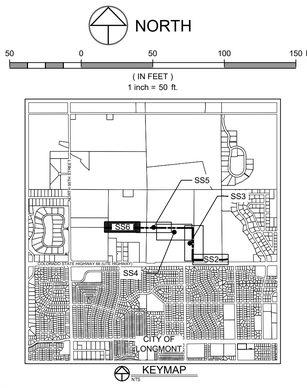


SANITARY LINE A

PROFILE SCALE:
HORIZ. 1"=50'
VERT. 1"=5'





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- EXISTING ELECTRIC — E
- EXISTING TELEPHONE — T
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APPROVAL BLOCK

ENGINEERING REVIEW
CITY OF LONGMONT

- ☐ No Exceptions Taken
- ☐ Make Corrections Noted
- ☐ Rejected – See Checklist

Review is for general compliance with City of Longmont standards and requirements. The City of Longmont is not responsible for the correctness of design, dimensions, details, quantities and design safety.

REVIEW ENGINEER _____ DATE _____

Revisions:

No.	Date:
	REVIEW SET NOT FOR CONSTRUCTION 02.04.2022

These drawings are instruments of service provided by Northern Engineering Services, Inc. and are not to be used for any purpose or project unless signed and sealed by a Professional Engineer in the employ of Northern Engineering Services, Inc.

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

PROJECT: 911-016	DATE: 02.04.2022
DESIGNED BY: S. Hallauer	SCALE: 1" = 50'
DRAWN BY: S. Hallauer	REVIEWED BY: S. Thomas

TERRY LAKE REGIONAL SANITARY SEWER

SANITARY LINE A
PLAN & PROFILE

Sheet
SS6
7 of 8

DRAWING FILENAME: D:\Projects\911-016\Dwg\Util\911-016_SAN-05.dwg LAYOUT NAME: SS6 DATE: Feb 04, 2022 - 1:43pm CAD OPERATOR: sterling
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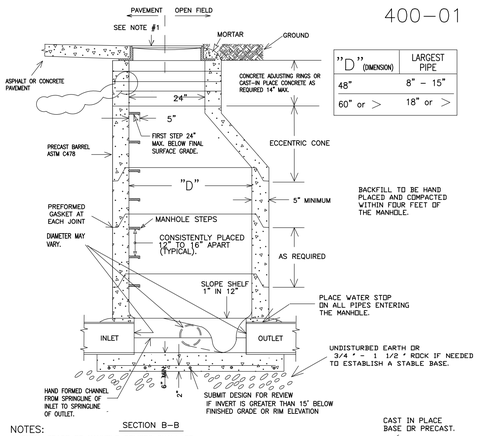
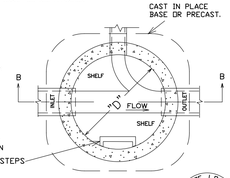
400-01



"D" (DIMENSION)	LARGEST PIPE
48"	8" – 15"
60" or >	18" or >

SECTION B–B



NOTES:

1. FINAL GRADE OF MANHOLE COVERS SHALL BE FLUSH TO 1/4 " BELOW FINAL STREET GRADE.
2. ALL CHANNELS FLOWING INTO THE MAIN STREAM OF THE SEWER SHALL BE HAND FORMED INTO THE FLOW.
3. STEPS SHOULD BE PLACED OVER THE SHELF NOT OVER THE FLOW. NO STEPS ALLOWED IN THE ADJUSTING RING AREA.
4. MH COVER & FRAME SHALL BE DEETER #1258 OR APPROVED EQUAL, WITH LETTERING DEPICTING "WATER", "SANITARY" OR "STORM".
5. NO 4" SERVICE LINES MAY ENTER MANHOLE.
6. THE PHYSICAL CONNECTION TO THE EXISTING SANITARY SEWER SYSTEM SHALL BE PLUGGED UNTIL CONSTRUCTION ACCEPTANCE HAS BEEN ISSUED FOR THE PROJECT.

REV 4-12-96 JR
REV 1-14-02 JR

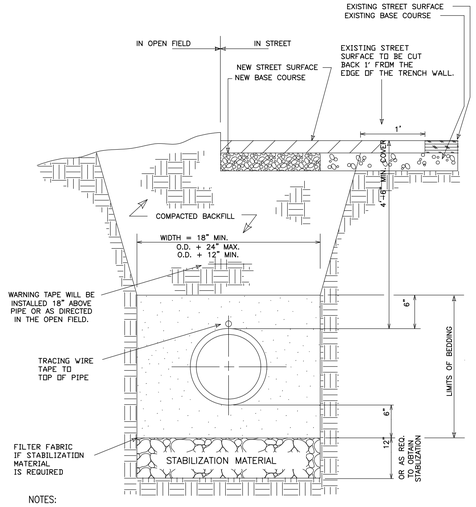
STANDARD MANHOLE DETAIL
N.T.S.

100
D1

STANDARD MANHOLE

NOT TO SCALE

100-01



NOTES:

1. BACKFILL TO BE COMPACTED TO 95% OF A.S.T.M. D-698 DENSITY IN ALL AREAS, UNLESS OTHERWISE NOTED.
2. 14 AWG. SOLID COPPER WIRE SHALL BE INSTALLED AS TRACING WIRE ABOVE ALL NON METALIC POTABLE WATER PIPES. THE WIRE SHALL BE CONNECTED AND COME TO THE SURFACE AS DIRECTED.
3. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.

3-19-93 BM
6-24-97 JR

TRENCH DETAIL
N.T.S.

101
D1

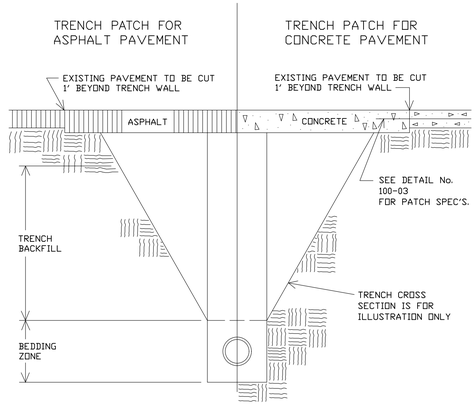
TRENCH BEDDING REQUIREMENTS

NOT TO SCALE

100-02

TRENCH PATCH FOR ASPHALT PAVEMENT

TRENCH PATCH FOR CONCRETE PAVEMENT



STREET CLASSIFICATION PER L.A.C.P.			
	LOCAL	COLLECTOR	ARTERIAL
CONCRETE	10"	10"	10"
FULL DEPTH ASPHALT	6"	8"	11"

MIN. REQ'D. THICKNESS OR MATCH EXIST. THICKNESS IF GREATER.

NOTES: ASPHALT SHALL BE USE TO PATCH ASPHALT
6" CONCRETE SHALL BE USED TO PATCH CONCRETE.

REVISED 11/5/2003
3-19-93 BM

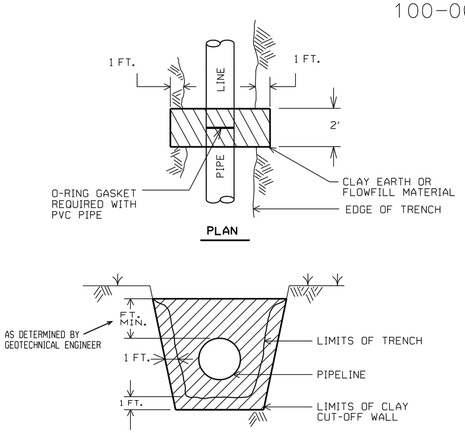
TYPICAL ASPHALT & CONCRETE TRENCH PATCH
N.T.S.

102
D1

ASHPALT/CONCRETE PATCH

NOT TO SCALE

100-06



NOTES:

1: CLAY WALL EXTENDS A MINIMUM OF 12" INTO UNDISTURBED SOIL ON EACH SIDE AND ON BOTTOM OF TRENCH.

2: CLAY MATERIAL TO BE CLASSIFIED AS CL, CH, OR OH.

3: APPROVED FLOW-FILL MATERIAL MAY BE USED INSTEAD OF CLAY MATERIAL.

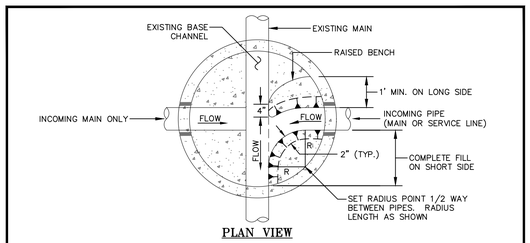
CUT-OFF WALL
N.T.S.

3-19-93 BM
6-25-97 JR

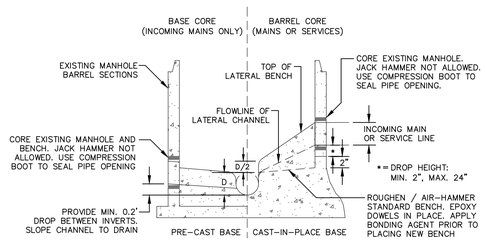
103
D1

GROUNDWATER BARRIER

NOT TO SCALE



PLAN VIEW



SECTION VIEW

NOTES:

1. CHANNELS SHALL BE CONCRETE, SHAPED TO FULLY CONTAIN THE FULL HEIGHT OF THE INCOMING PIPE AT THE MANHOLE WALL, SLOPING TO HALF THE PIPE DIAMETER AT THE MAIN CHANNEL.
2. INVERT SHAPING SHALL DIRECT FLOW TOWARD THE DOWNSTREAM END OF THE MANHOLE.
3. DROP MANHOLES SHALL BE USED FOR INVERT DROPS GREATER THAN 24" ABOVE THE MAIN CHANNEL BENCH.
4. CONCRETE SHALL BE READY-MIXED MIN. 3000 PSI. SLUMP AS REQUIRED.
5. **PROJECT SPECIFIC NOTE: CONTRACTOR TO VERIFY EXISTING STUB AT MANHOLE EXSSMH-A6 FOR EXISTING SIZE AND SLOPE. IF IT IS FOUND THAT THE EXISTING STUB DOES NOT CONFORM TO DESIGN SPECIFICATIONS WITHIN THIS PLAN SET, CONTRACTOR SHALL REPLACE EXISTING STUB AND UTILIZE THIS DETAIL FOR THE TIE-IN TO THE EXISTING MANHOLE.**

CONNECTION TO EXISTING MANHOLE

104
D1

CONNECTION TO EXISTING MANHOLE

NOT TO SCALE

CALL UTILITY NOTIFICATION CENTER OF COLORADO

811

Know what's below.
Call before you dig.

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APPROVAL BLOCK

ENGINEERING REVIEW
CITY OF LONGMONT

☐ No Exceptions Taken
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PROJECT: 911-016
DESIGNED BY: S. Hallauer
DRAWN BY: S. Hallauer
DATE: 02.04.2022
SCALE: N/A
REVIEWED BY: S. Thomas

TERRY LAKE REGIONAL SANITARY SEWER

SITE & SANITARY DETAILS

Sheet
D1
8 of 8

DRAWING FILENAME: D:\Projects\911-016\Dwg\Util\911-016_SAN-05.dwg LAYOUT NAME: D1 DATE: Feb 04, 2022 - 1:43pm CAD OPERATOR: sterling
LIST OF XREFS: [911-016_LAD1] [911-016_ACAD] [911-016_Survey Fee] [911-016_ESRI] [911-016_ACS-Border] [911-016_SAN_OFFSITE_Map] [911-016_Keymap]

December 15, 2021

SANITARY SEWER UTILITY REPORT FOR

Terry Lake Regional Sanitary Sewer Chosen Alternative

Longmont, Colorado

Prepared for:
The Landhuis Company
212 N. Wahsatch Ave, Suite 301
Colorado Springs, CO 80903

Prepared by:

301 North Howes Street, Suite 100
Fort Collins, Colorado 80521
Phone: 970.221.4158
www.northernengineering.com

This Drainage Report is consciously provided as a PDF.
Please consider the environment before printing this document in its entirety.
When a hard copy is absolutely necessary, we recommend double-sided printing.

Project Number: 911-016

NORTHERN ENGINEERING

December 15, 2021

Mr. Chris Huffer
City of Longmont
Public Works and Natural Resources

RE: Sanitary Sewer Utility Report for
Terry Lake Regional Sanitary Sewer

Dear Chris:

Northern Engineering is pleased to submit this Sanitary Sewer Utility Report for your review. This report will document the calculations completed for a regional sewer planned for the Terry Lake neighborhood.

This report has been prepared in accordance with the guidelines set forth by the City of Longmont. We understand that review by the agencies is to assure general compliance.

I understand the City's acceptance does not relieve the Design Engineer's responsibility for errors, omissions, or design deficiencies for which the City is held harmless.

If you should have any questions as you review this report, please feel free to contact us.

Sincerely,
NORTHERN ENGINEERING SERVICES, INC.

Stephanie Thomas, PE
Project Engineer

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E. Network Analysis 9
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APPENDIX A - Terry Lake Regional Sewer Basin Demand Calculations
APPENDIX B - Terry Lake Regional Sewer Option #1 Exhibit
APPENDIX C - Terry Lake Regional Sewer Option #1 Capacity Calculations
APPENDIX D - Terry Lake Regional Sewer Option #2 Exhibit
APPENDIX E - Terry Lake Regional Sewer Option #2 Capacity Calculations

I. PROJECT DESCRIPTION AND LOCATION

A. Project Description

1. The Terry Lake Neighborhood is located north of Highway 66, south of Vermillion Road, west of N. 107th Street, and east of N. 95th Street (Hover Street).

2. The "Envision Longmont Multimodel and Comprehensive Plans" adopted June 28, 2016 shows zoning for the Terry Lake Neighborhood as Parks, Greenways and Openspace, Public/Quasi-Public, Mixed-Use Corridor, and Single Family Neighborhood, and Rural Neighborhood.

3. This area will also conform to the requirements set forth in the Highway 66 Framework Master Plan adopted in 2006 as indicated in Envision Longmont. This report allows for development of this area with densities up to 25 units/acre.

4. The Terry Lake Neighborhood Master Drainage Plan has been completed and anticipates between 40 and 55 acres of regional detention ponds within the developable area. Ultimate developed densities will be modified accordingly.

5. At the time of this report, the Terry Lake Neighborhood currently includes the following developments:
    a. Willis Heights (currently served by individual septic)
    b. Wood Meadows (currently served by the NCNUPUD 8" sewer)
    c. Life Bridge Church ((currently served by the NCNUPUD 8" sewer)
    d. Longs Peak Animal Hospital (currently served by an existing 8" sewer extended from Spencer Street)
    e. Faith Community Lutheran Church (currently served by an existing 8" sewer extended from Spencer Street)

B. Location

1. The Terry Lake Neighborhood is located north of Highway 66, south of Vermillion Road, west of N. 107th Street, and east of N. 95th Street (Hover Street).

2. Land Use/Vicinity Map

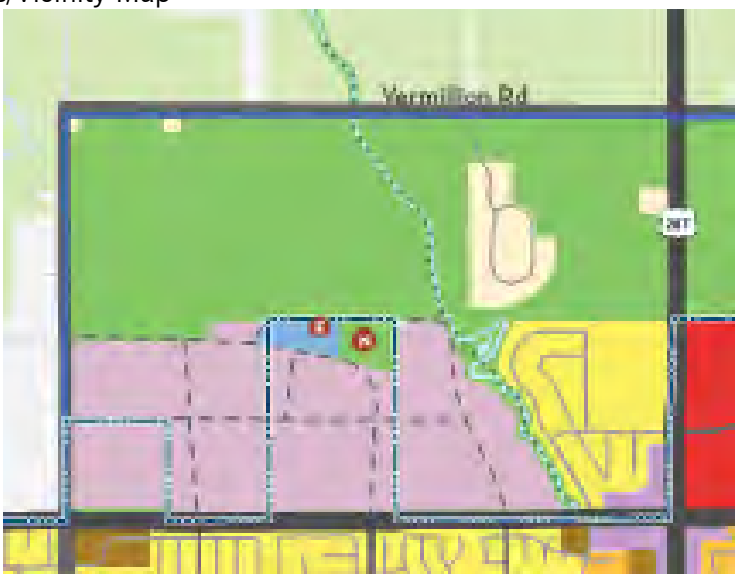

Figure 1 – Land Use/Vicinity Map

NORTH

II. SANITARY SEWER COLLECTION SYSTEM

A. Regulations

The sanitary sewer collection system was designed and analyzed based on guidance from the City of Longmont, and the regulations and design criteria set forth in the City of Longmont 2007 Design Standards and Construction Specifications and Title 15 of the Longmont Municipal Code.

B. Design Criteria

- Manning's Roughness Coefficient: 0.013
- Maximum d/D: 0.8
- Sewer Infiltration: 15% of average daily flow.
- Medium Density Residential Design Flow:

Sanitary Sewer Design Flow

Land Use	Occupancy	Average Day Wastewater Flows
Residential	2.2 persons	75 gpcd

- Non-Residential Design Flow:

Commercial/Office/Congregational Flow Factors

Type of Establishment	Flow Factor
Office	200 gal /1000 SF of Building / day
Commercial	1833 gal / acre / day
Congregation	75 gal /1000 SF of Building / day

- Peak Factor:

$$\frac{18+\sqrt{P}}{4+\sqrt{P}}$$

P = Population in thousands

C. Existing Infrastructure and Proposed Network

1. The existing sanitary sewer connection planned to serve the majority of undeveloped area is located at the intersection of Gay Street and Highway 66. The existing manhole was built with a 15" stub to the west and east for future sanitary flows and an 8" sewer to the north to serve the existing Life Bridge Church and the Wood Meadows Neighborhood. The available capacity at this manhole is the constraint for the total buildout of the area.

2. An existing 8-inch sewerline is stubbed north of Highway 66 from Spencer Street. This extension is planned to serve the Longs Peak Animal Hospital, the Faith Community Lutheran Church and 6 undeveloped lots. The City of Longmont has indicated that there is very little additional capacity available in this sewerline based on downstream constraints.

3. This report details the two routing options that were considered for the regional sewer that would serve the majority of the undeveloped Terry Lake Neighborhood from the existing Gay Street sewer extension. Both alignments are generally oriented flowing from west to east and connecting at the existing sanitary sewer manhole at Highway 66 and Gay Street.

4. The Option 1 alignment traverses along the northern boundary of the Dickens property, crosses the Puma 66 property from west to east, traverses south along the Puma 66 eastern property line, crosses the Highway 119 Holdings property from

east to west and connects to the existing sanitary sewer manhole on the Life Bridge Church Property. This alignment is constrained by 3 existing buildings on the Highway 119 Holdings property. These existing buildings would likely be removed with development of the property. In this option, a separate local branch would need to be built as a part of the Puma 66 property development to serve the southern portion of the Puma 66 property. The exact alignment of this option will be further refined with design, easement acquisition, and coordination with landowners. As such, the design may allow the sewer to run straight along Highway 119 without any jogs around existing buildings. **This option was chosen by the existing property owner and future developers.**

5. The Option 2 alignment traverses east along the northern boundary of the Dickens property, turns south along the Puma 66 western property line, turns east along the Puma 66 southern boundary, jogs north at the Highway 119 western property line to avoid the existing buildings on the Highway 119 property, continues east across the Highway 119 Holdings property and connects to the existing sanitary sewer manhole on the Life Bridge Church Property. This alignment is constrained by 3 existing buildings on the Highway 119 Holdings property and existing buildings on the Puma 66 Investments property. These existing buildings would likely be removed with development of the property. In this option, all properties will have direct access to the regional sewer. The exact alignment of this option will be further refined with design, easement acquisition, and coordination with landowners. As such, the design may allow the sewer to run straight along Highway 119 without any jogs around existing buildings. **This option was not chosen by the existing property owners and future developers.**

D. Basin Demand Analysis

The Terry Lake Neighborhood Area was split into 11 sanitary sewer basins to aid in demand calculations and sewer capacity calculations. The basin boundaries were determined by property ownership and point of connection to the sewer system. Each basin was assigned sewer demand for the existing development and/or future development planned for the basin.

The existing 15" sewer at Highway 66 and Gay Street was designated as the Design Point 1. This existing sewer will max at a 0.8 d/D. This equates to a 2.44 cfs allowable peak flow in this sewer. This existing sewer capacity was utilized to calculate the total future development demand allowable.

A calculation was done to determine the available capacity of the sewer at Design Point 1 to serve the existing developments of the existing Wood Meadows neighborhood and the Life Bridge Church property and future developments planned for the rest of the basins. Based on this design point, the future residential development properties would be allowed a density of 9.74 SFE/acre and a future office development of 30,000 square feet would be allowed on the Life Bridge property. The combination of these planned developments and the existing developments would create a sewer peak demand of 2.44 cfs (which matches the allowable peak flow).

Each undeveloped property, except the Life Bridge property, is shown with a total SFE (single-family equivalent) based on the total property area and an approximate density. Any future development on the Life Bridge property was given an office designation based on guidance from the City.

The designation of single-family equivalent (SFE) measurement allows for residential and non-residential development as long as the total flow equates to no more than the single-family equivalent (SFE) peak flow.

This report assumes a uniform application of sewer capacity but higher density may be allowed if lower basins develop at a less intensive manner. Please see Appendix A for a detailed calculation of planned demand per sewer basin.

Basin Area Designation	Ownership	Area	Existing Residential Units	Future Residential Units	Existing Congregation Area	Future Office Area
		Acre	Single Family Equivalent (SFE)	Single Family Equivalent (SFE)	SF of Building	SF of Building
Basin 1	Dirks and Boettcher	40		390		
Basin 2	Zeek	35		341		
Basin 3	Newell	41		399		
Basin 4	Dickens	15		146		
Basin 5	Dickens	4		39		
Basin 6	Puma 66 Investments	50		487		
Basin 7	Puma 66 Investments	45		438		
Basin 8	Wood Meadows	35	20			
Basin 9	Highway 119 Holdings	30		292		
Basin 10	Highway 119 Holdings	27		263		
Basin 11	Life Bridge Church	35			90,000	30,000

E. Network Analysis

The sanitary sewer capacities were calculated at six design points for both alignment options. The results of the analyses are shown below. Exhibits and detailed calculations are provided in the appendix.

Table 1 – Option 1 Sanitary Sewer Analysis Results

Design Point	Contributing Basins	Pipe Size (inches)	Total Peak Flow (cfs)	d/D
1	1-11	15	2.44	0.80
2	1-7	15	1.94	0.66
3	1-6	15	1.60	0.58
4	1-4	12	1.18	0.62
5	1-2	10	0.71	0.42
6	8-9	8	0.32	0.38

Table 2 – Option 2 Sanitary Sewer Analysis Results

Design Point	Contributing Basins	Pipe Size (inches)	Total Peak Flow (cfs)	d/D
1	1-11	15	2.44	0.80
2	1-7	15	1.94	0.66
3	1-5	15	1.21	0.49
4	1-4	12	1.18	0.62
5	1-2	10	0.71	0.57
6	8-9	8	0.32	0.45

F. Network Analysis for Pre-Buildout

As with all regional infrastructure, this regional sewer line will not be operating at full capacity until buildout of the Terry Lake neighborhood is complete. During the time prior to full buildout, portions of the regional sanitary sewer are expected to see flow velocities below 2 ft/s. 2 ft/s is the standard at which the sewer is expected to self-scour.

The portions of the proposed regional sewer that would be of concern prior to buildout are the 12" and 15" stretches of proposed sewer due to their flatter slopes and larger pipe size.

A calculation was completed to determine the velocity of the flow in the 15" proposed sewer if only the Zeek property were developed. In this case, the 15" sewer would see flow velocities in the realm of 1.43 ft/s.

Another calculation was completed to determine the number of residential units that will provide scour velocity in the 15" sewer. This sewer would need approximately 1,260 residential units to provide scour velocity of 2 ft/s.

As this is a typical situation for regional infrastructure, it is recommended that a more frequent maintenance schedule be developed for these lines until the flow velocity reaches the self-scouring 2 ft/s.

III. CONCLUSIONS

The proposed Terry Lake Regional Sewer will serve the undeveloped Terry Lake Neighborhood sufficiently.

Basins 1-7 and Basins 9-10 will average a density of 9.74 SFE/acre at buildout. Basin 11 is shown with a potential future office development of 30,000 square feet. These development figures are based on the capacity of the existing 15" sewer crossing Highway 66 at Gay Street.

The preferable alignment option was determined with discussion between the property owners and the City, refined design, and easement acquisition. Option 1 was the chosen route for the sewer.

NORTHERN ENGINEERING

APPENDIX A

TERRY LAKE REGIONAL SEWER BASIN DEMAND CALCULATIONS

Sanitary Sewer Basin Demand Calculations										
Basin Area Designation	Ownership	Area	Existing Residential Units	Future Residential Units	Residential Average Flow	Existing Congregation Area	Congregation Average Flow	Future Office Area	Office Average Flow	Total Average Flow, per Basin
		Acre	Single Family Equivalent (SFE)	Single Family Equivalent (SFE)	GPD (2.2 cap/unit, 75 GPD/unit)	SF of Building	GPD (75 gpd/1000 sf)	SF of Building	GPD (200 gpd/1000 sf)	GPD
Basin 1	Dirks and Boettcher	40	0	390	64,350	0	0	0	0	64,350
Basin 2	Zeek	35	0	341	56,265	0	0	0	0	56,265
Basin 3	Newell	41	0	399	65,835	0	0	0	0	65,835
Basin 4	Dickens	15	0	146	24,090	0	0	0	0	24,090
Basin 5	Dickens	4	0	39	6,435	0	0	0	0	6,435
Basin 6	Puma 66 Investments	50	0	487	80,355	0	0	0	0	80,355
Basin 7	Puma 66 Investments	45	0	438	72,270	0	0	0	0	72,270
Basin 8	Wood Meadows	35	20	0	3,300	0	0	0	0	3,300
Basin 9	Highway 119 Holdings	30	0	292	48,180	0	0	0	0	48,180
Basin 10	Highway 119 Holdings	27	0	263	43,395	0	0	0	0	43,395
Basin 11	Life Bridge Church	35	0	0	0	90,000	6,750	30,000	6,000	12,750

Total Future Residential Units	2,795
Total Future Residential Acreage (acre)	287
Future Residential Units/Acre	9.74

Total Average Flow (GPD)	477,225
Infiltration (15%)	71,584
Peaking Factor	3.16
Total Peak Flow (GPD)	1,578,488
Total Peak Flow (cfs)	2.44
Maximum Allowable Flow in 15" Sewer, 0.15%, 0.8 d/D (cfs)	2.44

NORTHERN ENGINEERING

APPENDIX B

TERRY LAKE REGIONAL SEWER OPTION #1 EXHIBIT
CHOSEN ALTERNATIVE

NORTHERN ENGINEERING

07.06.2021

500 0 500

(IN FEET)
1 INCH = 500 FEET

TERRY LAKE REGIONAL SEWER
LONGMONT, CO
OPTION #1

Basin Area Designation	Ownership	Area	Existing Residential Units	Future Residential Units	Existing Congregation Area	Future Office Area
		Acre	Single Family Equivalent (SFE)	Single Family Equivalent (SFE)	SF of Building	SF of Building
Basin 1	Dirks and Boettcher	40		390		
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Basin 9	Highway 119 Holdings	30		292		
Basin 10	Highway 119 Holdings	27		263		
Basin 11	Life Bridge Church	35			90,000	30,000

BASIN 1
DIRKS AND BOETTCHER PROPERTY
TOTAL AREA (AC): 40
ZONING: MIXED USE CORRIDOR

BASIN 2
ZEEK PROPERTY
TOTAL AREA (AC): 35
ZONING: MIXED USE CORRIDOR

BASIN 3
NEWELL PROPERTY
TOTAL AREA (AC): 41
ZONING: MIXED USE CORRIDOR

BASIN 4
DICKENS PROPERTY
TOTAL AREA (AC): 15
ZONING: MIXED USE CORRIDOR

BASIN 5
DICKENS PROPERTY
TOTAL AREA (AC): 4
ZONING: MIXED USE CORRIDOR

BASIN 6
PUMA 66 INVESTMENTS
TOTAL AREA (AC): 50
ZONING: MIXED USE CORRIDOR

BASIN 7
PUMA 66 INVESTMENTS
TOTAL AREA (AC): 45
ZONING: MIXED USE CORRIDOR

BASIN 8
WOOD MEADOWS
AREA (AC): 35
ZONING: RURAL NEIGHBORHOOD

BASIN 9
HIGHWAY 119 HOLDINGS
TOTAL AREA (AC): 30
ZONING: MIXED USE CORRIDOR

BASIN 10
HIGHWAY 119 HOLDINGS
TOTAL AREA (AC): 27
ZONING: MIXED USE CORRIDOR

BASIN 11
LIFE BRIDGE CHURCH
TOTAL AREA (AC): 35
ZONING: MIXED USE CORRIDOR
LAND USE: OFFICE AND CONGREGATION

HOVER STREET
SPENCER STREET
FRANCIS STREET
GAY STREET
HIGHWAY 66

DP#1 DEPTH: 13.3'
DP#2 DEPTH: 11.4'
DP#3 DEPTH: 14.8'
DP#4 DEPTH: 16.5'
DP#5
DP#6 DEPTH: 14.1'

PROPOSED SEWER
10" SS
12" SS
15" SS
8" SS
EXISTING SEWER
DEPTH: 11.0'
DEPTH: 10.8'

PORTION OF PROPOSED SEWER TO BE LOCATED ON LOT LINE.

EXISTING BUILDINGS TO BE REMOVED

EXISTING BUILDINGS

LONG PEAK ANIMAL HOSPITAL

FAITH COMMUNITY LUTHERAN

D:\PROJECTS\911-016\UTILITY\SANITARY SEWER ANALYSIS\2021-07-06\911-016_REGIONAL SANITARY SEWER ANALYSIS-OPTION 1.DWG

NORTHERN ENGINEERING

APPENDIX C

TERRY LAKE REGIONAL SEWER OPTION #1 CAPACITY CALCULATIONS CHOSEN ALTERNATIVE

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 1-11	Calcs By:	S. Thomas
Design Point:	DP#1 - Existing Manhole at Gay Street		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	2815 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	90000.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	30000.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	477,225 gal/day
Infilltration	15%
Approx. Population	6193
Peaking Factor	3.16

Daily Peak Flow	1,578,488 gal/day
Peak Flow	2.44 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	2.44 cfs

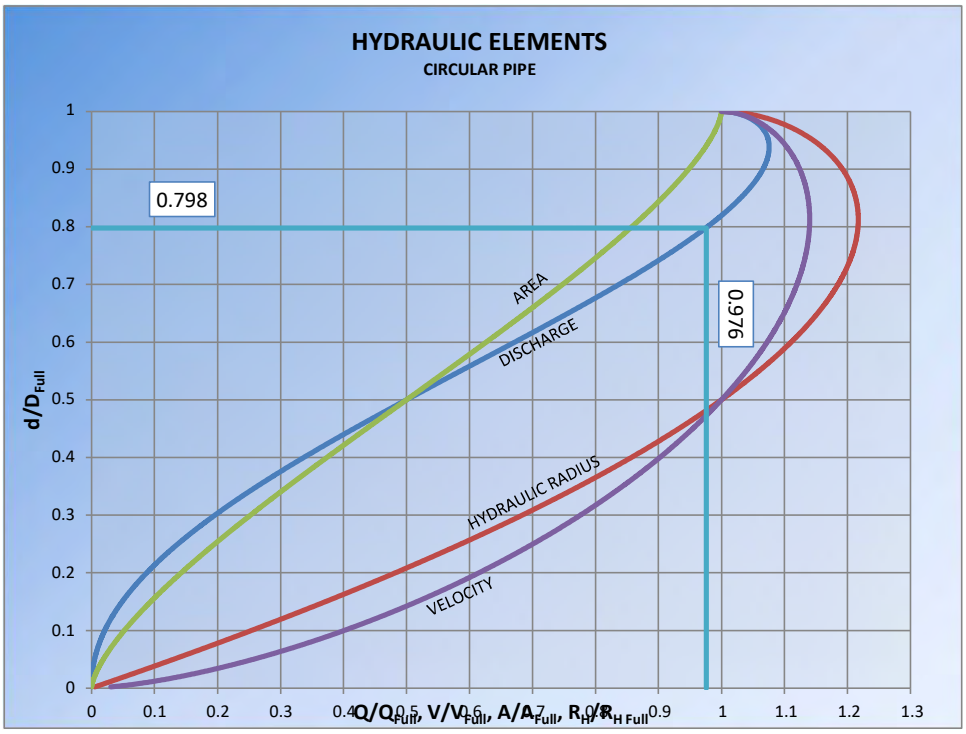
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.9762	V/V_{full}	1.1396	A/A_{full}	0.8556



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.798
Depth	11.970 in
Velocity	2.323 ft/s
Area	151.194 sq. in.

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 1-7	Calcs By:	S. Thomas
Design Point:	DP#2		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	2240 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	369,600 gal/day
Infilltration	15%
Approx. Population	4928
Peaking Factor	3.25

Daily Peak Flow	1,256,949 gal/day
Peak Flow	1.94 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	1.94 cfs

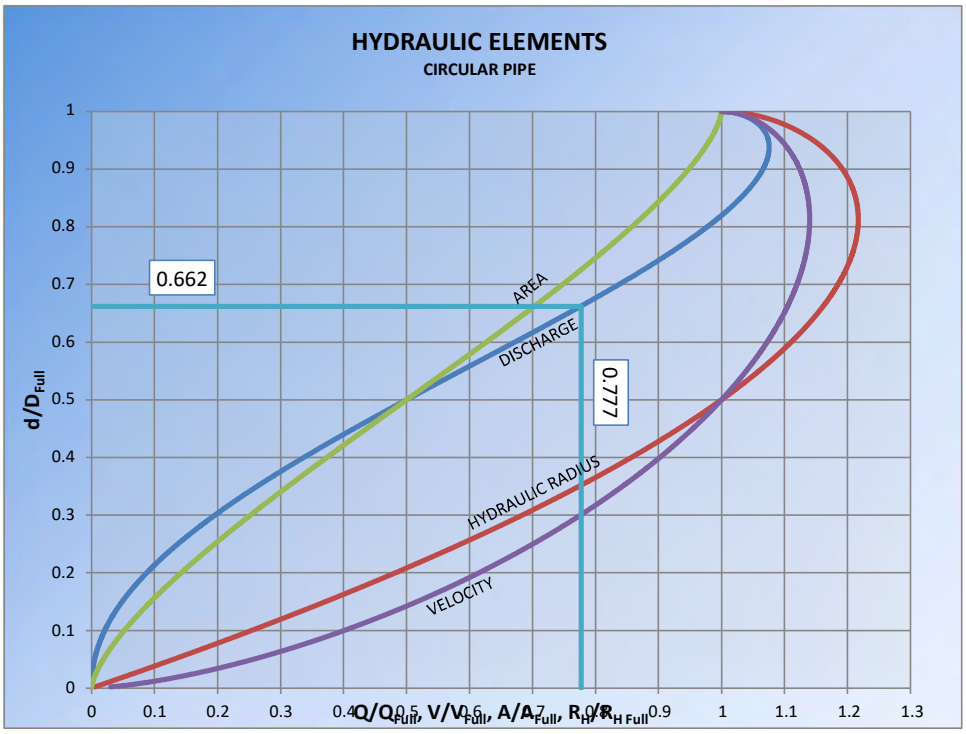
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.7773	V/V_{full}	1.1048	A/A_{full}	0.7026



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.662
Depth	9.930 in
Velocity	2.252 ft/s
Area	124.159 sq. in.

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 1-6	Calcs By:	S. Thomas
Design Point:	DP#3		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	1802 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	297,330 gal/day
Infilltration	15%
Approx. Population	3964
Peaking Factor	3.34

Daily Peak Flow	1,036,732 gal/day
Peak Flow	1.60 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	1.60 cfs

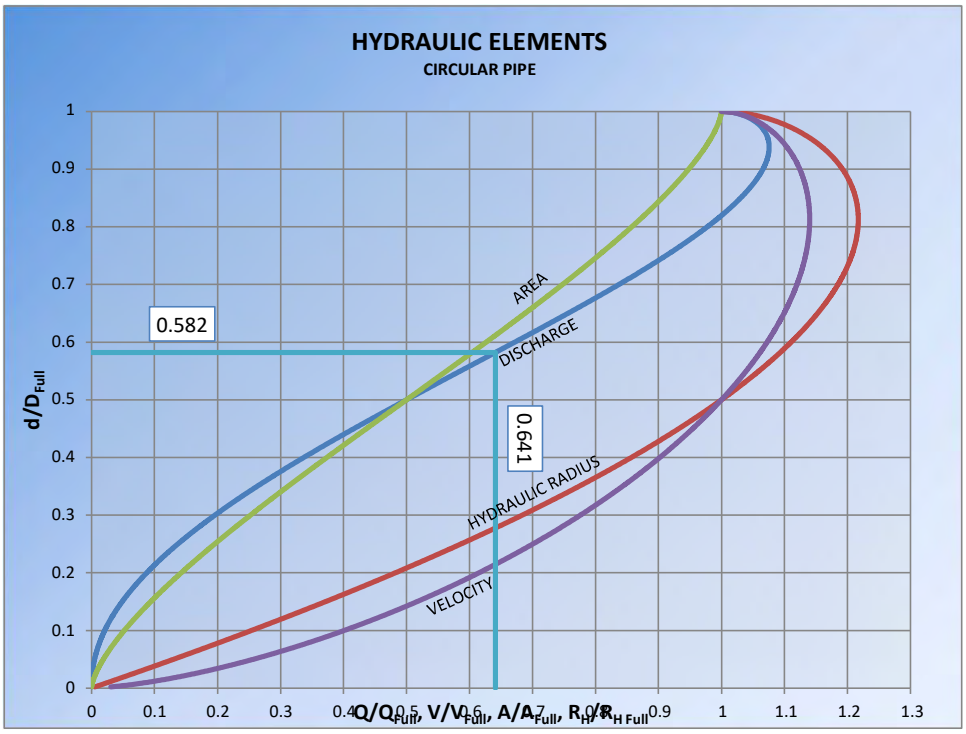
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.6411	V/V_{full}	1.0612	A/A_{full}	0.6039



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.582
Depth	8.730 in
Velocity	2.164 ft/s
Area	106.724 sq. in.

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 1-4	Calcs By:	S. Thomas
Design Point:	DP#4		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	1276 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	210,540 gal/day
Infilltration	15%
Approx. Population	2807
Peaking Factor	3.47

Daily Peak Flow	761,472 gal/day
Peak Flow	1.18 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	1.18 cfs

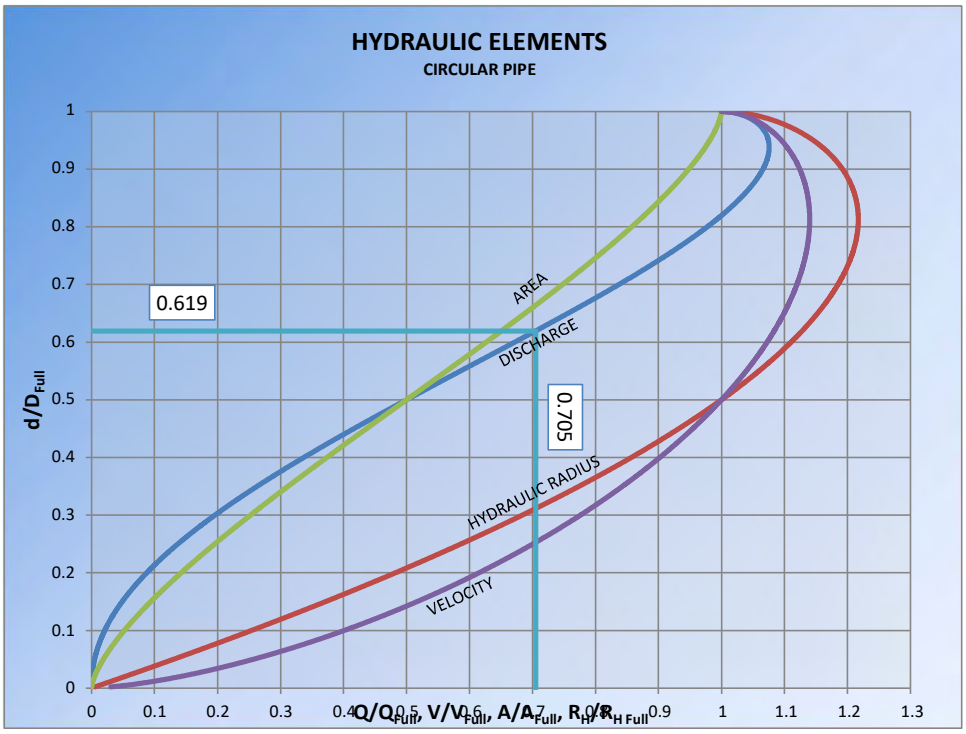
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	12 in
Slope of Pipe	0.0022 ft/ft
n	0.013

Q_{full}	1.671 cfs	V_{full}	2.128 ft/s	A_{full}	0.785 sq. ft.
Q/Q_{full}	0.7050	V/V_{full}	1.0834	A/A_{full}	0.6501



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.619
Depth	7.428 in
Velocity	2.305 ft/s
Area	73.521 sq. in.

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 1-2	Calcs By:	S. Thomas
Design Point:	DP#5		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	731 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	120,615 gal/day
Infilltration	15%
Approx. Population	1608
Peaking Factor	3.66

Daily Peak Flow	459,239 gal/day
Peak Flow	0.71 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	0.71 cfs

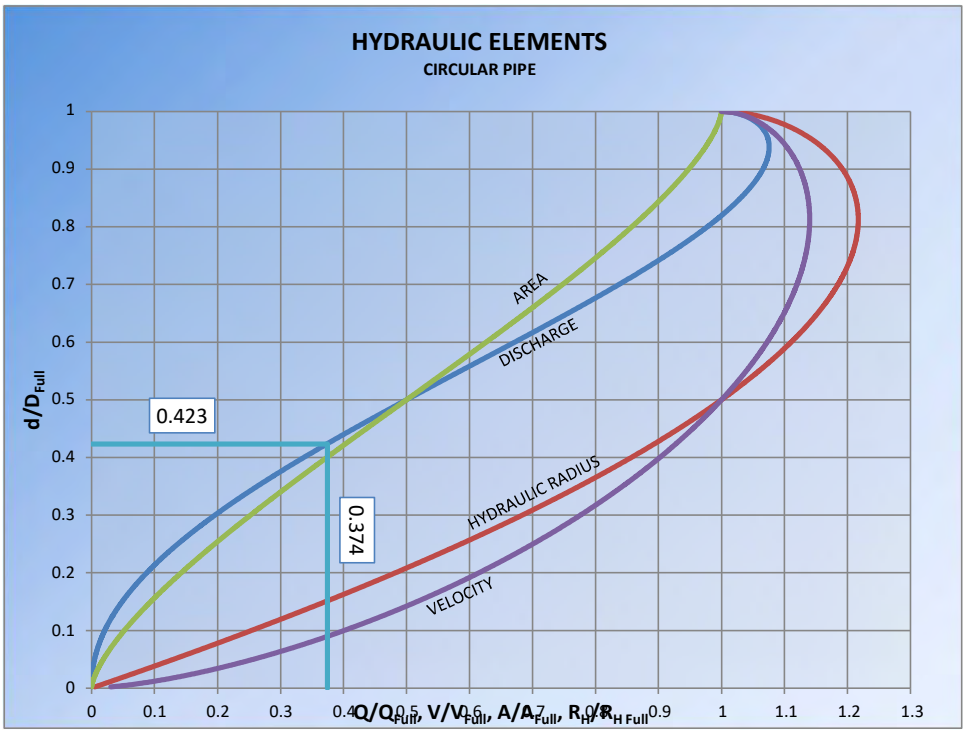
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	10 in
Slope of Pipe	0.0075 ft/ft
n	0.013

Q_{full}	1.897 cfs	V_{full}	3.479 ft/s	A_{full}	0.545 sq. ft.
Q/Q_{full}	0.3745	V/V_{full}	0.9270	A/A_{full}	0.4023



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.423
Depth	4.230 in
Velocity	3.225 ft/s
Area	31.600 sq. in.

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 8-9	Calcs By:	S. Thomas
Design Point:	DP#6		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	312 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	51,480 gal/day
Infilltration	15%
Approx. Population	686
Peaking Factor	3.90

Daily Peak Flow	208,466 gal/day
Peak Flow	0.32 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	0.32 cfs

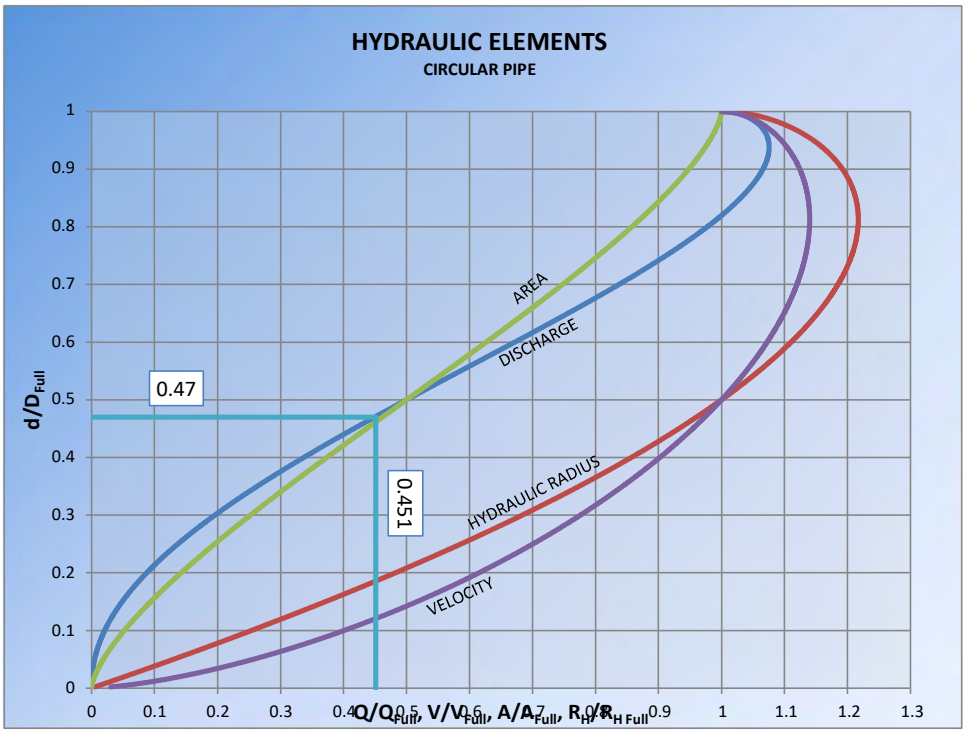
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	8 in
Slope of Pipe	0.0035 ft/ft
n	0.013

Q_{full}	0.715 cfs	V_{full}	2.048 ft/s	A_{full}	0.349 sq. ft.
Q/Q_{full}	0.4512	V/V_{full}	0.9734	A/A_{full}	0.4618



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.47
Depth	3.760 in
Velocity	1.994 ft/s
Area	23.214 sq. in.

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 1-7 Pre-Buildout	Calcs By:	S. Thomas
Design Point:	DP#2		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	341 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	56,265 gal/day
Infilltration	15%
Approx. Population	750
Peaking Factor	3.88

Daily Peak Flow	226,580 gal/day
Peak Flow	0.35 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	0.35 cfs

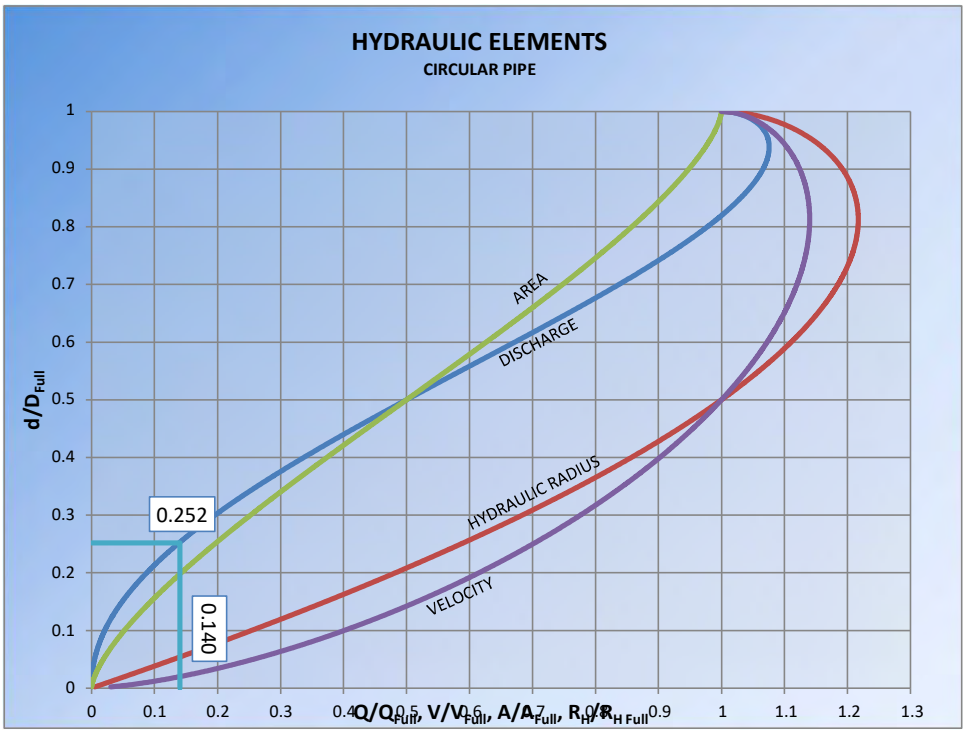
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.1401	V/V_{full}	0.7039	A/A_{full}	0.1977



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.252
Depth	3.780 in
Velocity	1.435 ft/s
Area	34.938 sq. in.

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 1-7 at 2 ft/s	Calcs By:	S. Thomas
Design Point:	DP#2		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	1260 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	207,900 gal/day
Infilltration	15%
Approx. Population	2772
Peaking Factor	3.47

Daily Peak Flow	752,878 gal/day
Peak Flow	1.16 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	1.16 cfs

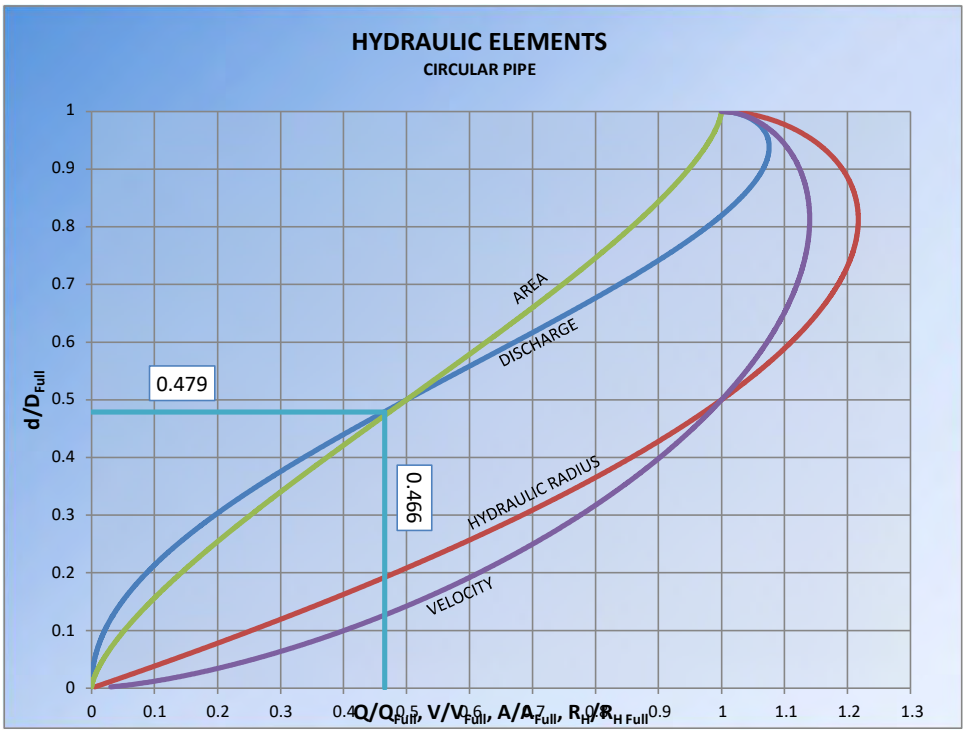
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.4656	V/V_{full}	0.9816	A/A_{full}	0.4733



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.479
Depth	7.185 in
Velocity	2.001 ft/s
Area	83.634 sq. in.

NORTHERN ENGINEERING

APPENDIX D

TERRY LAKE REGIONAL SEWER OPTION #2 EXHIBIT

NORTHERN ENGINEERING

08.16.2018

500 0 500

(IN FEET)
1 INCH = 500 FEET

TERRY LAKE REGIONAL SEWER
LONGMONT, CO
OPTION #2

Basin Area Designation	Ownership	Area	Existing Residential Units	Future Residential Units	Existing Congregation Area	Future Office Area
		Acre	Single Family Equivalent (SFE)	Single Family Equivalent (SFE)	SF of Building	SF of Building
Basin 1	Dirks and Boettcher	40		390		
Basin 2	Zeek	35		341		
Basin 3	Newell	41		399		
Basin 4	Dickens	15		146		
Basin 5	Dickens	4		39		
Basin 6	Puma 66 Investments	50		487		
Basin 7	Puma 66 Investments	45		438		
Basin 8	Wood Meadows	35	20			
Basin 9	Highway 119 Holdings	30		292		
Basin 10	Highway 119 Holdings	27		263		
Basin 11	Life Bridge Church	35			90,000	30,000

BASIN 1
DIRKS AND BOETTCHER PROPERTY
TOTAL AREA (AC): 40
ZONING: MIXED USE CORRIDOR

BASIN 2
ZEEK PROPERTY
TOTAL AREA (AC): 35
ZONING: MIXED USE CORRIDOR

BASIN 3
NEWELL PROPERTY
TOTAL AREA (AC): 41
ZONING: MIXED USE CORRIDOR

BASIN 4
DICKENS PROPERTY
TOTAL AREA (AC): 15
ZONING: MIXED USE CORRIDOR

BASIN 5
DICKENS PROPERTY
TOTAL AREA (AC): 4
ZONING: MIXED USE CORRIDOR

BASIN 6
PUMA 66 INVESTMENTS
TOTAL AREA (AC): 50
ZONING: MIXED USE CORRIDOR

BASIN 7
PUMA 66 INVESTMENTS
TOTAL AREA (AC): 45
ZONING: MIXED USE CORRIDOR

BASIN 8
WOOD MEADOWS
AREA (AC): 35
ZONING: RURAL NEIGHBORHOOD

BASIN 9
HIGHWAY 119 HOLDINGS
TOTAL AREA (AC): 30
ZONING: MIXED USE CORRIDOR

BASIN 10
HIGHWAY 119 HOLDINGS
TOTAL AREA (AC): 27
ZONING: MIXED USE CORRIDOR

BASIN 11
LIFE BRIDGE CHURCH
TOTAL AREA (AC): 35
ZONING: MIXED USE CORRIDOR
LAND USE: OFFICE AND CONGREGATION

HOVER STREET
SPENCER STREET
FRANCIS STREET
GAY STREET
HIGHWAY 66

DP#1 DEPTH: 13.3'
DP#2 DEPTH: 11.4'
DP#3 DEPTH: 14.7'
DP#4 DEPTH: 14.8'
DP#5 DEPTH: 16.5'
DP#6 DEPTH: 11.0'
DEPTH: 10.8'

PROPOSED SEWER
EXISTING SEWER
10" SS
12" SS
15" SS
8" SS

PORTION OF PROPOSED SEWER TO BE LOCATED ON LOT LINE.

EXISTING BUILDINGS
LONG PEAK ANIMAL HOSPITAL
FAITH COMMUNITY LUTHERAN

D:\PROJECTS\911-016\UTILITY\SANITARY SEWER ANALYSIS\911-016_REGIONAL SANITARY SEWER ANALYSIS-OPTION 2.DWG

NORTHERN ENGINEERING

APPENDIX E

TERRY LAKE REGIONAL SEWER OPTION #2 CAPACITY CALCULATIONS

Project Title:	Zeek Property	Date:	August 16, 2018
Project Number:	911-016	Client:	Landhuis
Region:	Option 2: Basins 1-11	Calcs By:	S. Thomas
Design Point:	DP#1 - Existing Manhole at Gay Street		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	2815 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	90000.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	30000.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	477,225 gal/day
Infilltration	15%
Approx. Population	6193
Peaking Factor	3.16

Daily Peak Flow	1,578,488 gal/day
Peak Flow	2.44 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	2.44 cfs

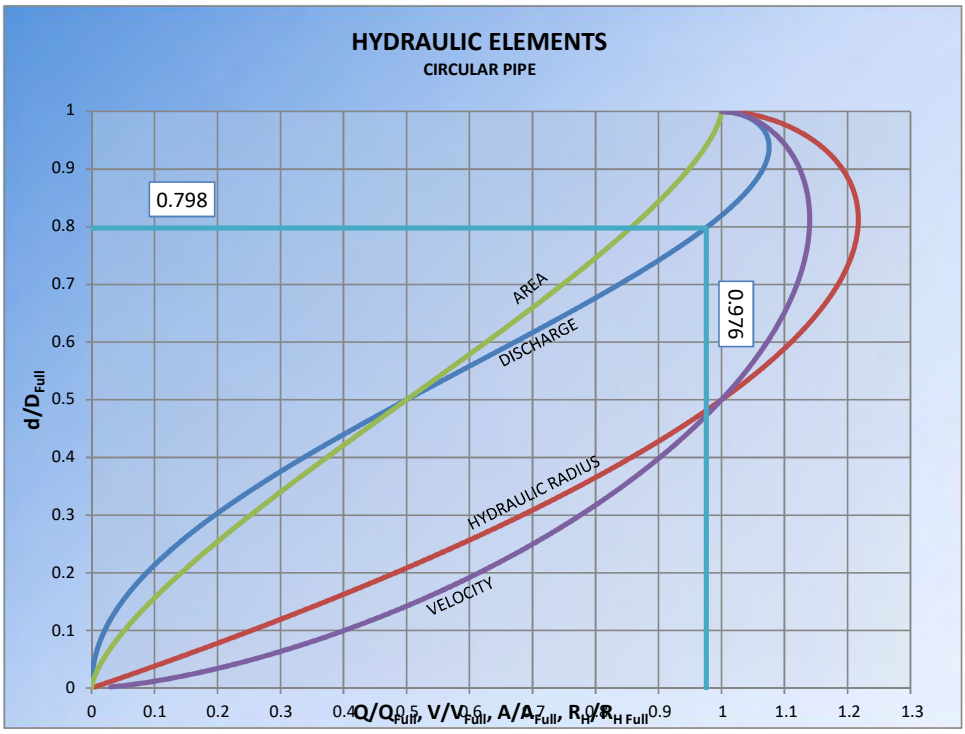
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.9762	V/V_{full}	1.1396	A/A_{full}	0.8556



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.798
Depth	11.970 in
Velocity	2.323 ft/s
Area	151.194 sq. in.

Project Title:	Zeek Property	Date:	August 16, 2018
Project Number:	911-016	Client:	Landhuis
Region:	Option 2: Basins 1-7	Calcs By:	S. Thomas
Design Point:	DP#2		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	2240 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	369,600 gal/day
Infilltration	15%
Approx. Population	4928
Peaking Factor	3.25

Daily Peak Flow	1,256,949 gal/day
Peak Flow	1.94 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	1.94 cfs

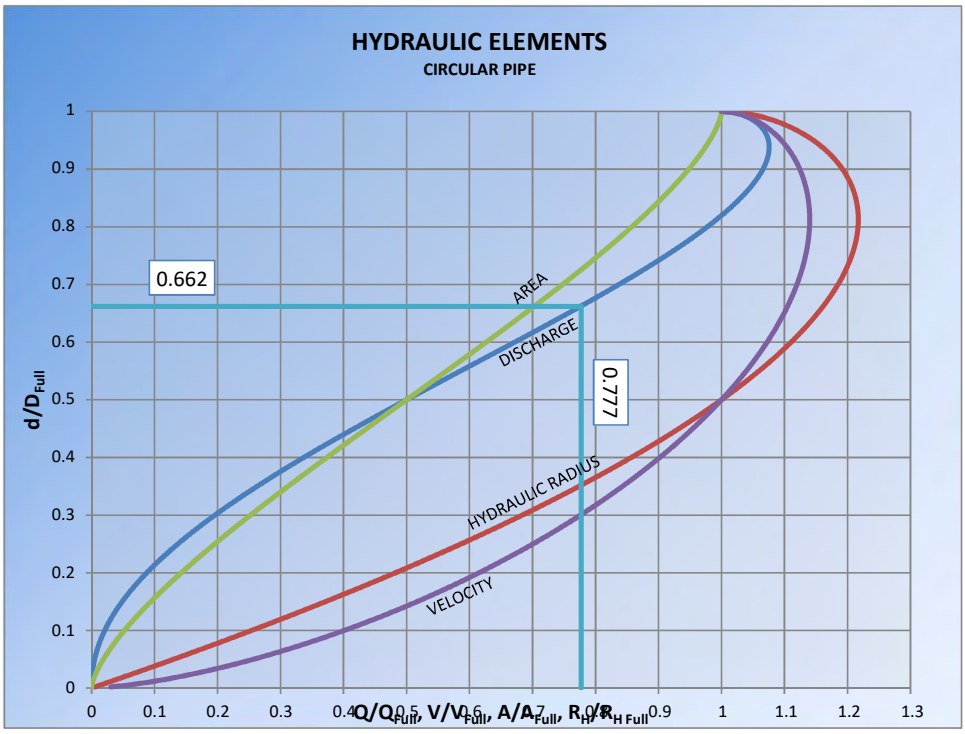
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.7773	V/V_{full}	1.1048	A/A_{full}	0.7026



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.662
Depth	9.930 in
Velocity	2.252 ft/s
Area	124.159 sq. in.

Project Title:	Zeek Property	Date:	August 16, 2018
Project Number:	911-016	Client:	Landhuis
Region:	Option 2: Basins 1-5	Calcs By:	S. Thomas
Design Point:	DP#3		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	1315 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	216,975 gal/day
Infilltration	15%
Approx. Population	2893
Peaking Factor	3.46

Daily Peak Flow	782,360 gal/day
Peak Flow	1.21 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	1.21 cfs

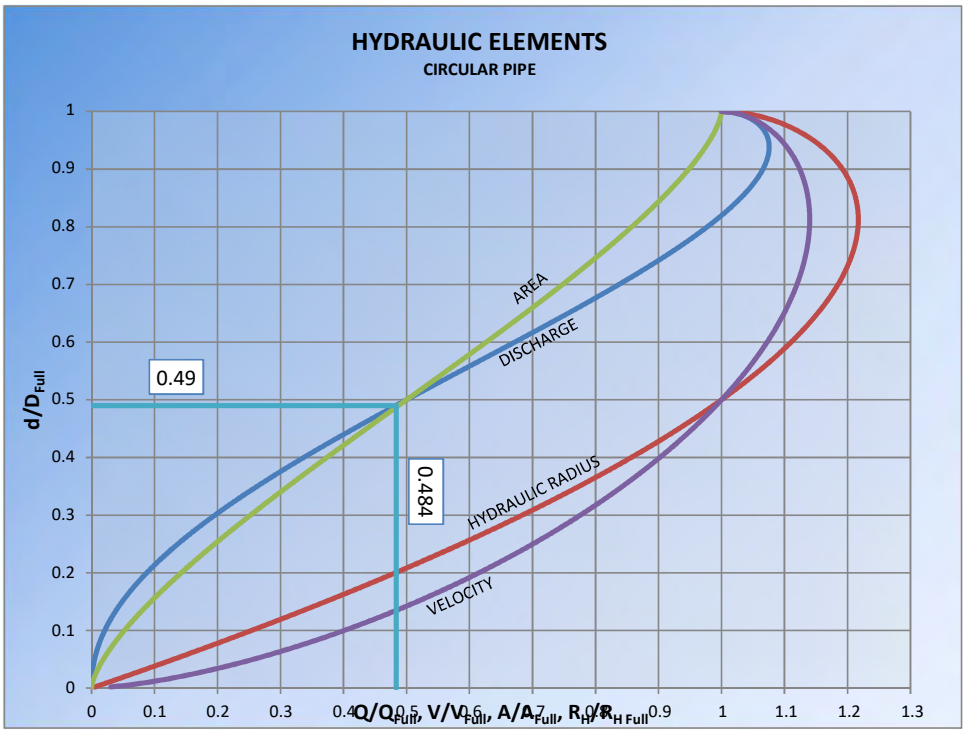
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.4838	V/V_{full}	0.9914	A/A_{full}	0.4873



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.49
Depth	7.350 in
Velocity	2.021 ft/s
Area	86.107 sq. in.

Project Title:	Zeek Property	Date:	August 16, 2018
Project Number:	911-016	Client:	Landhuis
Region:	Option 2: Basins 1-4	Calcs By:	S. Thomas
Design Point:	DP#4		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	1276 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	210,540 gal/day
Infilltration	15%
Approx. Population	2807
Peaking Factor	3.47

Daily Peak Flow	761,472 gal/day
Peak Flow	1.18 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	1.18 cfs

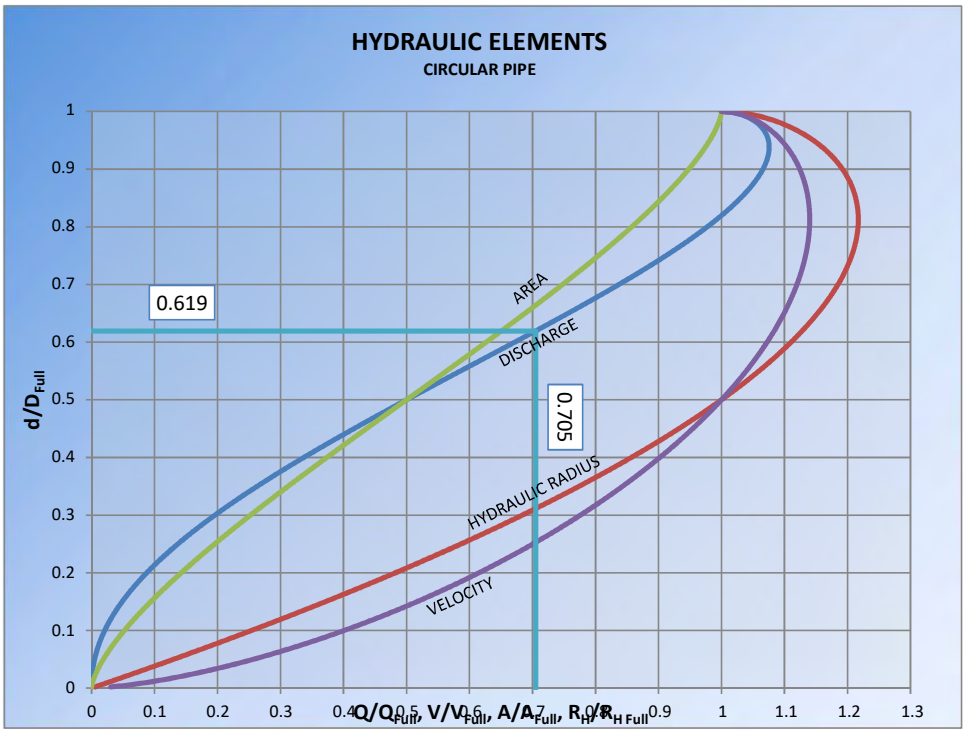
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	12 in
Slope of Pipe	0.0022 ft/ft
n	0.013

Q_{full}	1.671 cfs	V_{full}	2.128 ft/s	A_{full}	0.785 sq. ft.
Q/Q_{full}	0.7050	V/V_{full}	1.0834	A/A_{full}	0.6501



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.619
Depth	7.428 in
Velocity	2.305 ft/s
Area	73.521 sq. in.

Project Title:	Zeek Property	Date:	August 16, 2018
Project Number:	911-016	Client:	Landhuis
Region:	Option 2: Basins 1-2	Calcs By:	S. Thomas
Design Point:	DP#5		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	731 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	120,615 gal/day
Infilltration	15%
Approx. Population	1608
Peaking Factor	3.66

Daily Peak Flow	459,239 gal/day
Peak Flow	0.71 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	0.71 cfs

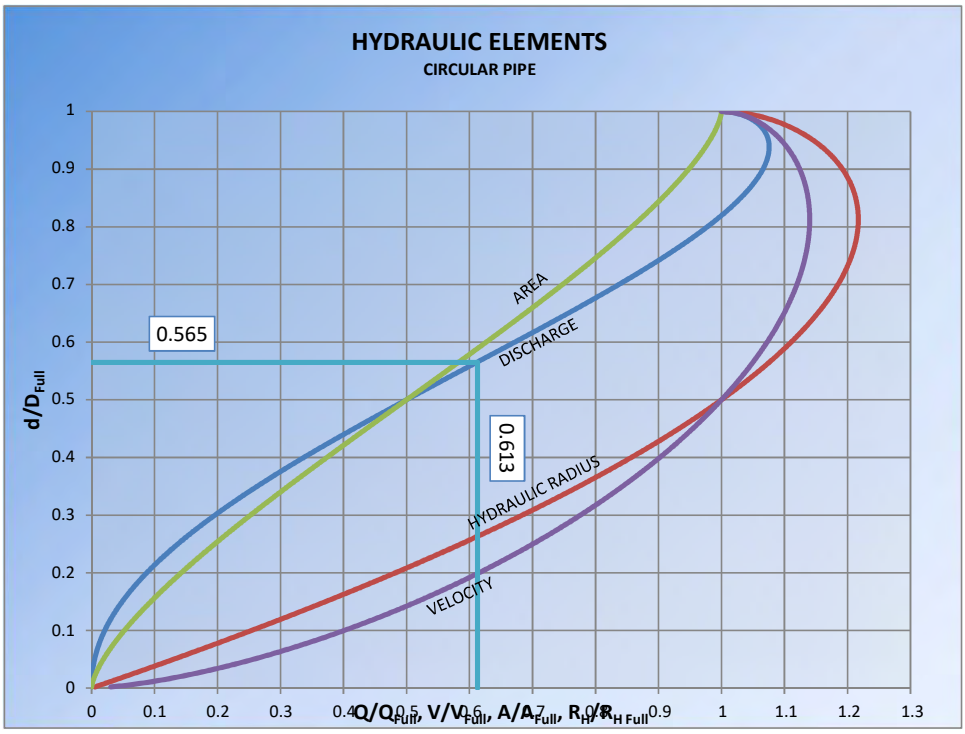
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	10 in
Slope of Pipe	0.0028 ft/ft
n	0.013

Q_{full}	1.159 cfs	V_{full}	2.126 ft/s	A_{full}	0.545 sq. ft.
Q/Q_{full}	0.6129	V/V_{full}	1.0499	A/A_{full}	0.5825



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.565
Depth	5.650 in
Velocity	2.232 ft/s
Area	45.752 sq. in.

Project Title:	Zeek Property	Date:	August 16, 2018
Project Number:	911-016	Client:	Landhuis
Region:	Option 2: Basins 8-9	Calcs By:	S. Thomas
Design Point:	DP#6		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	312 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	51,480 gal/day
Infilltration	15%
Approx. Population	686
Peaking Factor	3.90

Daily Peak Flow	208,466 gal/day
Peak Flow	0.32 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	0.32 cfs

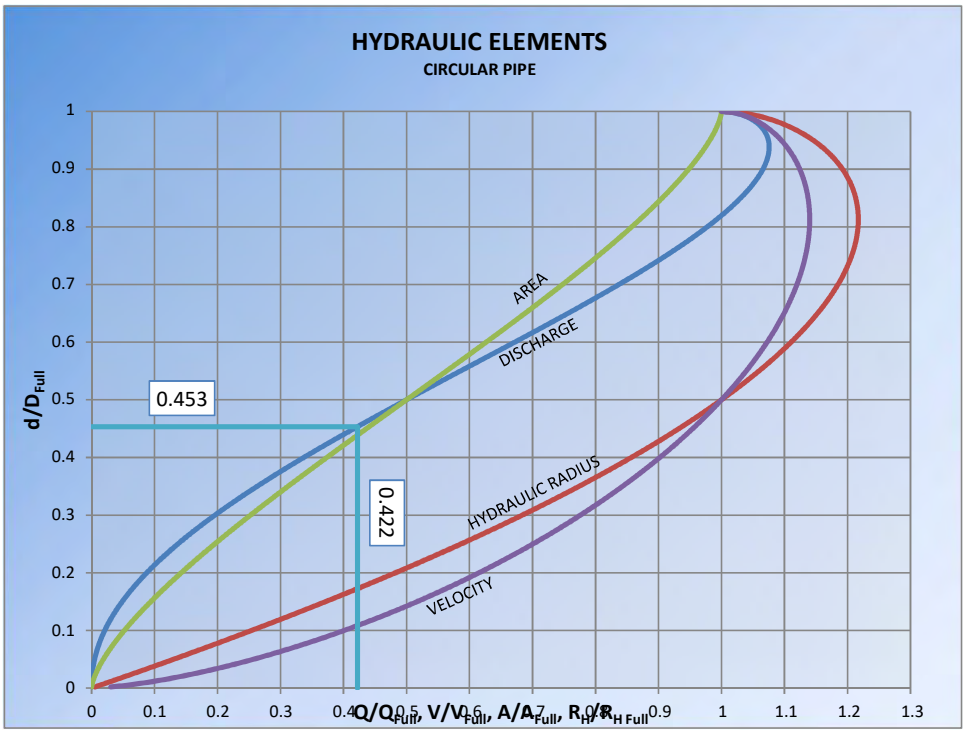
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	8 in
Slope of Pipe	0.0040 ft/ft
n	0.013

Q_{full}	0.764 cfs	V_{full}	2.189 ft/s	A_{full}	0.349 sq. ft.
Q/Q_{full}	0.4220	V/V_{full}	0.9573	A/A_{full}	0.4402



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

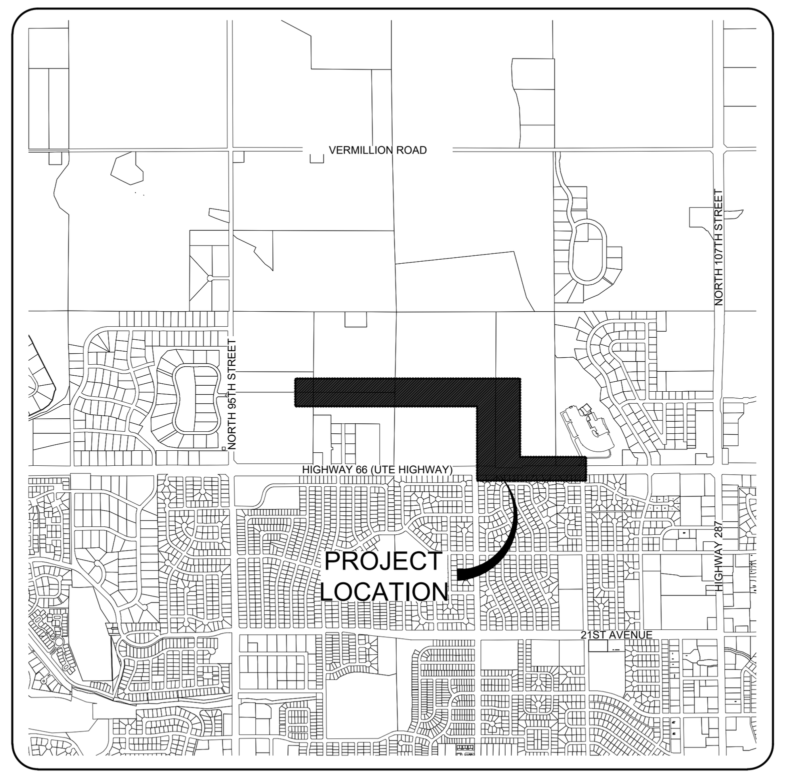
d/D_{full}	0.453
Depth	3.624 in
Velocity	2.096 ft/s
Area	22.129 sq. in.

STORMWATER POLLUTION CONTROL PLANS

TERRY LAKE REGIONAL SANITARY SEWER

A TRACT OF LAND LOCATED IN THE SOUTHERN HALF OF SECTION 21, TOWNSHIP 3 NORTH,
RANGE 69 WEST OF THE 6TH P.M., CITY OF LONGMONT,
COUNTY OF BOULDER, COLORADO

FEBRUARY 2021



NORTH

VICINITY MAP
1"=2500'

PROJECT BENCHMARKS:

PROJECT DATUM: NAVD88

BENCHMARKS:
City of Longmont Benchmark "NGS U410"
1.45 miles W. of Hwy 287 on Hwy 66, 585' E. of the CL of N. 95th, (Hover Rd.), 93.2' N. of the CL of Hwy 66, and 5.6' E. of a utility pole. (rod in range box)
Elevation = 5090.10

City of Longmont Benchmark "F-030"
North side of Hwy 66 at North quarter of Section 28 at fence corner. ½ mile east of Hover Rd. 50' West of the S.W. corner house. +/- 6' East of P.P.
Elevation = 5063.93

Basis of Bearings
The South line of the Southwest Quarter of the Southwest Quarter of Section 21 as bearing North 89°43'25" West.

FIELD SURVEY BY:

Original Field Survey:	Additional Field Survey:
Northern Engineering	Northern Engineering
Project No. 911-016	Project No. 911-016
Date: May 22nd, 2017	Date: Dec 1st, 2017

SUBSURFACE EXPLORATION BY:

Soilogic, Inc.
Preliminary Geotechnical Subsurface Exploration Report
Proposed Zeek Annexation
Northeast Corner of N. 95th Street and Colorado State Highway 66
Boulder County, Colorado
Soilogic Project # 14-1083
Date: May 20, 2014

CALL UTILITY NOTIFICATION CENTER OF COLORADO

811

Know what's below. Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

CONTACT INFORMATION

PROJECT TEAM:

THE LANDHUIS COMPANY

OWNER/APPLICANT
The Landhuis Company
Jeff Mark, President
212 N Wahsatch Ave, Suite #301
Colorado Springs, CO 80903
(719) 635-3200

NORTHERN ENGINEERING

SITE ENGINEER
Northern Engineering Services, Inc.
Stephanie Thomas, PE
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521
(970) 221-4158

NORTHERN ENGINEERING

SITE SURVEYOR
Northern Engineering Services, Inc.
Steven A. Lund, PLS
820 8th Street
Greeley, CO 80631
(970) 395-9880

UTILITY CONTACT LIST: *

UTILITY COMPANY			CONTACT INFORMATION
GAS	Xcel Energy	Donna George	donna.l.george@xcelenergy.com
ELECTRIC	Longmont Power and Communications	Rocco Supino	(303) 651-8706
CABLE	Comcast	Marcus Petty	marcus_petty@comcast.com
TELECOM	Centurylink	Christopher Janoski	christopher.janoski@centurylink.com
WATER	City of Longmont	Wes Lowrie	(303) 651-8814
WASTEWATER	City of Longmont	Doug Gossett	(303) 651-8922
STORMWATER	City of Longmont	Tyler Dell	(303) 651-8399

* This list is provided as a courtesy reference only. Northern Engineering Services assumes no responsibility for the accuracy or completeness of this list. In no way shall this list relinquish the Contractor's responsibility for locating all utilities prior to commencing any construction activity. Please contact the Utility Notification Center of Colorado (UNCC) at 811 for additional information.

SHEET INDEX

1	SPC1	COVER SHEET & STORMWATER POLLUTION CONTROL GENERAL NOTES
2	SPC2	STORMWATER POLLUTION CONTROL PRE-CONSTRUCTION PLAN
3	SPC3	STORMWATER POLLUTION CONTROL DURING-CONSTRUCTION PLAN
4	SPC4	STORMWATER POLLUTION CONTROL FINAL STABILIZATION PLAN
5	SPC5	STORMWATER POLLUTION CONTROL DETAILS

APPROVAL BLOCK

ENGINEERING REVIEW
CITY OF LONGMONT

Review is for general compliance with City of Longmont standards and requirements. The City of Longmont is not responsible for the correctness of design, dimensions, details, quantities and design safety.

☐ No Exceptions Taken
☐ Make Corrections Noted
☐ Rejected – See Checklist

REVIEW ENGINEER   DATE

STORMWATER POLLUTION CONTROL GENERAL NOTES:

1. STORMWATER CONSTRUCTION ACTIVITY PERMIT (SCAP) DRAWINGS HAVE BEEN SUBMITTED AND APPROVED AS PART OF AN APPLICATION FOR A STORMWATER CONSTRUCTION ACTIVITY PERMIT FOR CONSTRUCTION ACTIVITIES FILED WITH THE CITY OF LONGMONT. ADDITIONAL STORMWATER POLLUTION CONTROL MEASURES (EROSION AND SEDIMENT CONTROL MEASURES, AND BEST MANAGEMENT PRACTICES) MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE STORMWATER POLLUTION CONTROLS OUTLINED IN THESE DRAWINGS DO NOT FUNCTION AS INTENDED. THE INSTALLATION AND MAINTENANCE OF ALL STORMWATER POLLUTION CONTROL MEASURES SHALL BE THE OBLIGATION OF THE PERMIT HOLDER UNTIL SUCH TIME AS THE PERMIT IS RELEASED.
2. THE CONTRACTOR SHALL LOCATE, INSTALL, AND MAINTAIN ALL STORMWATER POLLUTION CONTROL MEASURES FOR SEDIMENT AND EROSION CONTROL AND WATER QUALITY "BEST MANAGEMENT PRACTICES" AS INDICATED IN THE APPROVED SCAP DRAWINGS. ALL STORMWATER POLLUTION CONTROLS SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT AS INSTRUCTED IN THE CONTROL DETAILS INCLUDED IN THE APPROVED SCAP DRAWINGS.
3. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING A FIELD-SET OF THE SCAP DRAWINGS ON-SITE AT ALL TIMES. ANY CHANGES TO THESE PLANS THAT OCCUR IN THE FIELD MUST BE REDLINED, AND DISCUSSED WITH THE STORMWATER INSPECTOR DURING SUBSEQUENT INSPECTIONS.
4. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND ILLUSTRATING (ON THE SCAP DRAWINGS) STOCKPILES, STAGING AREAS, EQUIPMENT STORAGE, REFUELING/MAINTENANCE AREAS, AND DISPOSAL AREAS.
5. THE CONTRACTOR AND/OR AUTHORIZED AGENTS SHALL PREVENT SEDIMENT, MUD, CONSTRUCTION DEBRIS, SPILLED MATERIALS, AND ALL OTHER POLLUTANTS FROM ENTERING WATERWAYS, PUBLIC RIGHTS-OF-WAYS, OR THE STORM SEWER SYSTEM DURING CONSTRUCTION ACTIVITIES THAT ARE PART OF THIS PROJECT. THE PERMITTEE SHALL BE HELD RESPONSIBLE TO REMOVE ALL POLLUTANTS AND REMEDIATE ANY WATERWAYS, RIGHTS-OF-WAYS, OR STORM SEWERS, ADVERSELY IMPACTED BY WORK DONE AS PART OF THIS PROJECT IN A TIMELY MANNER, USING APPROPRIATE EQUIPMENT FOR THE POLLUTANT PRESENT.
6. EQUIPMENT AND MATERIALS NECESSARY FOR THE CONTROL OF SPILLS SHALL BE AVAILABLE ONSITE AT ALL TIMES. SPILLS AND LEAKS SHALL BE STOPPED AND THE MATERIAL CLEANED UP IMMEDIATELY AND DISPOSED OF PROPERLY. USE PROPER STORMWATER CONTROL MEASURES ('BEST MANAGEMENT PRACTICES') TO PREVENT OIL, GREASE, OR FUEL FROM LEAKING ON THE GROUND, INTO STORM INLETS, OR SURFACE WATERS.
7. WHEN WORKING IMMEDIATELY ADJACENT TO WATERWAYS, ADDITIONAL CARE SHOULD BE TAKEN TO AVOID THE DISCHARGE OF POLLUTANTS AS THERE IS LIMITED ABILITY TO INTERCEPT THE POLLUTANTS PRIOR TO DISCHARGING TO THE WATERWAYS. VIOLATIONS OF THE SCAP NEAR WATERWAYS MAY RESULTS IN ADDITIONAL SEDIMENT/EROSION CONTROL MEASURES BEING REQUIRED AND/OR ACCELERATED ENFORCEMENT ACTIONS.
8. EQUIPMENT CAPABLE OF MITIGATING FUGITIVE DUST FROM CONSTRUCTION ACTIVITY SHALL BE AVAILABLE AT ALL TIMES. DUST/WIND CONTROL PRACTICES (WATERING, VEGETATION, STRIPPED TOPSOIL, ANY PLASTIC COVERS, ETC.) SHALL BE IMPLEMENTED AS PART OF ROUTINE SITE MAINTENANCE, IMPLEMENTED AS NEEDED TO ELIMINATE ANY ADVERSE IMPACTS TO ADJACENT PROPERTY OWNERS OR CITY RIGHTS-OF-WAY. ADDITIONAL DUST CONTROL REQUIREMENTS CAN BE FOUND IN THE CITY OF LONGMONT MUNICIPAL CODE TITLE 15 CHAPTER 15.05.160.
9. HAULING ROUTES FOR THE SITE MUST BE IDENTIFIED ON THE STORMWATER POLLUTION CONTROL CONSTRUCTION DRAWINGS. OFFSITE HAULING ROUTES MUST BE IDENTIFIED - REFER MUNICIPAL CODE TITLE 11 CHAPTER 11.32 FOR HAULING GUIDELINES.
10. THE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL INSURE THAT ALL LOADS OF CUT AND FILL MATERIALS IMPORTED TO, OR EXPORTED FROM, THIS SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORT ON PUBLIC RIGHTS-OF-WAY. ANY SETTLEMENT OR SOIL ACCUMULATION FOUND BEYOND THE LIMITS OF DISTURBANCE (AS IDENTIFIED ON THE STORMWATER POLLUTION CONTROL CONSTRUCTION DRAWINGS), SHALL BE REMOVED AND/OR REPAIRED IMMEDIATELY BY THE PERMITTEE.
11. STOCKPILE REQUIREMENTS:
   - STOCKPILES SHALL BE IMMEDIATELY PROTECTED IF THEY ARE NOT SCHEDULED TO BE USED WITHIN 14 DAYS. STORMWATER CONTROL MEASURES, AS OUTLINED IN MILE HIGH FLOOD DISTRICT VOLUME 3 (OR CURRENT EDITION), FOR STOCKPILE MANAGEMENT SHALL BE INSTALLED AND MAINTAINED AT ALL TIMES.
   - STOCKPILE LOCATION SHALL BE SETBACK FROM PROPERTY LINES, DRAINAGE WAYS, AND FLOODPLAIN BOUNDARIES A MINIMUM OF 50 FEET, UNLESS WRITTEN APPROVAL IS GRANTED BY THE CITY. LOCATION OF STOCKPILES SHALL BE SELECTED TO PROVIDE ACCESS TO ALL EXISTING UTILITIES.
   - STOCKPILE HEIGHT ONSITE IS LIMITED TO EIGHT (8) FEET WITH FLAT TOPS AND MAXIMUM SIDE SLOPES OF 2:1 (H:V), UNLESS WRITTEN APPROVAL IS GRANTED BY THE CITY.
   - DUST/WIND CONTROL PRACTICES (WATERING, VEGETATION, STRIPPED TOPSOIL, ANY PLASTIC COVERS, ETC.) SHALL BE IMPLEMENTED AS PART OF THE STOCKPILE MANAGEMENT. COVERS SHALL BE INSTALLED SECURELY TO PROTECT FROM WIND AND RAIN - REFER TO THE MUNICIPAL CODE TITLE 15 CHAPTER 15.05.160.
12. ALL TEMPORARY GROUNDWATER DEWATERING DISCHARGES MUST BE TREATED TO REMOVE SEDIMENT BEFORE DISCHARGING FROM THE CONSTRUCTION SITE. DISCHARGING WATER INTO A SEDIMENT TRAP OR BASIN IS AN ACCEPTABLE TREATMENT OPTION. WATER MAY ALSO BE TREATED USING A DEWATERING FILTER BAG, AND A SERIES OF STRAW BALES OR SEDIMENT LOGS. IF THESE PREVIOUS OPTIONS ARE NOT FEASIBLE DUE TO SPACE OR THE ABILITY TO PASSIVELY TREAT THE DISCHARGE TO REMOVE SEDIMENT, THEN A SETTLING TANK OR AN ACTIVE TREATMENT SYSTEM MAY NEED TO BE UTILIZED. REFER TO MHFD CRITERIA MANUAL, VOL. 3, CHAPTER 7 (SM-9). THE CONTRACTOR MUST REDLINE DISCHARGE POINTS ON SCAP DRAWINGS TO REFLECT FIELD CONDITIONS.
13. IF NO CONSTRUCTION ACTIVITIES TAKE PLACE ON-SITE FOR 30 DAYS OR MORE, THE PERMITTEE IS RESPONSIBLE FOR SEEDING AND STABILIZING THE SITE WITH THE SEED MIX IDENTIFIED IN THE CITY DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS, PARKS AND OPEN SPACE APPROVED MATERIAL LIST, SECTION 604, OR CURRENT EQUIVALENT.
14. ANY KNOWN WILDLIFE IN THE PROPOSED AREA OF SOIL STOCKPILES (I.E. PRAIRIE DOGS, GROUND NESTING BIRDS AND CANOPY NESTING BIRDS - I.E. RAPTORS IN VICINITY) MUST BE IDENTIFIED AND SPECIFIED. IF PRESENT:
   - AN ALTERNATIVE LOCATION THAT DOES NOT NEGATIVELY IMPACT THE EXISTING WILDLIFE MUST BE FOUND, OR
   - PERMISSION IS REQUIRED TO RELOCATE, TRAP OR EUTHANIZE THE WILDLIFE FROM THE COLORADO DIVISION OF PARKS AND WILDLIFE.
15. IT IS THE PERMITTEE'S RESPONSIBILITY TO COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO THE PERMITTEE'S ACTIVITIES, WHETHER OR NOT THOSE REQUIREMENTS ARE INCLUDED IN THE STORMWATER CONSTRUCTION ACTIVITY PERMIT.

No. | Revisions: | By: | Date:

REVIEW SET
NOT FOR CONSTRUCTION
02.04.2022

These drawings are instruments of service provided by Northern Engineering Services, Inc. and are not to be used for any type of construction unless signed and sealed by a Professional Engineer in the employ of Northern Engineering Services, Inc.

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

PROJECT: 911-016	DESIGNED BY: S. Hallauer	DRAWN BY: S. Hallauer
DATE: 02.04.2022	SCALE: N/A	REVIEWED BY: S. Thomas

TERRY LAKE REGIONAL SANITARY SEWER

COVER SHEET & STORMWATER POLLUTION CONTROL GENERAL NOTES

Sheet SPC1

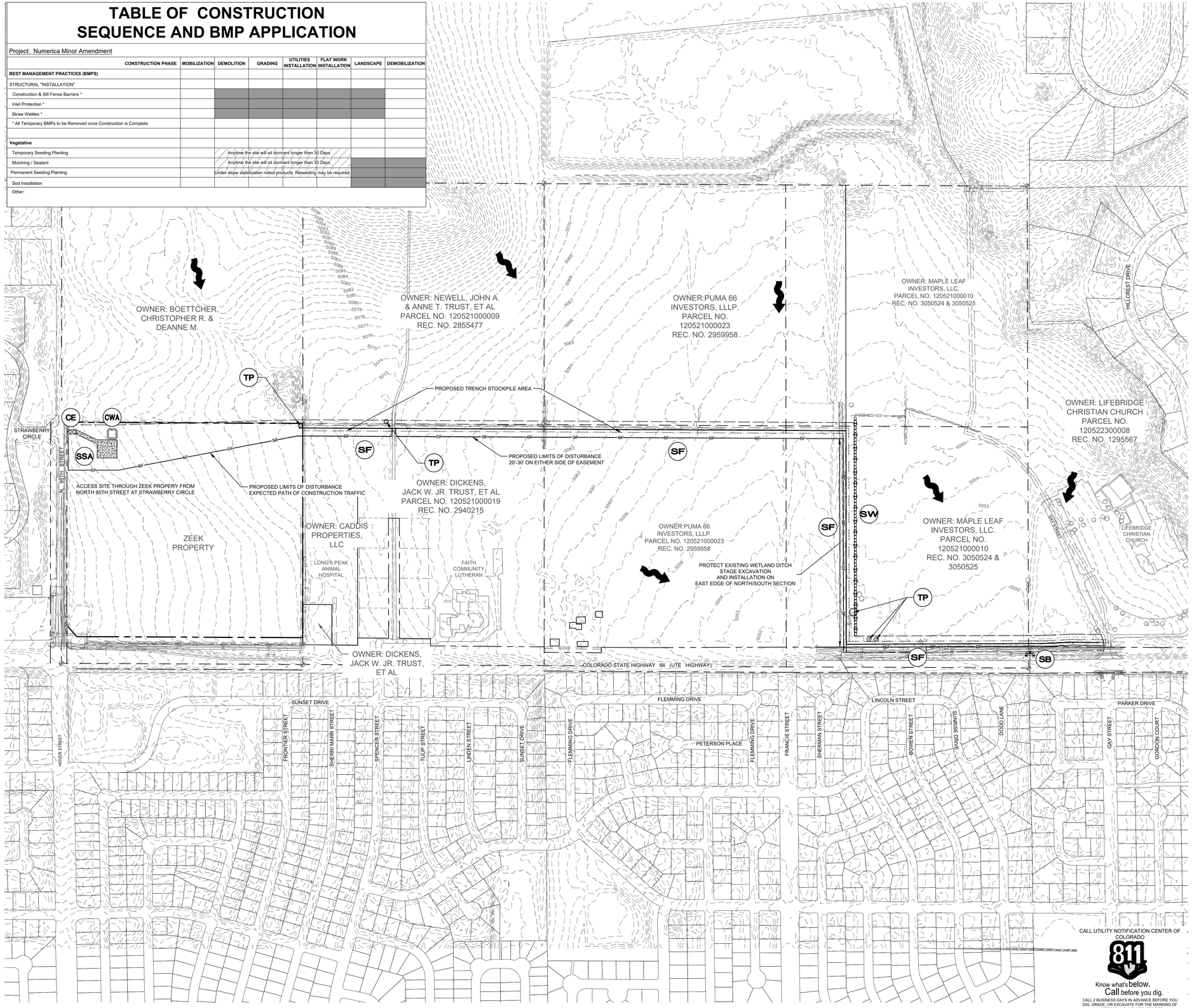
1 of 5

DRAWING FILENAME: D:\Projects\911-016\Dwg\Drng\911-016_SAN-OS_SPCP-COVR.dwg LAYOUT NAME: SPC1 DATE: Feb 16, 2022 – 1:44pm CAD OPERATOR: sterling
LIST OF XREFS: [911-016_SPCP-NES-xborder]

TABLE OF CONSTRUCTION SEQUENCE AND BMP APPLICATION

Project: Numerica Minor Amendment

CONSTRUCTION PHASE	MOBILIZATION	DEMOLITION	GRADING	UTILITIES INSTALLATION	FLAT WORK INSTALLATION	LANDSCAPE	DEMOBILIZATION
BEST MANAGEMENT PRACTICES (BMPS)							
STRUCTURAL "INSTALLATION"							
Construction & Silt Fence Barriers *							
Inlet Protection *							
Straw Wattles *							
* All Temporary BMPs to be Removed once Construction is Complete							
Vegetative							
Temporary Seeding Planting		Anytime the site will sit dormant longer than 30 Days					
Mulching / Sealant		Anytime the site will sit dormant longer than 30 Days					
Permanent Seeding Planting		Under slope stabilization rolled products. Reseeding may be required.					
Sod Installation							
Other:							

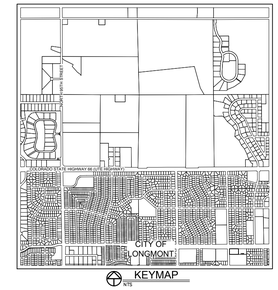


CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

NORTH

250 0 250 500 750 Feet

(IN FEET)
1 inch = 250 ft.



KEYMAP

LEGEND:

EXISTING CONTOUR 4953
PROPOSED STOCKPILE AREA
PROPERTY BOUNDARY
EXISTING FLOW PROFILE
SILT FENCE SF
STRAW WATTLE SW
CONSTRUCTION ENTRANCE CE
STABILIZED STAGING AREA SSA
STRAW BALE INLET PROTECTION SB
CONCRETE WASHOUT AREA CWA
SEEDING/MULCHING SM
TREE PROTECTION TP

NOTE:
ALL BMP'S SHOWN ON THIS PLAN ARE GRAPHIC REPRESENTATIONS ONLY. FINAL DETERMINATION OF SIZE AND LOCATION SHALL BE DETERMINED BY THE CONTRACTOR.

GENERAL NOTES:

1. CONTRACTOR SHALL IMMEDIATELY STABILIZE ALL DISTURBED SLOPES BY CRIMP MULCHING OR SIMILAR METHODS.
2. ALL DISTURBED AREAS SHALL BE SEEDED, MULCHED AND TACKED PROMPTLY AFTER FINAL GRADE IS REACHED (WITHIN 14 DAYS OF REACHING FINAL GRADE) ON PORTIONS OF THE SITE NOT OTHERWISE PERMANENTLY STABILIZED.
3. TOTAL DISTURBED AREA = 11.6 ACRES
4. SWMP ADMINISTRATOR:
   Contact _____
   Company _____
   Address _____
   Phone _____
5. CONTRACTOR TO PROVIDE VEHICLE TRACKING CONTROL FOR CONCRETE WASHOUT AREA IF ACCESS IS OFF PAVEMENT.
6. CONSTRUCTION OF SANITARY SEWER MAY ENCOUNTER GROUNDWATER, CONTRACTOR TO OBTAIN DEWATERING PERMITS WHERE NECESSARY.
7. THE SIZE, TYPE AND LOCATION OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THESE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE OF ALL UNDERGROUND UTILITIES IN THE AREA OF THE WORK. BEFORE COMMENCING NEW CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR ALL UNKNOWN UNDERGROUND UTILITIES.
8. EROSION CONTROL PRACTICES, SITE PROTECTION, AND REVEGETATION METHODS SHALL FOLLOW CITY REGULATIONS.
9. SEE STORMWATER POLLUTION CONTROL GENERAL NOTES ON SHEET SPC1 AS WELL AS DETAILS ON SHEET SPC5.
10. CONTRACTOR TO PROVIDE EROSION AND SEDIMENT PROTECTION PERIMETER AROUND TRENCH STOCKPILES THROUGH MEANS OF STRAW BALES, SILT FENCING, AND/OR BLANKETING.
11. PERMANENT STORMWATER CONTROLS WILL NOT BE REQUIRED AS THE DISTURBED AREA FALLS UNDER THE UNDERGROUND UTILITIES EXCLUSION.

APPROVAL BLOCK

ENGINEERING REVIEW
CITY OF LONGMONT

☐ No Exceptions Taken
☐ Make Corrections Noted
☐ Rejected – See Checklist

Review is for general compliance with City of Longmont standards and requirements. The City of Longmont is not responsible for the correctness of design, dimensions, details, quantities and design safety.

REVIEW ENGINEER _____ DATE _____

Revisions: No. Date:
REVIEW SET NOT FOR CONSTRUCTION 02.04.2022

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NORTHERN ENGINEERING
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GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

DATE: 02.04.2022
SCALE: 1" = 250'
REVIEWED BY: S. Thomas
PROJECT: 911-016
DESIGNED BY: S. Hallauer
DRAWN BY: S. Hallauer

TERRY LAKE REGIONAL SANITARY SEWER
STORMWATER POLLUTION CONTROL
PRE-CONSTRUCTION PLAN

Sheet
SPC2
2 of 5

DRAWING FILENAME: D:\Projects\911-016\dwg\dwg\911-016_SANI-OS_GPOP-OVERALL.dwg LAYOUT NAME: SPC2 DATE: Feb 16, 2022 - 1:44pm OSD OPERATOR: sterling
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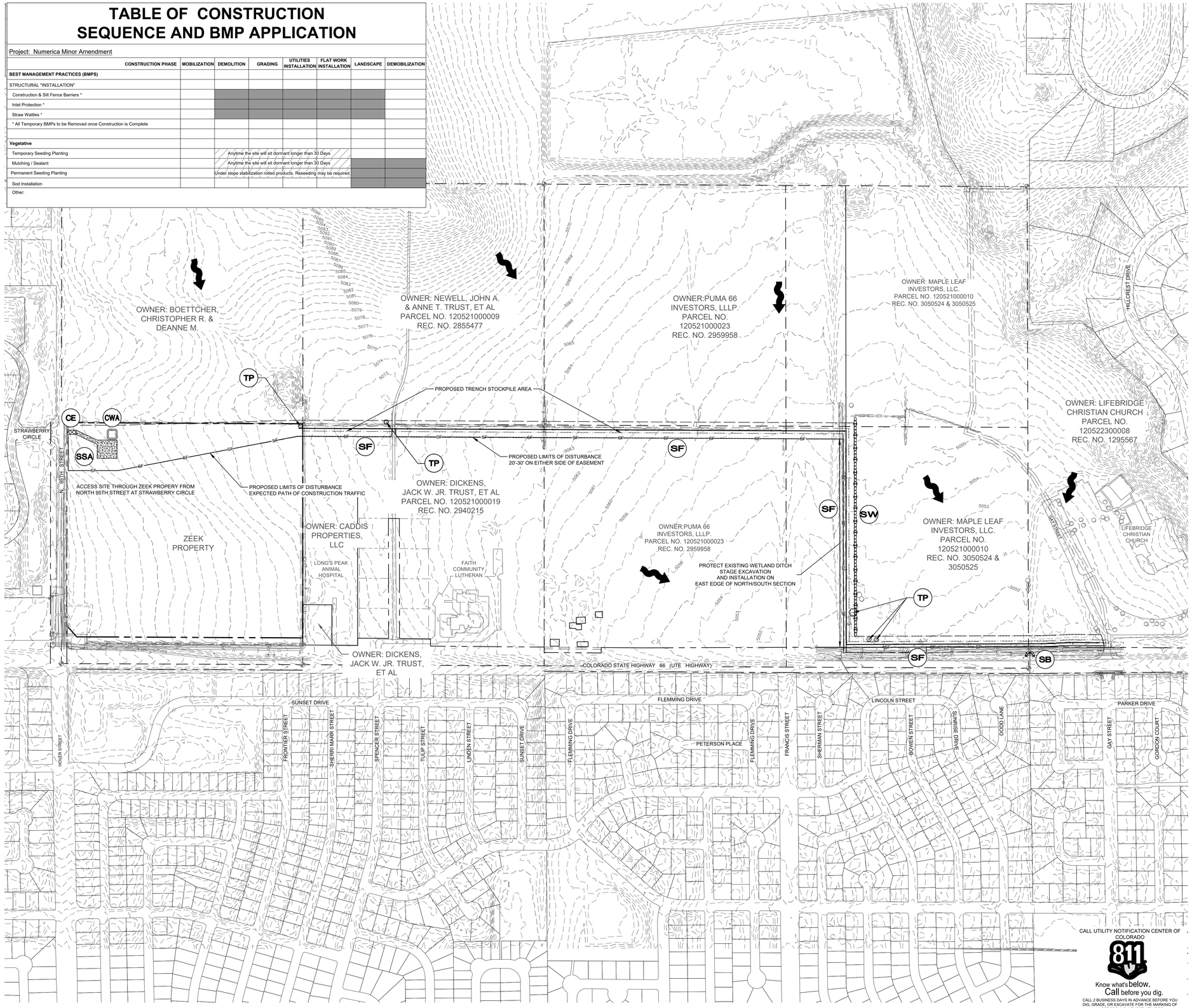
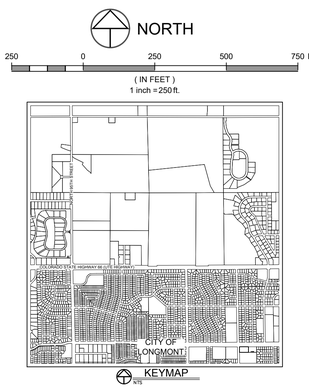
TABLE OF CONSTRUCTION SEQUENCE AND BMP APPLICATION

Project: Numerica Minor Amendment

CONSTRUCTION PHASE	MOBILIZATION	DEMOLITION	GRADING	UTILITIES INSTALLATION	FLAT WORK INSTALLATION	LANDSCAPE	DEMOBILIZATION
BEST MANAGEMENT PRACTICES (BMPS)							
STRUCTURAL "INSTALLATION"							
Construction & Silt Fence Barriers *							
Inlet Protection *							
Straw Wattles *							
* All Temporary BMPs to be Removed once Construction is Complete							
Vegetative							
Temporary Seeding Planting		Anytime the site will sit dormant longer than 30 Days					
Mulching / Sealant		Anytime the site will sit dormant longer than 30 Days					
Permanent Seeding Planting		Under slope stabilization rolled products. Reseeding may be required.					
Sod Installation							
Other:							



CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.



LEGEND:

- EXISTING CONTOUR — 4953
- PROPOSED STOCKPILE AREA
- PROPERTY BOUNDARY
- EXISTING FLOW PROFILE
- SILT FENCE — SF
- STRAW WATTLE — SW
- CONSTRUCTION ENTRANCE — CE
- STABILIZED STAGING AREA — SSA
- STRAW BALE INLET PROTECTION — SB
- CONCRETE WASHOUT AREA — CWA
- SEEDING/MULCHING — SM
- TREE PROTECTION — TP

NOTE:
ALL BMP'S SHOWN ON THIS PLAN ARE GRAPHIC REPRESENTATIONS ONLY. FINAL DETERMINATION OF SIZE AND LOCATION SHALL BE DETERMINED BY THE CONTRACTOR.

GENERAL NOTES:

1. CONTRACTOR SHALL IMMEDIATELY STABILIZE ALL DISTURBED SLOPES BY CRIMP MULCHING OR SIMILAR METHODS.
2. ALL DISTURBED AREAS SHALL BE SEEDED, MULCHED AND TACKED PROMPTLY AFTER FINAL GRADE IS REACHED (WITHIN 14 DAYS OF REACHING FINAL GRADE) ON PORTIONS OF THE SITE NOT OTHERWISE PERMANENTLY STABILIZED.
3. TOTAL DISTURBED AREA = 11.6 ACRES
4. SWMP ADMINISTRATOR:
   Contact _____
   Company _____
   Address _____
   Phone _____
5. CONTRACTOR TO PROVIDE VEHICLE TRACKING CONTROL FOR CONCRETE WASHOUT AREA IF ACCESS IS OFF PAVEMENT.
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APPROVAL BLOCK

ENGINEERING REVIEW
CITY OF LONGMONT

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northernengineering.com

DATE: 02.04.2022 | SCALE: 1" = 250' | REVIEWED BY: S. Thomas
PROJECT: 911-016 | DESIGNED BY: S. Hallauer | DRAWN BY: S. Hallauer

TERRY LAKE REGIONAL SANITARY SEWER
STORMWATER POLLUTION CONTROL DURING-CONSTRUCTION PLAN

Sheet SPC3
3 of 5

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Straw Wattles *							
* All Temporary BMPs to be Removed once Construction is Complete							
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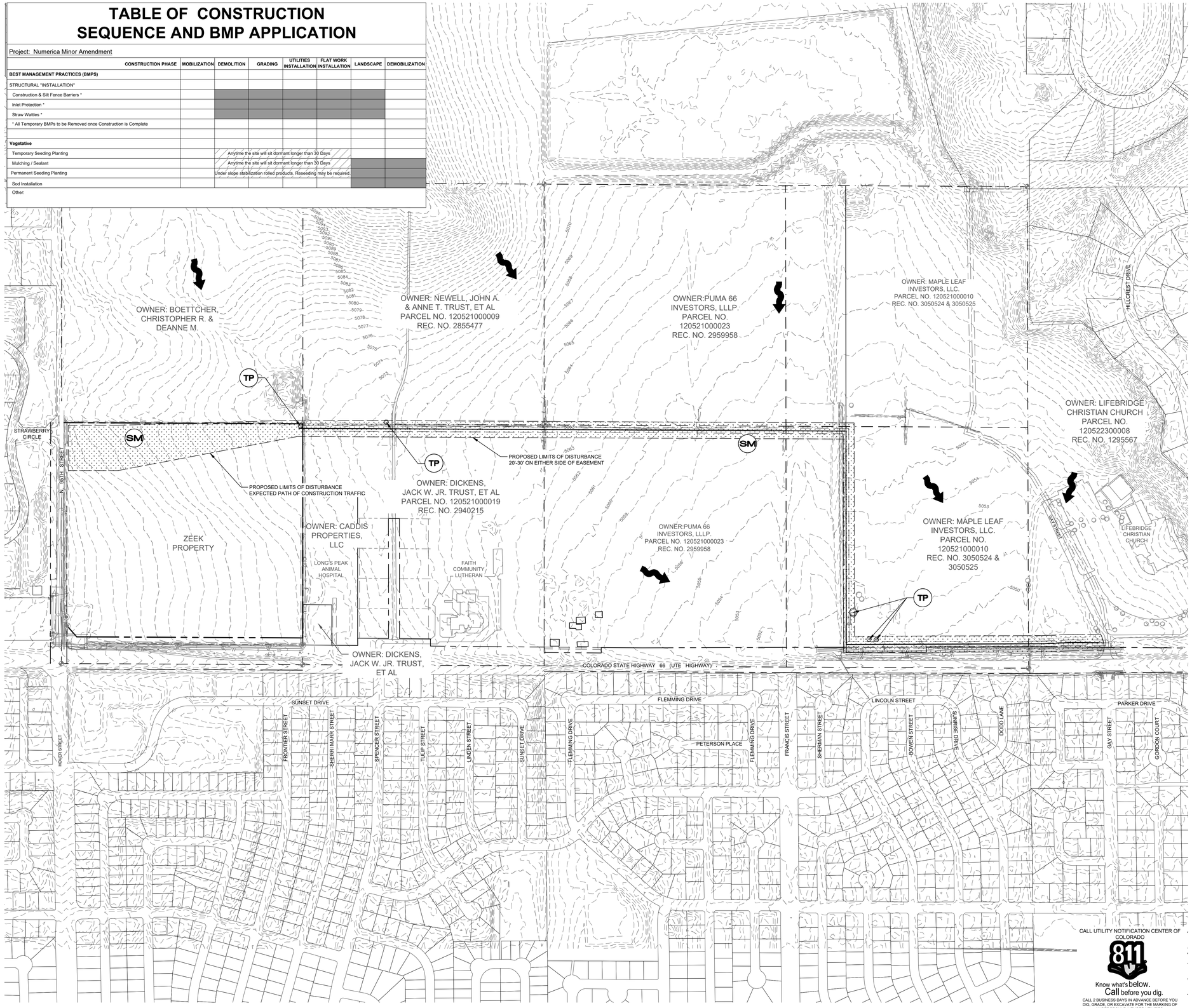
Temporary Seeding Planting		Anytime the site will sit dormant longer than 30 Days					
Mulching / Sealant		Anytime the site will sit dormant longer than 30 Days					
Permanent Seeding Planting		Under slope stabilization rolled products. Reseeding may be required.					
Sod Installation							
Other:							



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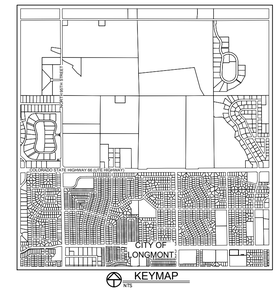
NORTH
250 0 250 500 750 Feet
(IN FEET)
1 inch = 250 ft.



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CITY OF LONGMONT

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REVIEWED BY: S. Thomas
PROJECT: 911-016
DESIGNED BY: S. Hollauer
DRAWN BY: S. Hollauer

TERRY LAKE REGIONAL SANITARY SEWER
STORMWATER POLLUTION CONTROL FINAL STABILIZATION PLAN

Sheet SPC4
4 of 5

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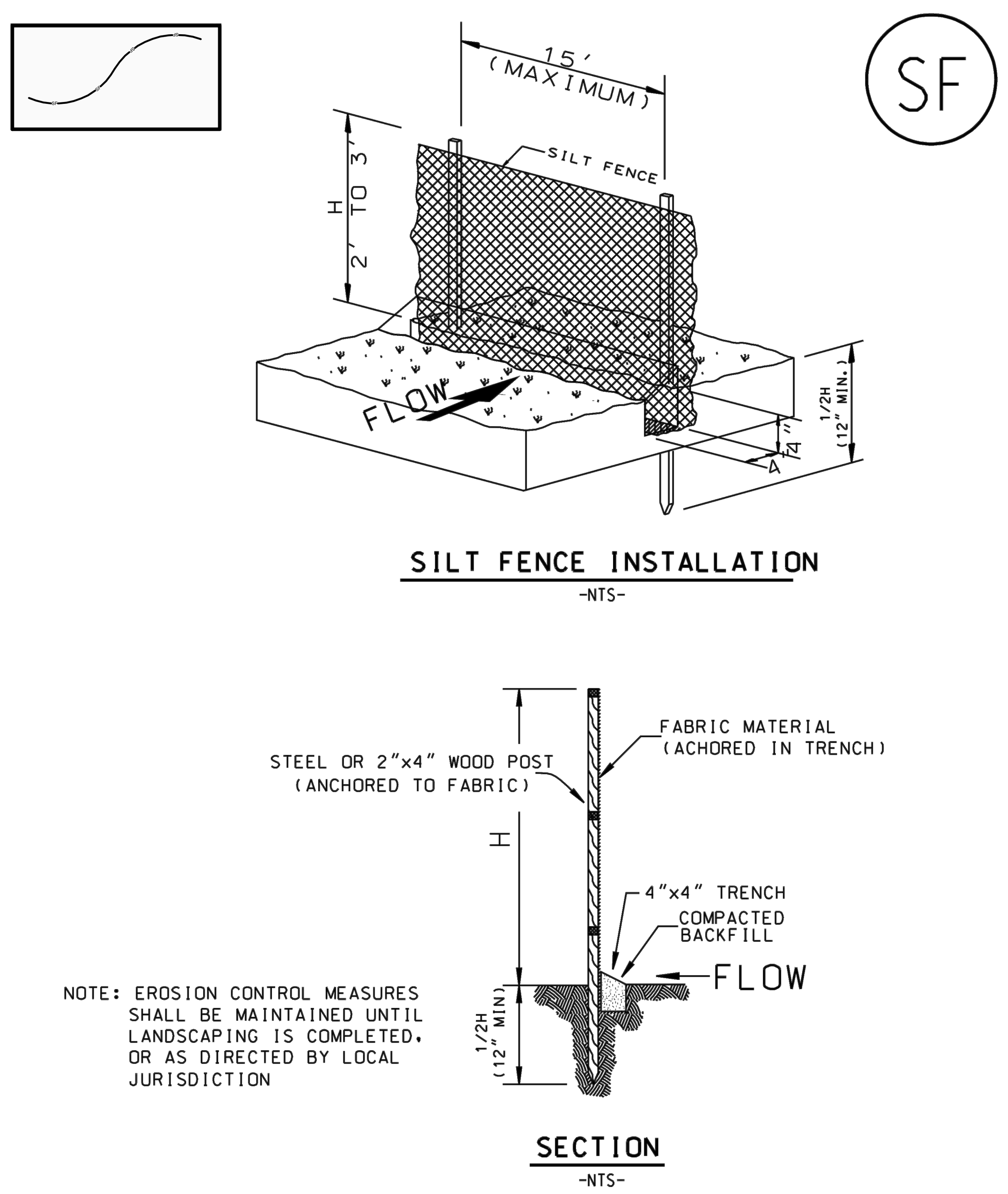


Urban Drainage and Flood Control District
Drainage Criteria Manual (V.3)

PUBLIC WORKS DIVISION

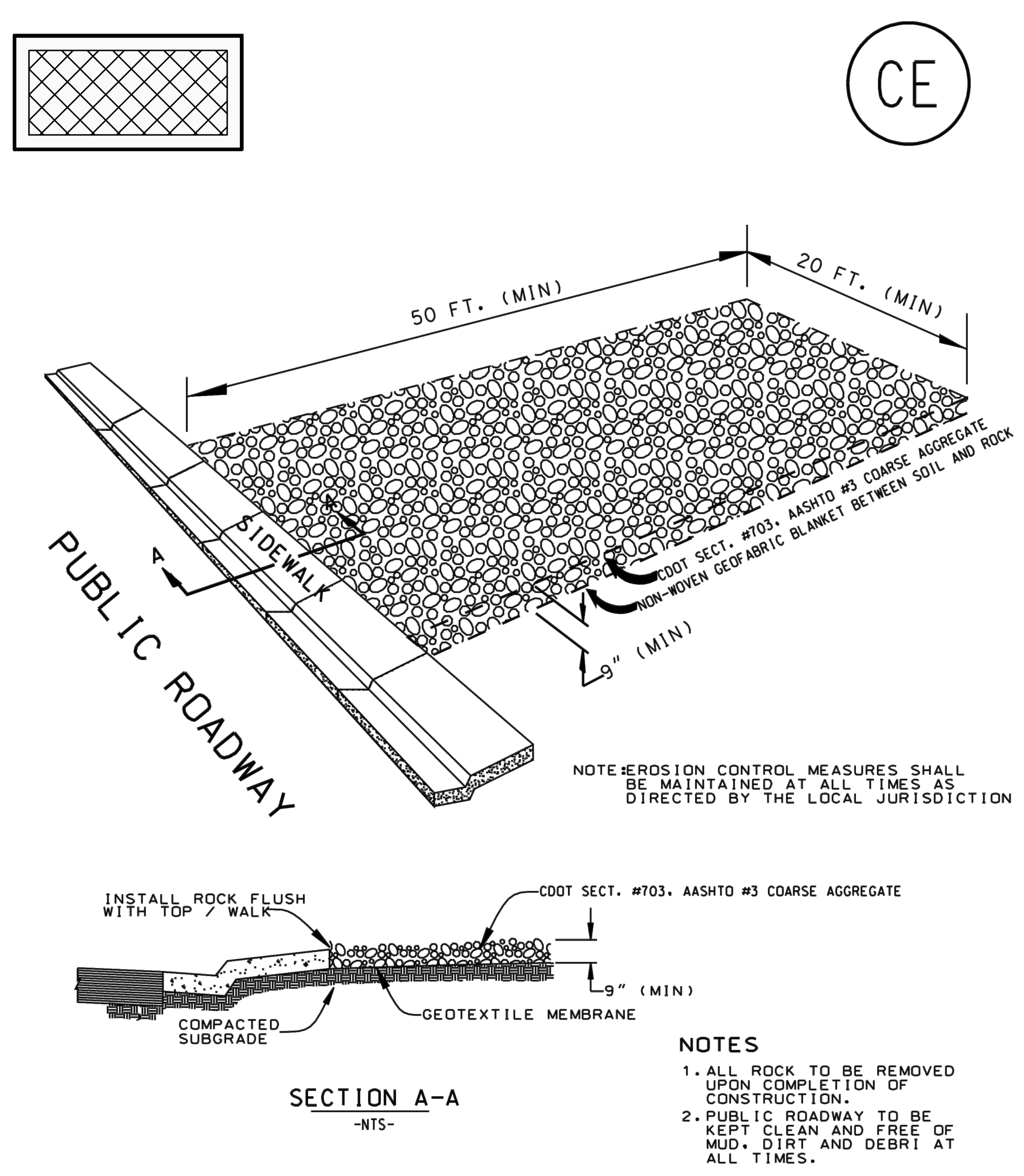
STORM DRAINAGE
SILT FENCE EROSION BARRIER
DETAIL 100-09

REB

DATE: SEPTEMBER 2005 SCALE: NOT TO SCALE

200 SPC5 TYPICAL SILT FENCE

NOT TO SCALE



Urban Drainage and Flood Control District
Drainage Criteria Manual (V.3)

PUBLIC WORKS DIVISION

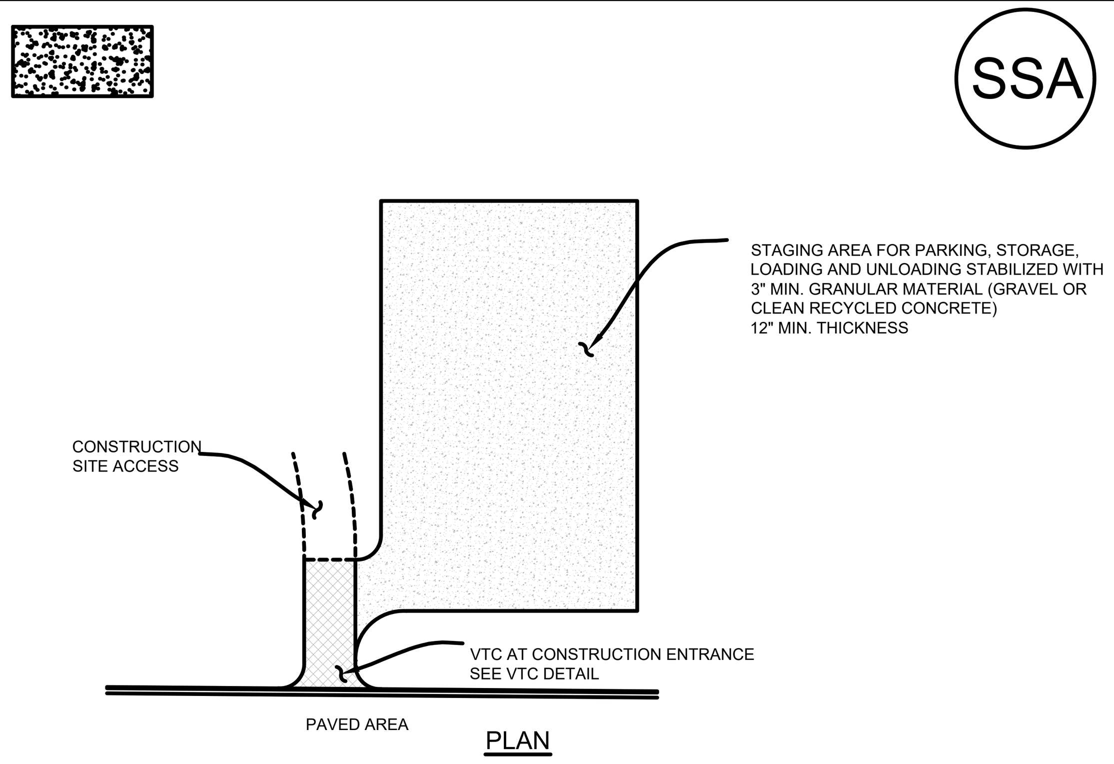
STORM DRAINAGE
CONSTRUCTION STAGING PAD
DETAIL 100-11

REB

DATE: SEPTEMBER, 2005 SCALE: NOT TO SCALE

201 SPC5 VEHICLE TRACKING PAD

NOT TO SCALE



STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR GENERAL LOCATION OF STAGING AREA. CONTRACTOR MAY MODIFY LOCATION AND SIZE OF STABILIZED STAGING AREA WITH APPROVAL FROM LOCAL JURISDICTION.
2. STABILIZED STAGING AREA SHALL BE LARGE ENOUGH TO FULLY CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
3. IF REQUIRED BY THE LOCAL JURISDICTION, SITE ACCESS ROADS SHALL BE STABILIZED IN THE SAME MANNER AS THE STAGING AREA.
4. STAGING AREA SHALL BE STABILIZED PRIOR TO ANY OTHER OPERATIONS ON THE SITE.
5. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM OF 3" OF GRANULAR MATERIAL (GRAVEL OR CLEAN RECYCLED CONCRETE).

STABILIZED STAGING AREA MAINTENANCE NOTES

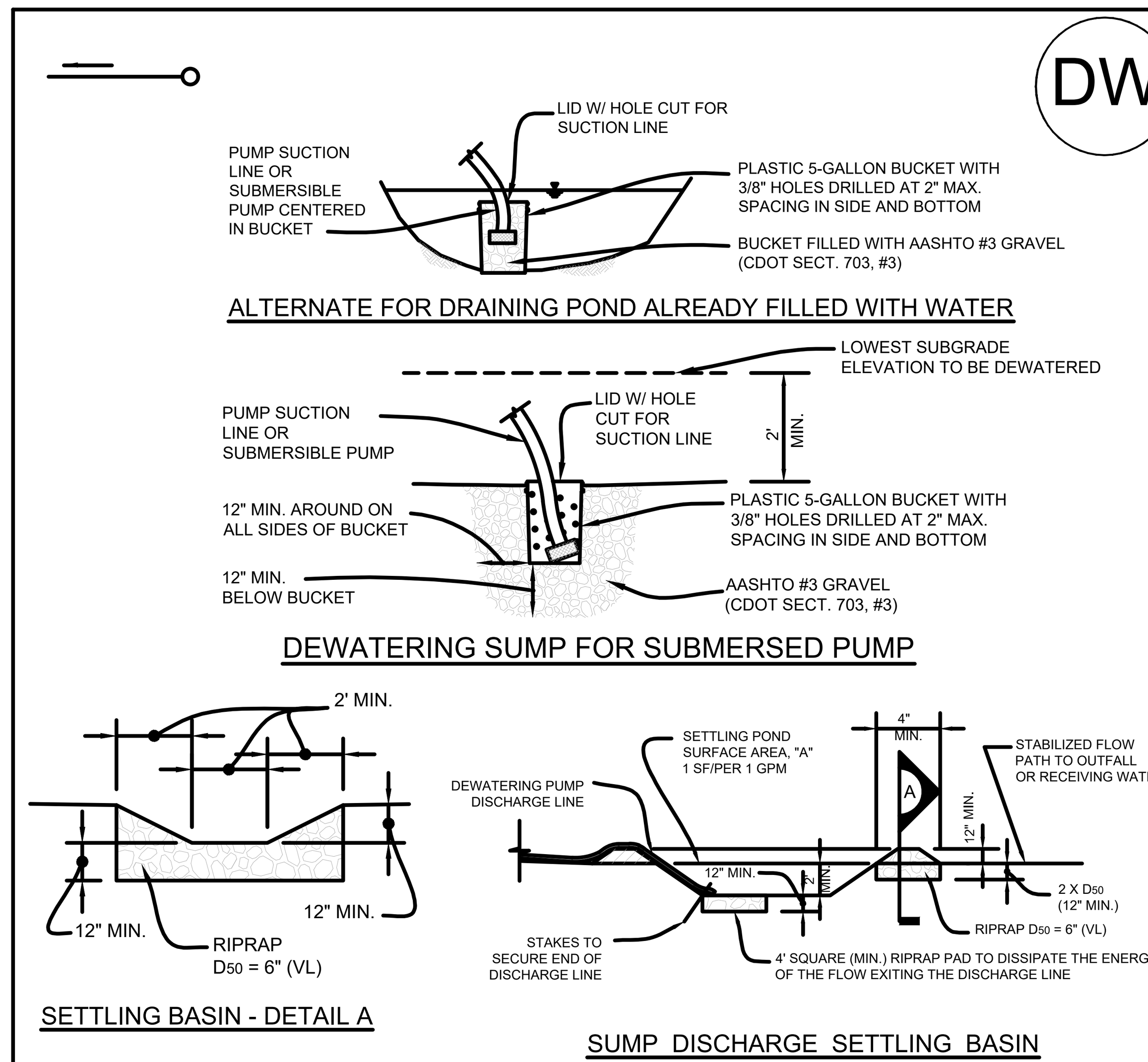
1. THE SWMP MANAGER SHALL INSPECT THE STABILIZED STAGING AREA WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
2. SWMP MANAGER SHALL PROVIDE ADDITIONAL THICKNESS OF GRANULAR MATERIAL IF ANY RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.
3. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
4. ANY ACCUMULATED DIRT OR MUD SHALL BE REMOVED FROM THE SURFACE OF THE STABILIZED STAGING AREA.
5. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.

DETAIL BASED ON DETAILS PROVIDED BY DOUGLAS COUNTY

Urban Drainage and Flood Control District Drainage Criteria Manual (V.3)	**Figure C3–1 STABILIZED STAGING AREA**

202 SPC5 STABILIZED STAGING AREA

NOT TO SCALE



DEWATERING INSTALLATION NOTES

1. THE SWMP MANAGER SHALL OBTAIN A CONSTRUCTION DISCHARGE (DEWATERING) PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT PRIOR TO ANY DEWATERING OPERATIONS. ALL DEWATERING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PERMITS.
2. THE SWMP MANAGER SHALL PROVIDE, OPERATE, AND MAINTAIN DEWATERING SYSTEMS OF SUFFICIENT SIZE AND CAPACITY TO PERMIT EXCAVATION AND SUBSEQUENT CONSTRUCTION IN DRY CONDITIONS AND TO LOWER AND MAINTAIN THE GROUNDWATER LEVEL A MINIMUM OF 2-FEET BELOW THE LOWEST POINT OF EXCAVATION AND CONTINUOUSLY MAINTAIN EXCAVATIONS FREE OF WATER UNTIL BACK-FILLED TO FINAL GRADE.
3. DEWATERING OPERATIONS SHALL USE ONE OR MORE OF THE DEWATERING SUMPS SHOWN ABOVE, WELL POINTS, OR OTHER MEANS APPROVED BY THE LOCAL JURISDICTION TO REDUCE THE PUMPING OF SEDIMENT, AND SHALL PROVIDE A TEMPORARY BASIN FOR SETTLING PUMPED DISCHARGES PRIOR TO RELEASE OFF SITE OR TO A RECEIVING WATER. A SEDIMENT BASIN MAY BE USED IN LIEU OF SUMP DISCHARGE SETTLING BASIN SHOWN ABOVE.
4. A 4' SQUARE RIPRAP PAD SHALL BE PLACED AT DISCHARGE POINT.
5. THE DISCHARGE END OF THE LINE SHALL BE STAKED IN PLACES TO PREVENT MOVEMENT OF RIPRAP PAD.

DEWATERING MAINTENANCE NOTES

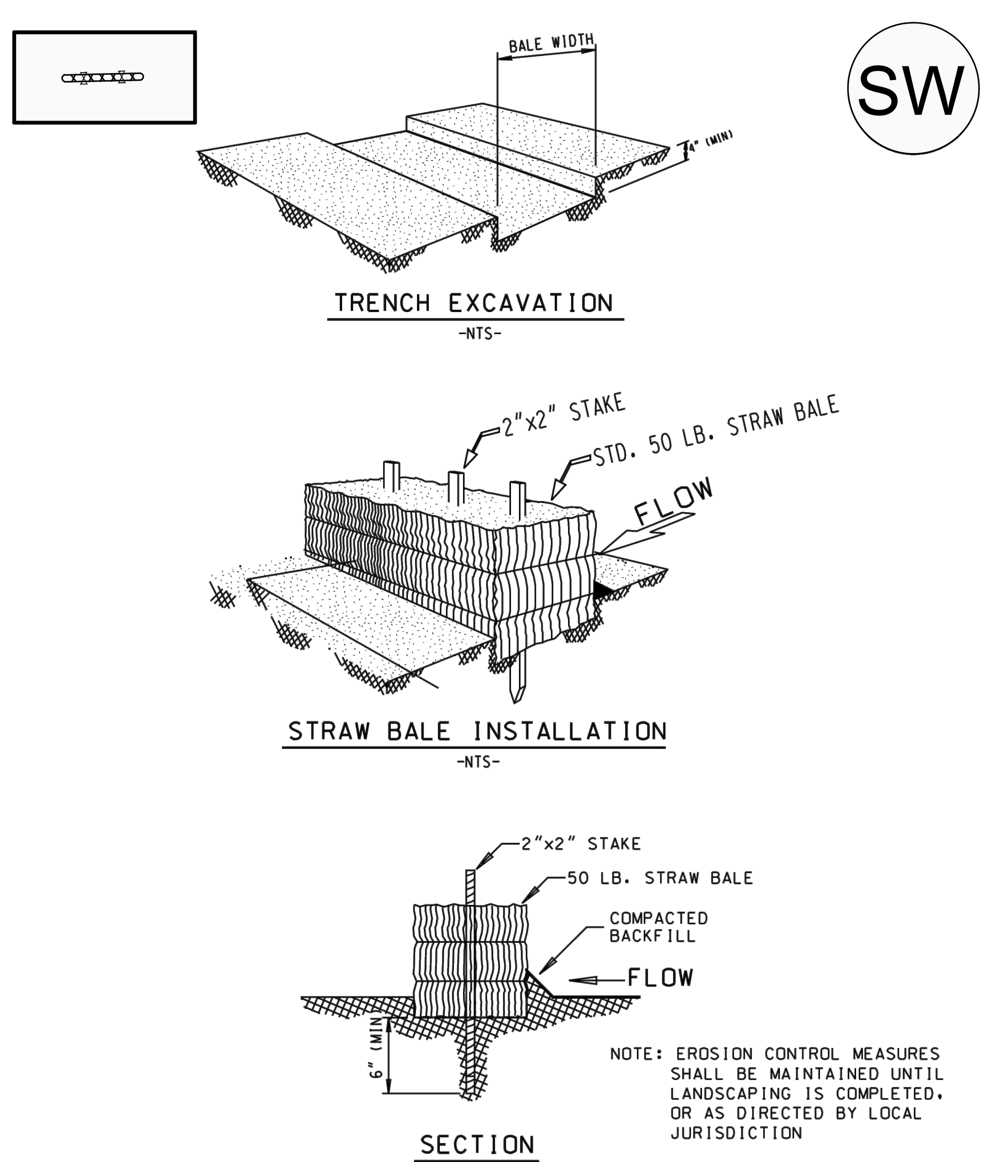
1. THE SWMP MANAGER SHALL INSPECT DEWATERING SYSTEMS AND PERFORM ANY NECESSARY REPAIRS OR MAINTENANCE AT LEAST TWICE A DAY.
2. TEMPORARY SETTLING BASINS SHALL BE REMOVED WHEN NO LONGER NEEDED FOR DEWATERING OPERATIONS. ANY DISTURBED AREA SHALL BE COVERED WITH TOP SOIL,DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

DETAIL BASED ON DETAILS PROVIDED BY DOUGLAS COUNTY, COLORADO

URBAN DRAINAGE AND FLOOD CONTROL DISTRICT DRAINAGE CRITERIA MANUAL (V.3)	Figure C3-3 CONCRETE WASHOUT AREA DEWATERING DETAIL

203 SPC5 TYPICAL DEWATERING

NOT TO SCALE



Urban Drainage and Flood Control District
Drainage Criteria Manual (V.3)

PUBLIC WORKS DIVISION

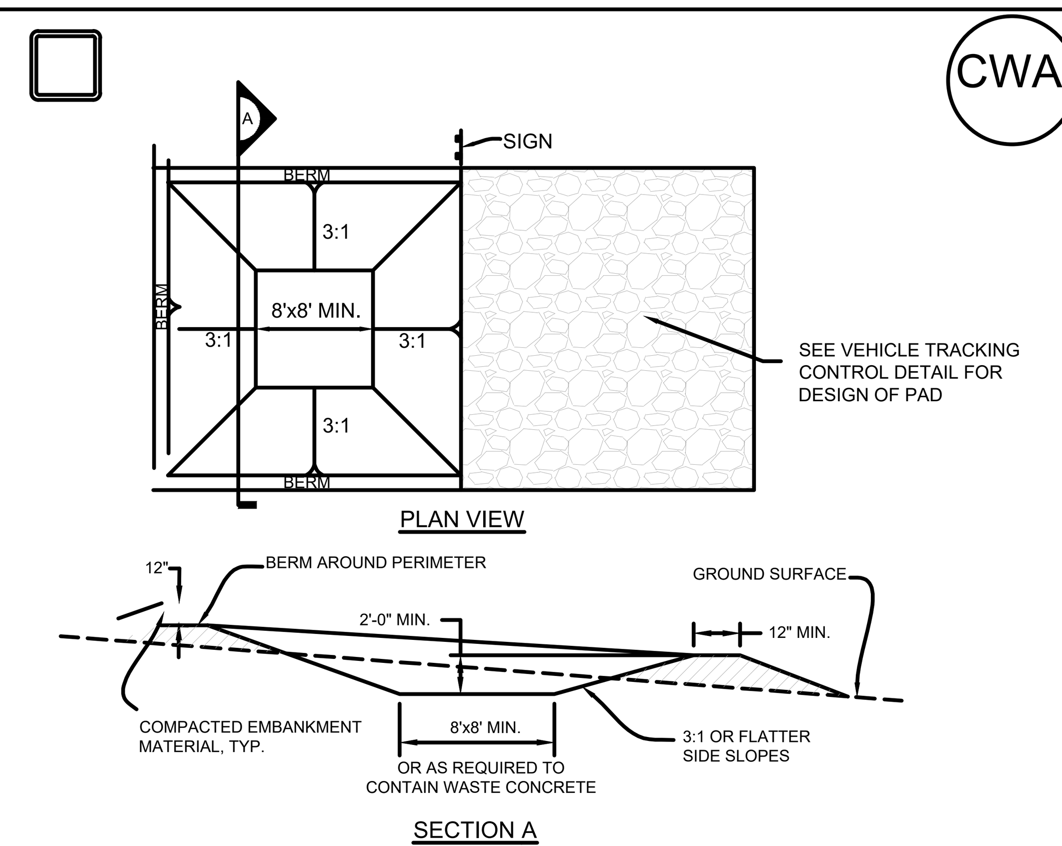
STRAW BALE EROSION BARRIER
DETAIL 300-08

REB

DATE: SEPTEMBER, 2005 SCALE: NOT TO SCALE

204 SPC5 STRAW WATTLE

NOT TO SCALE



CONCRETE WASHOUT AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATIONS OF CONCRETE WASHOUT AREA
2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
3. VEHICLE TRACKING CONTROL IS REQUIRED AT THE ACCESS POINT.
4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
5. EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION

CONCRETE WASHOUT AREA MAINTENANCE NOTES

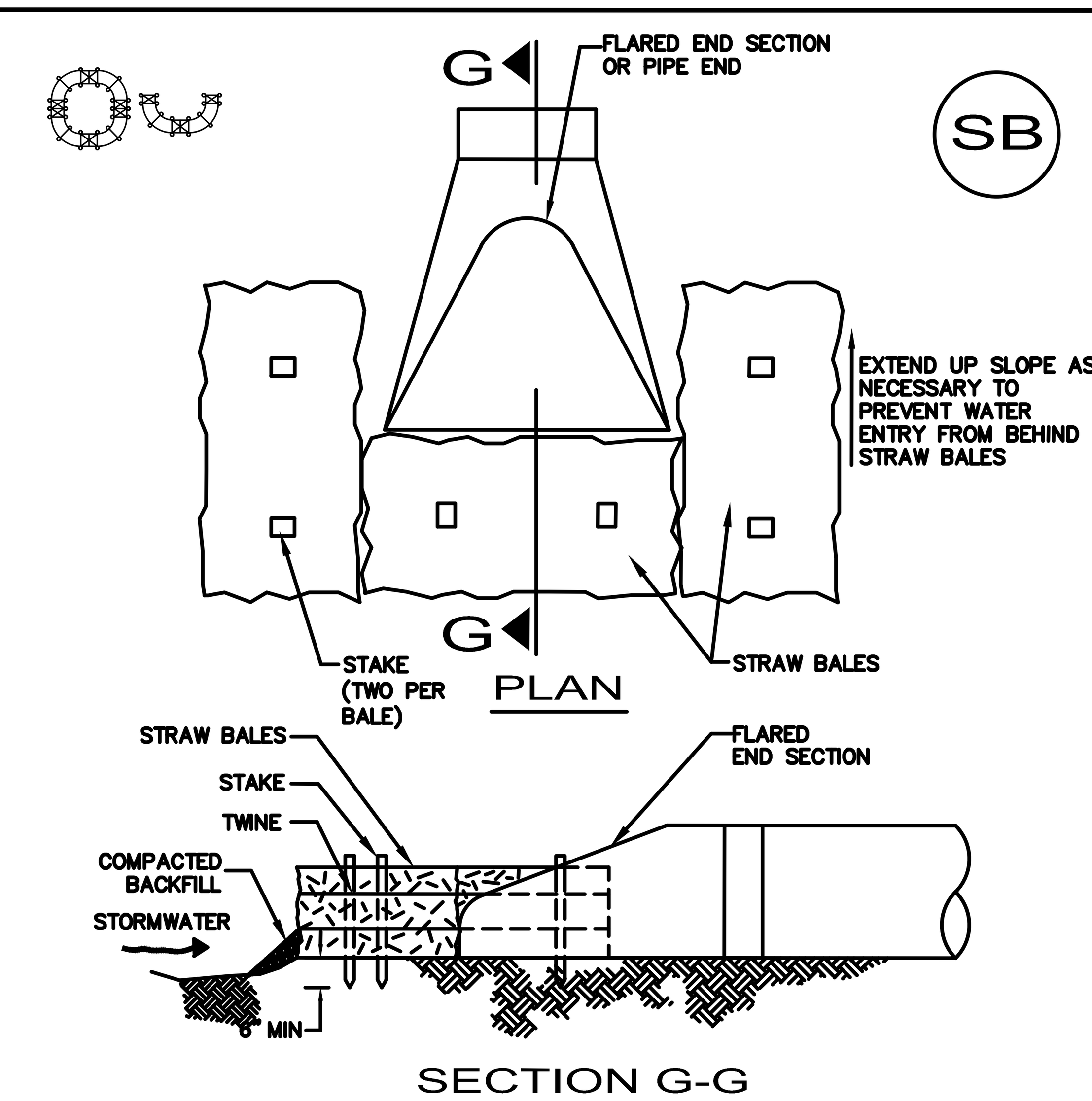
1. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
2. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
3. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, DRILL SEED AND CRIMP MULCH OR OTHERWISE STABILIZE IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
4. INSPECT WEEKLY, DURING AND AFTER ANY STORM EVENT.

DETAIL BASED ON DETAILS PROVIDED BY DOUGLAS COUNTY

Urban Drainage and Flood Control District Drainage Criteria Manual (V.3)	Figure C3-2 CONCRETE WASHOUT AREA

205 SPC5 CONCRETE WASHOUT AREA

NOT TO SCALE



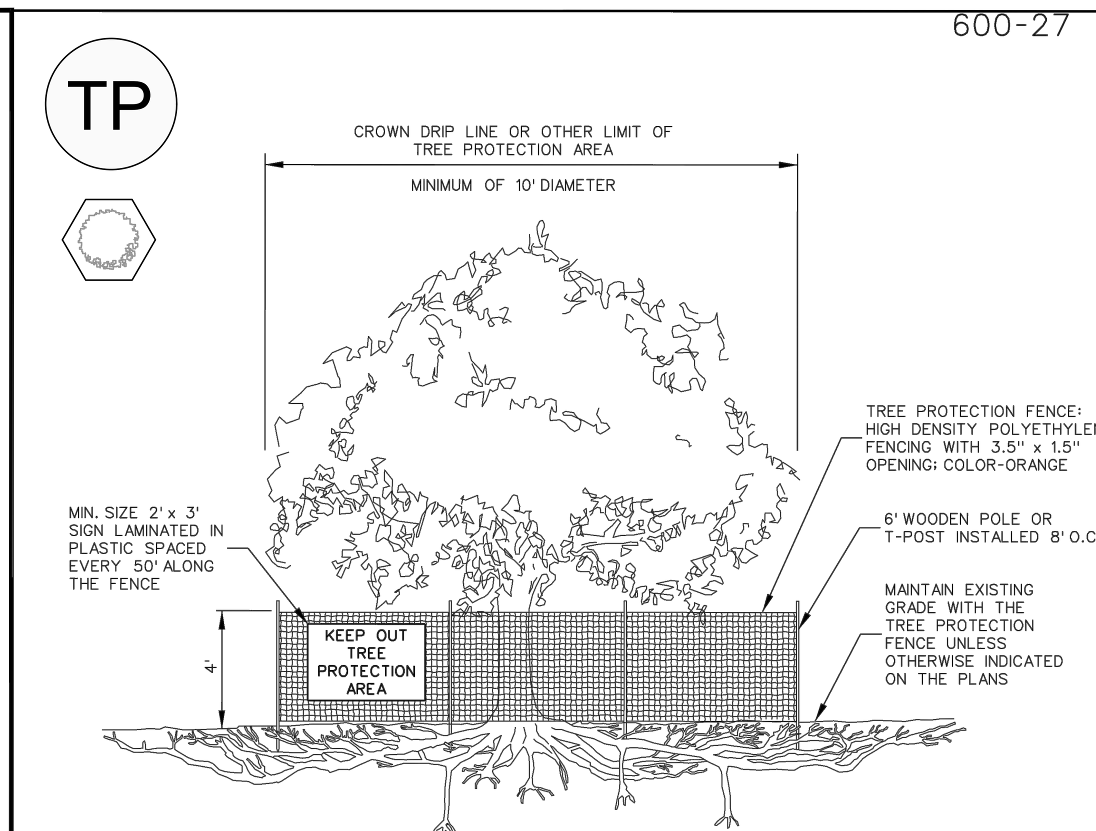
GENERAL NOTES:
1. INSPECT, REPAIR, AND REPLACE, (IF NECESSARY) THE FILTERS AFTER EACH STORM EVENT.
2. ALL BALES MUST BE REPLACED AFTER 12 MONTHS UNLESS APPROVAL IS GRANTED BY THE ENGINEERING DIVISION FOR LONGER USE.

STRAW BALE INLET PROTECTION

206 SPC5 STRAW BALE INLET PROTECTION

NOT TO SCALE

600-27



NOTES:
1. NO PRUNING SHALL BE PERFORMED EXCEPT BY CITY LICENSED TREE CONTRACTOR.
2. NO STORAGE OF MATERIALS ALLOWED INSIDE TREE PROTECTION AREA.
3. NO EQUIPMENT SHALL OPERATE INSIDE TREE PROTECTION AREA INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
4. SUPPLEMENTAL TREE WATERING SHALL BE REQUIRED IF THERE IS NO EXISTING IRRIGATION. CONSULT FORESTRY SERVICE.
5. SEE SECTION 600 OF CITY STANDARDS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.

TREE PROTECTION
N.T.S.

LONGMONT COLORADO

REVISIONS
8-2019 JMR

Print Date: 4/17/2020
File: Section 600.dgnlib
SCALE: NOT TO SCALE

CITY of LONGMONT
385 Kimbark Street, Longmont, CO 80501
Phone: 303-651-8304
FAX: 303-651-8352

DETAIL 600-27

207 SPC5 TREE PROTECTION PERIMETER

NOT TO SCALE

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PROJECT: 911-016
DATE: 02.04.2022
DESIGNED BY: S. Hallauer
SCALE: N/A
DRAWN BY: S. Hallauer
REVIEWED BY: S. Thomas

TERRY LAKE REGIONAL SANITARY SEWER
STORMWATER POLLUTION CONTROL DETAILS

Sheet SPC5
5 of 5

DRAWING FILENAME: D:\Projects\911-016\Dwg\Drng\911-016_SAN-OS_SPCP-OVERALL.dwg LAYOUT NAME: SPC5 DATE: Feb 16, 2022 – 1:45pm CAD OPERATOR: sterling
LIST OF XREFS: [911-016_xADJ] [911-016_xExist] [911-016_xSurveyText] [911-016_xSITE] [911-016_xUtil] [911-016_Keymap] [911-016_xEROS_leg] [911-016_SPCP-NES-xborder]

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
DENVER REGULATORY OFFICE, 9307 SOUTH WADSWORTH BOULEVARD
LITTLETON, COLORADO 80128-6901

December 2, 2021

SUBJECT: Approved Jurisdictional Determination – Corps File No. NWO-2021-01941-DEN, Terry Lake Regional Sewer Project

Gloria Sargent
Cedar Creek Associates Inc.
P.O. Box 272150
Fort Collins, CO 80527

Dear Ms. Sargent:

This letter is in reference to the property located at approximate latitude 40.205111208219, longitude -105.118409252525, in Longmont, Boulder County, Colorado. The submittal dated November 4, 2021, consists of a request for an Approved Jurisdictional Determination for the above project. The delineated area located on the subject property has been reviewed in accordance with Section 404 of the Clean Water Act under which the U.S. Army Corps of Engineers regulates the discharge of dredged and fill material, and any excavation activity associated with a dredge and fill project in waters of the United States.

At your request, an Approved Jurisdictional Determination, a written indication that wetlands and waterways within your project area are not waters of the United States has been prepared. The review area contains the following that are not considered waters of the United States (WOTUS). The two irrigation ditches were constructed entirely in uplands, with all flows terminating in uplands. No surface flows from the ditches reach a water of the U.S. As such, the ditches are not considered jurisdictional as described om the November 13, 1986 Federal Register (page 41217), Part 328(a) Non-tidal drainage and irrigation ditches excavated on dry land. The Corps of Engineers generally does not consider these types of aquatic resources to be waters of the U.S. except on a case-by-case basis.

The Approved Jurisdictional Determination is attached to this letter. If you are not in agreement with the Approved Jurisdictional Determination, you may request an administrative appeal under regulation 33 CFR 331, by using the attached Appeal Form and Administrative Appeal Process form. The request for appeal must be received within 60 days from the date of this letter. It is not necessary to submit a Request for Appeal if you do not object to the Approved Jurisdictional Determination.

This Approved Jurisdictional Determination is valid for a period of five years from the date of this letter, unless new information warrants revisions of the Approved Jurisdictional Determinations before the expiration date, or unless the Corps has identified, after a possible public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

If there are any questions please feel free to contact Cody Wheeler at (720) 922-3846 or by e-mail at Cody.S.Wheeler@usace.army.mil, and reference **Corps File No. NWO-2021-01941-DEN**.

Sincerely,

Cody Wheeler
Regulatory Project Manager

Enclosure(s)

Copies Furnished by Email:

gsargent@cedarcreekassociatesinc.com

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): December 2, 2021

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Denver Regulatory Office
Terry Lake Regional Sewer Project
NWO-2021-01941-DEN

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: CO County/parish/borough: Boulder City: Longmont
Center coordinates of site (lat/long in degree decimal format): Lat. 40.2051115 N; Long. 105.118409 W
Name of nearest waterbody: Rough and Ready Ditch
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: N/A
Name of watershed or Hydrologic Unit Code (HUC): Boulder Creek-Saint Vrain Creek 1019000507
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: December 2, 2021
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. Waters of the U.S.
a. Indicate presence of waters of U.S. in review area (check all that apply): [1]
☐ TNWs, including territorial seas
☐ Wetlands adjacent to TNWs
☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
☐ Non-RPWs that flow directly or indirectly into TNWs
☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
☐ Impoundments of jurisdictional waters
☐ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:
Non-wetland waters: linear feet: width (ft) and/or acres.
Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: **Pick List**
Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):[3]
☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: The two irrigation ditches were determined to be preamble waters and are not considered jurisdictional. See reference below in Section III.F.

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: **Pick List**
Drainage area: **Pick List**
Average annual rainfall: inches
Average annual snowfall: inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.
Project waters are **Pick List** river miles from RPW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Project waters are **Pick List** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: .
Tributary stream order, if known: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is:
- ☐ Natural
- ☐ Artificial (man-made). Explain: .
- ☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
- Average width: feet
- Average depth: feet
- Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
- Describe flow regime: .

Other information on duration and volume: .

Surface flow is: **Pick List.** Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
- ☐ Dye (or other) test performed: .

Tributary has (check all that apply):
- ☐ Bed and banks
- ☐ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

- ☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
- Explain: .

Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   - ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

[8]See Footnote # 3.

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   - ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   - ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   - ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   - ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☐ which are or could be used for industrial purposes by industries in interstate commerce.
- ☐ Interstate isolated waters. Explain: .
- ☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  - Identify type(s) of waters: .
- ☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- ☒ Other: (explain, if not covered above): Reference is made to the November 13, 1986 Federal Register (Page 41217), Part 328 (a) Non-tidal drainage and irrigation ditches excavated on dry land. The Corps of Engineers generally does not consider these types of aquatic resources waters of the U.S. except on a case-by-case basis. In this case, the two irrigation ditches are constructed entirely in

[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

uplands, with all flows terminating in uplands. There are no base flows within the ditches, and no surface flows from the ditches return to a water of the U.S.. As such, the ditches are not considered jurisdictional.

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Terry Lake Regional Sewer Project Species and Habitat Characterization Plan. November 2021.
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  ☒ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☒ U.S. Geological Survey Hydrologic Atlas: .
  ☒ USGS NHD data.
  ☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name:1:24K Longmont.
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):Google Earth.
  or ☐ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☒ Applicable/supporting case law:Rapanos.
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Gloria L. Sargent	File Number: NWO-2021-01941-DEN	Date: December 2, 2021
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found in Corps regulations at 33 CFR Part 331, or at http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/FederalRegulation.aspx

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also, you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact: US Army Corps of Engineers, Denver Regulatory Office Attn: Cody Wheeler 9307 S. Wadsworth Blvd Littleton, CO 80128 Telephone (720) 922-3846	If you only have questions regarding the appeal process you may also contact: US Army Corps of Engineers, Northwestern Division Attn: Melinda Larsen, Regulatory Appeals Review Officer 1201 NE Lloyd Blvd Ste 400 Portland, OR 97232-1257 Telephone (503) 808-3888 Melinda.M.Larsen@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation and will have the opportunity to participate in all site investigations.

_____ Signature of appellant or agent.	Date:	Telephone number:

Terry Lake Regional Sewer Project

Species and Habitat Characterization Plan

July, 2021

CEDAR CREEK ASSOCIATES, INC.

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Fort Collins, CO 80527

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Terry Lake Regional Sewer Project

Species and Habitat Conservation Plan

1.0 INTRODUCTION

Cedar Creek Associates, Inc. (Cedar Creek) was contracted by the Landhuis Company to develop a Species and Habitat Conservation Plan (SHCP), in accordance with City of Longmont's Development Standards (15.05.030 [H]), for the Terry Lake Regional Sewer Project. Cedar Creek is a small ecological consulting firm that has been operating out of Fort Collins since its inception in 1982. Our technical team consists of biologists, soil scientists, ecologists, and associate discipline specialists. Cedar Creek's principal business activities concentrate on providing practical ecological and soils expertise toward identification and quantification of ecological resources, characterization of potential project impacts, recommendation of appropriate mitigation measures, and planning for restoration success after project implementation. This plan was implemented by Mr. Jesse Dillon, Cedar Creek's Principal Ecologist with 17 years experience, and Ms. Gloria Sargent, a Botanist and GIS specialist with Cedar Creek.

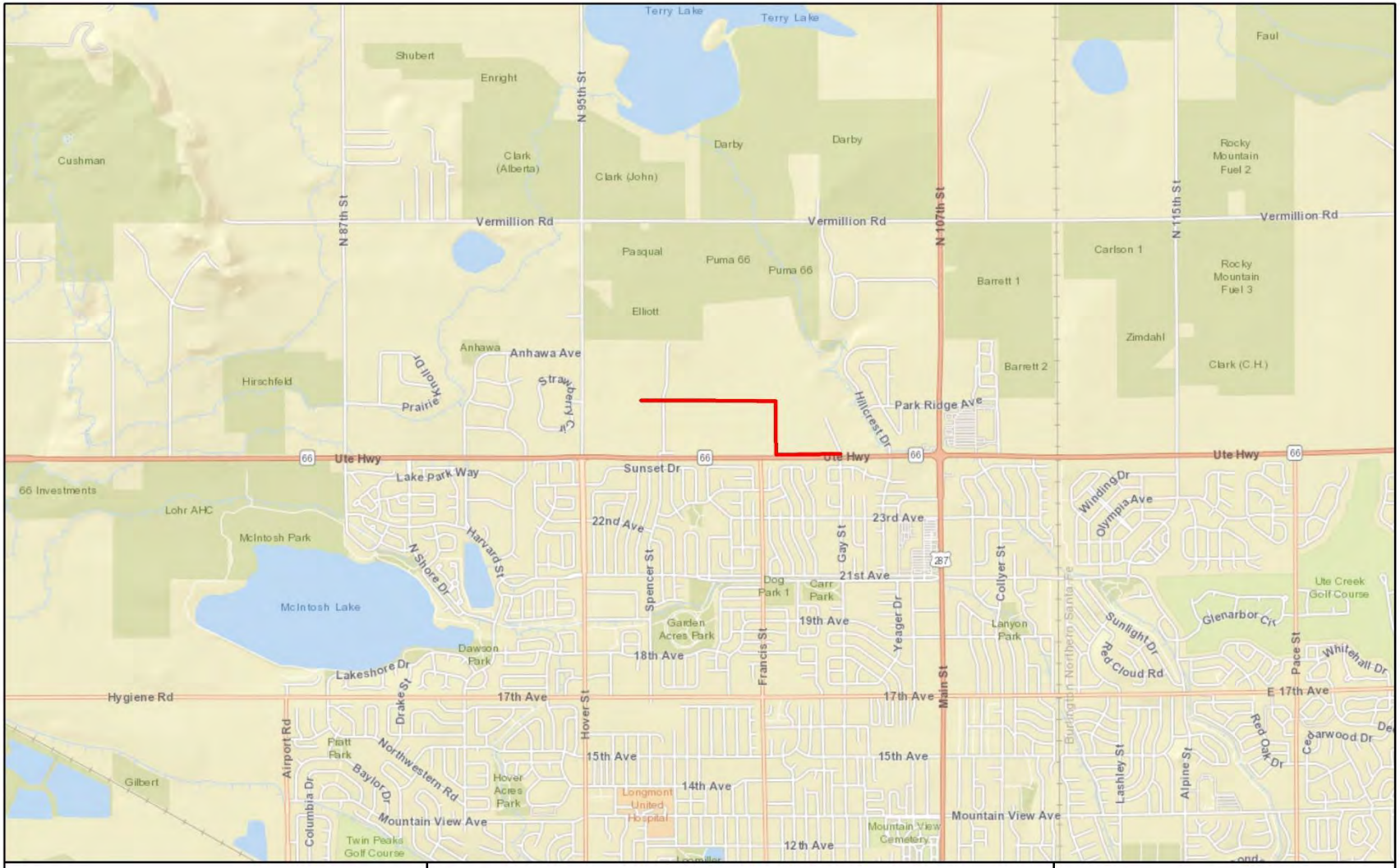
Development of the SHCP comprised of the following components:

- Desktop Analysis – This component relies on publicly available environmental data to screen the project area for potential resources. The GIS study included evaluation of the National Wetlands Inventory (USFWS 2021), Colorado Department of Parks and Wildlife High Priority Habitat Maps (CPW 2021), and Information for Planning and Consultation (IPac) tool (USFWS).
- Field Verification – This component consists of a qualified biologist/ecologist visiting the project area to conduct pedestrian surveys to identify potential resources which are not indicated on publicly available GIS data.

Field verification of project resource occurred on June 18th.

2.0 SITE DESCRIPTION

The Site is located on a tract of land located in the southern half of Section 21, Township 3 North, Range 69 West of the 6th Principal Meridian in the City of Longmont, County of Boulder, Colorado. The project involves a regional sewer expansion which includes installation of 30-inch sanitary sewer line over a distance of approximately one mile. The project occurs completely within private lands and is fully described within the Preliminary Public Improvement Plans for the Terry Lake Regional Sanitary Sewer prepared by Northern Engineering (2021). Figure 1 displays the project location.



Legend

Sewer Alignment

CEDAR CREEK ASSOCIATES, INC.

Coordinate System:
NAD83 HARN CO N ft

Sources:
Cedar Creek

Terry Lake Regional Sewer Project

Figure 1
Project Location

3.0 METHODS

3.1 Desktop Review

A data review was conducted to gather information and assist in the evaluation of potential natural biological resources within the property. The data review entailed an evaluation of online resources and publications to determine the presence or potential occurrence of important natural and biological resources. This data review included:

- U.S. Fish and Wildlife Service (USFWS) Federally Listed and Proposed Endangered, Threatened, and Candidate Species and Critical Habitat as identified by the USFWS Information, Planning, and Conservation System (IPaC) Official Species List and Critical Habitat Mapper;
- Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (BGEPA) protected species as identified on the IPaC Report;
- The Colorado Natural Heritage Program database statewide species and natural community tracking list for Larimer County;
- Colorado Parks and Wildlife (CPW) Threatened and Endangered Species List; and
- USFWS National Wetlands Inventory (NWI).

3.2 Field Verification

Field surveys for the SHCP focused on vegetation characterization, raptor nest survey, wetland and riparian delineation, noxious weed observations, and assessment of wildlife habitat and utilization.

4.0 ECOLOGICAL CHARACTERIZATION

4.1 Vegetation

Representative photos were collected along the proposed sewer alignment and are provided in Appendix A of this report.

4.1.1 Vegetation Communities

The project area is primarily comprised of active agricultural fields and suburban development. The primary crops in the agricultural fields are alfalfa and hay (smooth brome). There is a riparian area with associated tree groves approximately 1,000 feet to the east and northeast of the project area. Figure 2 shows the aerial imagery in the vicinity of the project area.

4.1.2 Special Status Species

Desktop Analysis

The USFWS Information, Planning, and Conservation System query revealed two plants species with the potential to occur in the project area, Ute Ladies'-tresses (*Spiranthes diluvialis*) and Western Prairie Fringed Orchid (*Platanthera praeclara*). The results of the query are found in Appendix A. A query of tracked species with the Colorado Natural Heritage program for Boulder County resulted in only 1 plant which is state or federally listed, Ute Ladies'-tresses.

Ute Ladies'-tresses occurs along riparian edges, gravel bars, old oxbows, high flow channels, and moist to wet meadows along perennial streams. It typically occurs in stable wetland and seepy areas associated with old landscape features within historical floodplains of major rivers. It also is found in wetland and seepy areas near freshwater lakes or springs. Western Prairie Fringed Orchid occurs most often in mesic to wet unplowed tallgrass prairies and meadows but have been found in old fields and roadside ditches.

Field Survey

No potential habitat or special status plant species were encountered during the field survey conducted on June 18th.

4.1.3 Noxious Weeds

A total of four noxious weeds were observed within and/or adjacent to the easement during the field survey – Canada thistle (*Cirsium arvense*, B-List), Russian olive (*Elaeagnus angustifolia*, B-List), musk thistle (*Carduus nutans*, B-List), field bindweed (*Convolvulus arvensis*, C-List), and cheatgrass (*Bromus tectorum*, C-List). Field bindweed is the most common along the dry sections between fields as it is prevalent throughout the abutting croplands along and Canada thistle is more prevalent throughout the wetter drainages and ditch banks.

Other weedy species, not listed in Colorado as noxious, were common along the eastern portion of the alignment which parallels Highway 66. Predominantly burningbush (*Bassia scoparia*) and false salsify (*Scorzonera laciniata*).

Cropalnd - Unidentified
Cropland - Alfalfa
Non-native Grassland
Section 2 - Mesic Area
Section 2 - Disturbed Mesic Area
Non-native Grassland
12
11
10
9
8
7
6
Non-native Grasslands
Cropland - Alfalfa
Section 1 - Wetland
Cropland - Smooth Brome
5
Cropland - Intermediate Wheatgrass
Non-native Grasslands
Non-native Grassland
4
3
2
1
0
0.075
0.15
Miles
N
W
E
S
Legend
Photo Points
Habitat
Non-native Grassland
Section 1 - Wetland
Section 2 - Disturbed Mesic Area
Section 2 - Mesic Area
CEDAR CREEK ASSOCIATES, INC.
Coordinate System: NAD83 HARN CO N ft
Sources: Cedar Creek
Terry Lake Regional Sewer Project
Figure 2
Vegetation Communitites

4.2 Wetlands

4.2.1 Desktop Analysis

Figure 3 shows the mapped resources from the National Wetland Inventory (USFWS 2021). There is a riparian area with associated tree groves approximately 1,000 feet to the east and northeast of the project area. These areas were not visited for verification in the field because they are not likely to be affected by the proposed disturbance.

There were no streams, creeks, or riparian zones within the proposed sewer alignment. A single functioning irrigation ditch runs North-South through the sewer alignment which does demonstrate the three characteristics required for a wetland (vegetation, soil, and hydrology) as defined in the United States Army Corps of Engineers supplemental field guide: Arid West Region. In addition, there is a section along the western portion of the proposed alignment which also meets the criteria to be considered a wetland. These sections are shown on Figure 3 and are discussed below in section 4.2.2.

4.2.2 Field Survey

Two areas supporting wetland characteristics were observed in June 2021 (i.e., during the growing season) along the sewer alignment. Wetland indicator classifications were assigned to species following the definitions found in the USACE supplemental guide for the Arid West Region.

Section1 - The irrigation ditch running North-South through the easement showed characteristics of a defined bed and bank as well as an ordinary high water mark (OHWM). The ditch is approximately 7 feet wide and contained flowing water approximately 6 inches deep. At the time of the field survey water was below the OHWM. Vegetation within the ditch is dominated by broadleaf cattails (*Typha latifolia*, OBL species), softstem bulrush (*Schoenoplectus tabernaemontani,* OBL species), common duckweed (*Lemna minor*, OBL species), reed canarygrass (*Phalaris arundinacea*, FACW species) and to a lesser extent, Timothy (*Phleum pratense*, FACU species). Vegetation quickly transitions to upland species on the banks; predominately smooth brome (*Bromus inermis,* FACU species), intermediate wheatgrass (*Thinopyrum intermedium,* UPL species), and Timothy.

Section 2 – The grass lined channel does not show characteristics of a defined bed and bank or an OHWM. The channel is approximately 3 feet wide and was dry at the time of the field survey. Evidence of recent soil disturbance associated with agriculture practices was observed. Vegetation within the undisturbed channel is dominated by common spikerush (*Eleocharis palustris*, OBL species) and to a lesser extent broadleaf cattails and softstem bulrush. Also observed along the drainage were woods rose (*rosa woodsii*, FACU species) and Russian olive (FACU species). Vegetation quickly transitions to upland species on the banks; predominately smooth brome and intermediate wheatgrass.

Irrigation Ditch
0
0.125
0.25
Miles
N
W
E
S
Legend
Sewer Alignment
Wetland Characteristics Confined to Ditch
NWI Wetland Type
Freshwater Emergent Wetland
Freshwater Pond
Lake
Riverine
CEDAR CREEK ASSOCIATES, INC.
Coordinate System:
NAD83 HARN CO N ft
Sources:
Cedar Creek
Terry Lake Regional Sewer Project
Figure 3
Wetland Locations

4.3 Wildlife

4.3.1 Desktop Analysis

The State Wildlife Action Plan was queried to determine the whether the alignment intersected crucial habitat for Tier 1 terrestrial animal and plants species of greatest conservation need. The query yielded a habitat priority level of 4 for the project area with 1 being the highest priority and 5 being the lowest.

Colorado Parks and Wildlife recently compiled all High Priority Habitat into a single data package for oil and gas development. This data package contains delineated High Priority Habitat for avian, mammals, and aquatic species. No High Priority Habitats were found in the vicinity of the project.

4.3.2 Field Survey

Wildlife Observations

Unidentified songbirds were the only wildlife observed along the proposed sewer alignment in June 2021.

Wildlife Features and Migration Corridors

The Site is located in a moderately developed area of the City. Land use surrounding the alignment is dominated by agricultural fields and roadways. It is unlikely that the alignment intersects with any areas serving as a significant migration corridor for sensitive, unique, or regionally protected wildlife or significant wildlife features. There are some large trees associated with the buildings to be removed as part of the project. These trees could serve as nesting or perching habitat. However, no such activity was observed during the field survey. The noise and high level of traffic on Highway 66 and N 107th street would likely deter the majority of non-flying wildlife from attempting to access the Site from the south. The irrigation ditch running North-South through the alignment may provide some migratory benefit to resident urban-adapted wildlife such as red foxes, raccoons, coyotes, and skunks, and may serve as a temporary stopover habitat for migrating birds.

Resulting changes to wildlife corridor quality should be minimal because the property is located in a moderately developed area where wildlife are already accustomed to structures, roads, bridges, fences, buildings, and other habitat modifications. While wildlife species unaccustomed to significant urban habitat modifications can be found in close proximity to the alignment, they are unlikely to utilize any portion of the alignment as a wildlife corridor or for other purposes.

4.4 General Ecological Function

Habitats surrounding the sewer alignment are dominated by cultivated cropland which does not support any stands of mature vegetation. Relatively minor habitats of non-native grasslands occur between the fields and along the roadsides throughout the sewer alignment. The two sections supporting

wetland characteristics along the sewer alignment are relatively narrow linear features that are restricted by the local geomorphology.

Cropland is a non-native habitat that has been cleared of native vegetation and woody species, and as a result, does not support any natural habitat features and has minimal wildlife habitat value. Canada geese (*Branta canadensis*) may occasionally graze croplands after spring green-up and croplands may support resident populations of small mammals such as deer mouse and prairie vole, but overall habitat value is limited by seasonal cultivation and lack of cover from fall through early spring.

Non-native grasslands along the alignment also have relatively low habitat value because of the general lack of native vegetation from past disturbances and surrounding cultivated cropland. While these areas may not be cleared of vegetation regularly, they do not support woody species in any amount which would be beneficial to wildlife. A few isolated occurrences of Russian olive, Wood's rose, and Cottonwood were observed in these areas along the alignment. The largest stand of mature trees are found around the structures located along Highway 66.

The irrigation ditch running North-South through the sewer alignment contains the greatest potential for wildlife use as it provides a continuous pathway through the cropland from Vermillion Rd. (North of alignment) and Highway 66 (South of alignment).

5.0 POTENTIAL IMPACTS AND MITIGATION MEASURES

Proposed development would occur primarily in the non-native grasslands between cropland where there are limited concerns for impact to existing habitats and functionality. The portion running adjacent to the irrigation ditch and the point at which the alignment crosses the irrigation ditch contain the greatest potential for impact to desirable vegetation, water quality, and wildlife utilization. Based on field observation, no active nesting sites were observed. During construction, urban adapted avian and mammal species may avoid the area due to increased noise and human activity. However, they would be expected to return following completion of construction. Effective reclamation of the project areas to the existing conditions (or better ecological functionality) described in this report will ensure that the urban adapted species return.

Noxious weeds could increase as a result of the construction activities. During construction, best management practices to control and limit spread of noxious weeds should be employed. Post construction monitoring and chemical control may be necessary to limit noxious weeds.

As per the City of Longmont's municipal code (15.05.020), wetlands located in and or along the banks of irrigation ditches shall not be subject to the wetland setbacks if the Army Corps of Engineers determines that the wetlands are not jurisdictional waters. There are currently no buffers applied to any features along the sewer alignment. However, construction activities are planned within close proximity to the ditch which exhibits wetland characteristics. Therefore, a silt fence should be installed between the right of way and ditch boundary to ensure protection of the ditch areas exhibiting wetland characteristics. Planned disturbance and soil management should be implemented in a way that limits impact to desirable vegetation and features, thus protecting water quality and function of adjacent areas. When the sewer alignment needs to cross the irrigation ditch, it is recommended that it is installed under the ditch without disturbing the ditch, if possible.

If ground disturbing activities are to occur during bird nesting season from March 1 to July 31, a qualified biologist should survey trees and other potential nesting locations prior to disturbance to ensure no active nests are taken during construction.

6.0 LITERATURE CITED AND DATA SOURCES

Colorado Parks and Wildlife (CPW). Threatened and Endangered Species List. https://cpw.state.co.us/learn/Pages/SOC-ThreatenedEndangeredList.aspx. Accessed 6/16/2021.

Colorado Natural Heritage Program. Colorado Wetland Inventory. https://csurams.maps.arcgis.com/apps/webappviewer/index.html?id=a8e43760cb934a5084e89e46922580cc. Accessed 6/16/2021.

USACE. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0).

US Fish and Wildlife Service. Information, Planning, and Conservation System (IPaC). https://ecos.fws.gov/ipac/. Accessed 6/16/2021.

US Fish and Wildlife Service. National Wetlands Inventory (NWI) Wetlands Mapper. https://www.fws.gov/wetlands/. Accessed 6/16/2021.

Photolog – Habitat Photographs

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 1	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 1 looking east along alignment. Vegetation dominated by annual weedy species.			

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 2	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 1 looking west along alignment. Vegetation dominated by annual weedy species.			

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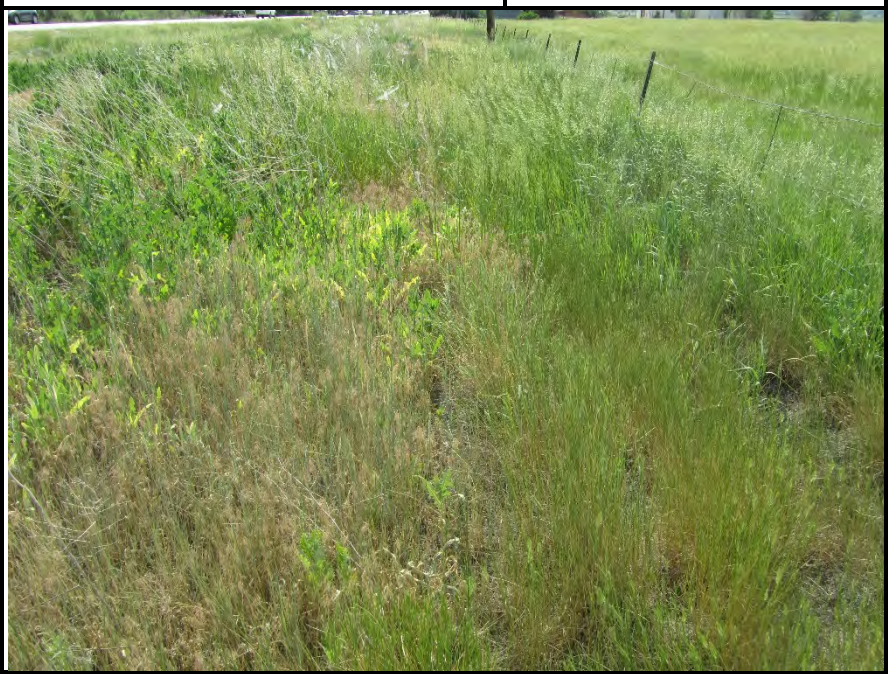
Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 3	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 2 looking east along alignment. Vegetation dominated by smooth brome and cheatgrass.			

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 4	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 2 looking west along alignment. Vegetation dominated by smooth brome, crested wheatgrass, and cheatgrass.			

Photolog – Habitat Photographs

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 5	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 3 looking east along alignment. Vegetation dominated by annual weedy species and smooth brome.			

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 6	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 3 looking west along alignment. Vegetation dominated by annual weedy species and smooth brome.			

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Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 7	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 4 looking north along alignment. Vegetation dominated by upland species outside of ditch and Timothy, softstem bullrush, and cattails inside of ditch.			

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 8	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 4 looking south along alignment. Vegetation dominated by upland species outside of ditch and Timothy, softstem bullrush, and cattails inside of ditch.			

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Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 9	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 5 looking north along alignment. Vegetation dominated by smooth brome and intermediate wheatgrass outside of ditch and Timothy, reed canarygrass, and cattails inside of ditch.			

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 10	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 5 looking south along alignment. Vegetation dominated by smooth brome and intermediate wheatgrass outside of ditch and Timothy, reed canarygrass, and cattails inside of ditch.			

Photolog – Habitat Photographs

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 11	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 6 looking east along alignment. Vegetation dominated by alfalfa and intermediate wheatgrass. Field bindweed is prevalent throughout.			

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 12	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 6 looking west along alignment. Vegetation dominated by alfalfa and intermediate wheatgrass. Field bindweed is prevalent throughout.			

Photolog – Habitat Photographs

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 13	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 7 looking east along alignment. Vegetation in adjacent cropland is dominated by alfalfa and intermediate wheatgrass. Vegetation in area between fields is dominated by smooth brome. Field bindweed is prevalent throughout.			

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 14	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 7 looking west along alignment. Vegetation in adjacent cropland is dominated by alfalfa and intermediate wheatgrass. Vegetation in area between fields is dominated by smooth brome. Field bindweed is prevalent throughout			

Photolog – Habitat Photographs

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 15	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 8 looking east along alignment. Vegetation in adjacent cropland is dominated by alfalfa. Vegetation in area between fields is dominated by smooth brome and intermediate wheatgrass.			

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 16	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 8 looking west along alignment. Vegetation in adjacent cropland is dominated by alfalfa. Vegetation in area between fields is dominated by smooth brome and intermediate wheatgrass.			

Photolog – Habitat Photographs

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 17	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 9 looking east along alignment. Vegetation in adjacent cropland is dominated by alfalfa. Vegetation in area between fields is dominated by smooth brome.			

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 18	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 9 looking west along alignment. Vegetation in adjacent cropland is dominated by unidentified cropland to the north and non-native grassland to the south. Vegetation between fields has been disturbed to accommodate a drainage, but evidence of cattails and common spikerush are present.			

Photolog – Habitat Photographs

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 19	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 10 looking east along alignment. Vegetation in adjacent cropland is dominated by unidentified cropland to the north and non-native grassland to the south. Vegetation between fields has been disturbed to accommodate a drainage, but evidence of cattails and common spikerush are present.			

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 20	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 10 looking west along alignment. Vegetation in adjacent cropland is dominated by unidentified cropland to the north and non-native grassland to the south. Vegetation between fields has been disturbed to accommodate a drainage, but evidence of cattails and common spikerush are present.			

Photolog – Habitat Photographs

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 21	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 11 looking east along alignment. Vegetation in adjacent cropland is dominated by unidentified cropland to the north and non-native grassland to the south. Vegetation between fields is dominated by smooth brome, common spikerush, and curly dock.			

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 22	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 11 looking west along alignment. Vegetation in adjacent cropland is dominated by unidentified cropland to the north and non-native grassland to the south. Vegetation between fields is dominated by smooth brome, common spikerush, and curly dock.			

Photolog – Habitat Photographs

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 23	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 12 looking east along alignment. Vegetation in adjacent cropland is dominated by unidentified cropland to the north and non-native grassland to the south. Vegetation between fields is dominated by smooth brome and Canada thistle.			

Project Name: Terry Lake Regional Sewer Project		**Location:** Boulder County, Colorado	**Project Reference:** N/A
Photo ID Number: Photo 24	**Date:** 6/18/21		
Site ID: Proposed Sewer Alignment			
Description: Photo collected at Photo Point No. 12 looking west along alignment. Vegetation in adjacent cropland is dominated by unidentified cropland to the north and non-native grassland to the south. Vegetation between fields is dominated by non-native grass Canada thistle, and curly dock.			

CEDAR CREEK ASSOCIATES, INC.

#28: COTTONWOOD, PLAINS

#27: RUSSIAN OLIVE

OWNER: DICKENS,
JACK W. JR. TRUST, ET AL
PARCEL NO. 120521000019
REC. NO. 2940215

OWNER:PUMA 66
INVESTORS, LLLP.
PARCEL NO. 120521000023
REC. NO. 2959958

OWNER: MAPLE LEAF
INVESTORS, LLC.
PARCEL NO. 120521000010
REC. NO. 3050524 & 3050525

GAY STREET

#1: RUSSIAN OLIVE

#2: SIBERIAN ELM

#3: SIBERIAN ELM

#4: SIBERIAN ELM

#5: ROCKY MOUNTAIN JUNIPER

#14-18: ROCKY MOUNTAIN JUNIPER

#6: CRABAPPLE

#20: ROCKY MOUNTAIN JUNIPER

#26: APPLE

#24: ROCKY MOUNTAIN JUNIPER

#25: ROCKY MOUNTAIN JUNIPER

#19: ROCKY MOUNTAIN JUNIPER

#23: AUSTRIAN PINE

#7: RUSSIAN OLIVE

#8/#9: JUNIPER/EASTERN CEDAR

#22: ROCKY MOUNTAIN JUNIPER

#21: DOUGLAS FIR

#10: COTTONWOOD

#11: COTTONWOOD

#12: SIBERIAN ELM

#13: COTTONWOOD

LINCOLN STREET

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DRAWING FILENAME: D:\Projects\911-016\Dwg\Exhibits\911-016_SAN-SS_TREES.dwg LAYOUT NAME: ISO1 DATE: Feb 02, 2022 - 2:09pm CAD OPERATOR: sterling
LIST OF XREFS: [911-016_LAD1][911-016_ACAD][911-016_xRoadway][911-016_ACAD][911-016_ACAD][911-016_ACAD-Border]

No.	Revisions:	Date:
	REVIEW SET NOT FOR CONSTRUCTION	02.02.2022

These drawings are instruments of service provided by Northern Engineering Services, Inc. and are not to be used for any purpose or project unless signed and sealed by a Professional Engineer in the employ of Northern Engineering Services, Inc.

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

PROJECT: 911-016	DATE: 02.02.2022	REVIEWED BY: S. Thomas
DESIGNED BY: S. Hallauer	SCALE: 1" = 75'	
DRAWN BY: S. Hallauer		

TERRY LAKE REGIONAL SANITARY SEWER
TREE REMOVAL INVENTORY EXHIBIT

Sheet

of 8

Tree Appraisal

Project Name:	**Terry Lake Regional Sanitary Sewer, addendum 02/02/2022**
Project Contact	Kristin Turner
Phone:	970.532.5891 ext. 105
Email:	kristin@tbgroup.us
City Planning Staff:	
Forestry Reviewer:	Brett Stadsvold
Phone:	303.651.8449
Email:	brett.stadsvold@longmontcolorado.gov
Date:	2/2/2022

Tree Assessment and Appraisal (Developer Review)							Forestry Review and Appraisal			Depreciation Factors (%)								
Tree #	**Species**	**Size**	**Condition**	**Remove/ Remain/ Relocate**	**Appraisal**	**Comments**	**Species**	**Size***	**Initial Value**	**Condition**	**Functional Limitations**	**External Limitations**	**Appraisal**	**Remove/ Remain/ Relocate**	**Subtotal for Removals**	**Caliper inches to Mitigate**	**Comments**
1	Olive, Russian (Invasive)	12.0	Fair	Remove			Olive, Russian (Invasive)	12.0	$ -	0%	0%	0%	$0	Remove	$0	0.0	invasive species
2	Elm, Siberian	5.0	Fair	Remain		multi-stem	Elm, Siberian	5.0	$ 625.00	80%	80%	70%	$280	Remain	$0	0.0	multistem
3	Elm, Siberian	11.0	Fair	Remain			Elm, Siberian	11.0	$ 3,025.00	50%	70%	70%	$741	Remain	$0	0.0	major stem inclusion
4	Elm, Siberian	20.0	Fair	Remain			Elm, Siberian	20.0	$ 10,000.00	60%	70%	70%	$2,940	Remain	$0	0.0	multistem
5	Juniper (Large)	15.0	Poor	Remove			Juniper (Large)	15.0	$ 6,623.44	40%	80%	80%	$1,696	Remove	$0	0.0	limbed up to 5', missing main lead
6	Apple, various	15.0	Fair	Remove		multi-stem	Apple, various	15.0	$ 10,980.00	30%	60%	60%	$1,186	Remove	$0	0.0	poor condition
7	Olive, Russian (Invasive)	15.0	Poor	Remove			Olive, Russian (Invasive)	15.0	$ -	0%	0%	0%	$0	Remove	$0	0.0	invasive species
8	Juniper (Large)	15.0	Poor	Remove			Juniper (Large)	15.0	$ 6,623.44	40%	80%	80%	$1,696	Remove	$0	0.0	significant lean to the south, multistem
9	Juniper (Large)	10.0	Poor	Remove			Juniper (Large)	10.0	$ 2,943.75	0%	80%	80%	$0	Remove	$0	0.0	dead
10	Cottonwood, plains	8.0	Fair	Remain			Cottonwood, plains	8.0	$ 1,488.98	70%	80%	80%	$667	Remain	$0	0.0	multistem
11	Cottonwood, plains	14.0	Fair	Remain			Cottonwood, plains	14.0	$ 4,560.00	70%	80%	80%	$2,043	Remain	$0	0.0	multistem
12	Elm, Siberian	16.0	Fair	Remain			Elm, Siberian	16.0	$ 6,400.00	30%	70%	70%	$941	Remain	$0	0.0	poor condition
13	Cottonwood, plains	25.0	Good	Remove			Cottonwood, plains	25.0	$ 14,540.82	50%	80%	80%	$4,653	Remove	$4,653	12.5	tree utility pruned, large lead removed on south side of crown, crown unbalanced
14	Juniper (Large)	15.0	Fair	Remove			Juniper (Large)	15.0	$ 6,623.44	50%	80%	80%	$2,120	Remove	$2,120	7.5	multistem, tree crowded by adjacent juniper trees. Missing 50% of foliage
15	Juniper (Large)	15.0	Fair	Remove			Juniper (Large)	15.0	$ 6,623.44	40%	80%	80%	$1,696	Remove	$0	0.0	multistem, tree crowded by adjacent juniper trees. Missing 50% of foliage
16	Juniper (Large)	15.0	Fair	Remove			Juniper (Large)	15.0	$ 6,623.44	40%	80%	80%	$1,696	Remove	$0	0.0	multistem, tree crowded by adjacent juniper trees. Missing 50% of foliage
17	Juniper (Large)	15.0	Fair	Remove			Juniper (Large)	15.0	$ 6,623.44	60%	80%	80%	$2,543	Remove	$2,543	9.0	multistem, large broken limb
18	Juniper (Large)	12.0	Poor	Remove			Juniper (Large)	12.0	$ 4,239.00	30%	80%	80%	$814	Remove	$0	0.0	very thin canopy
19	Juniper (Large)	25.0	Poor	Remain			Juniper (Large)	25.0	$ 18,398.44	20%	80%	80%	$2,355	Remain	$0	0.0	very thin canopy
20	Juniper (Large)	25.0	Poor	Remove			Juniper (Large)	25.0	$ 18,398.44	30%	80%	80%	$3,533	Remove	$0	0.0	very thin canopy
21	Douglas Fir	37.0	Good	Remove			Fir, Douglas	37.0	$ 44,521.84	70%	80%	80%	$19,946	Remove	$19,946	25.9	Although somewhat crowded, healthy tree.
22	Juniper (Large)	15.0	Poor	Remove			Juniper (Large)	15.0	$ 6,623.44	40%	20%	80%	$424	Remove	$0	0.0	grown next to foundation of building
23	Austrian Pine	14.0	Fair	Remain			Pine, Austrian	14.0	$ 8,334.08	75%	20%	70%	$875	Remain	$0	0.0	grown next to foundation of building
24	Juniper (Large)	28.0	Fair	Remove			Juniper (Large)	28.0	$ 23,079.00	80%	20%	80%	$2,954	Remove	$2,954	22.4	under utility wires
25	Juniper (Large)	25.0	Good	Remove			Juniper (Large)	25.0	$ 18,398.44	80%	20%	80%	$2,355	Remove	$2,355	20.0	under utility wires
26	Apple, various	12.0	Fair	Remove			Apple, various	12.0	$ 7,027.20	40%	60%	60%	$1,012	Remove	$0	0.0	multistem
27	Russian Olive	15.0	Poor	Remain			Olive, Russian (I	15.0	$ -	0%	0%	0%	$0	Remain	$0	0.0	multistem
28	Cottonwood, plains	4.0	Good	Remain			Cottonwood, plains	4.0	$ 372.24	70%	70%	70%	$128	Remain	$0	0.0	multistem

* Size: deciduous trees are measured in inches DBH; coniferous and clump trees are measured in vertical feet

1)	**97.3**	Tree caliper inches to mitigate for desirable trees that are removed.
2)	**$ 34,571**	Total appraised value for trees that will be removed.
3)	**$ 250.00**	Mitigation may be reduced at the rate of $/caliper inch for shade trees planted on site that are above the minium landscape requirements. Conifers may be used for mitigation and are credited at the rate of 2 caliper inches per 6' tall conifer.

General Notes: Trees that are in poor condition (Condition rating of 40% or less) do not require mitigation. A few other small dead trees were not captured on this report.

Reference

Size	Deciduous trees are measured at 4.5 feet above ground and reported in diameter inches. Coniferous trees are measured in height from						
Initial Value	The initial value references a price per diameter inch for deciduous trees, and a cost per vertical-foot for coniferous trees, established from the 'species' reference tab						
Condition:	Takes into account the health, structure and form. Reported as	Dead	Very Poor	Poor	Fair	Good	Excellent
		(0-5%)	(6-20%)	(21-40%)	(41-60%)	(61-80%)	(81-100%)
Functional Limitations:	Takes into account the available growing space, overhead utilities, underground utilities, nearby structures, soil volume, and the tree's disease and insect susceptibility, thorns, invasiveness, failure pattern, tolerance to construction activities, and soil and water requirements. Reported as a percentage of depreciation.		Extreme Impact	Severe Impact	Moderate Impact	Minor Impact	No Impact
			(0-20%)	(21-40%)	(41-60%)	(61-80%)	(81-100%)
External Limitations:	Takes into account water use limitations, or restrictions on irrigation; competing infrastructure, presence of serious pests in the area, and changing climate zones. Reported as a percentage of depreciation.		Extreme Impact	Severe Impact	Moderate Impact	Minor Impact	No Impact
			(0-20%)	(21-40%)	(41-60%)	(61-80%)	(81-100%)

Appraisal calculation:

1. Initial Value=	$/unit* observed size (height (ft) or cross-sectional area (in2)
2. Depretiation Factors=	condition*functional limitations*external limitations
3. Appraisal=	Initial value*depretiation factors

Species Reference

Species	Price	Stock Size	unit2	$/Unit	Size in...	Notes
Ailanthus (Tree of Heaven), Invasive				0	DBH	all shall be removed
Apple, various	305	2.5	4.90625	62.17	DBH	
Ash			0	60.00	DBH	EAB
Birch (clump)	380	10	38	38.00	Verical feet	
Boxelder	395	3	7.065	55.91	DBH	
Buckeye, Ohio	355	2	3.14	113.06	DBH	
Catalpa	345	3	7.065	48.83	DBH	
Cherry (fruit-bearing)	275	2	3.14	87.58	DBH	
Coffeetree (seed-bearing)	435	3	7.065	61.57	DBH	
Coffeetree (seedless)	455	3	7.065	64.40	DBH	
Cottonwood, plains	285	3.5	9.61625	29.64	DBH	only trees that have a DBH of 10" or greater will be appraised.
Elm, American	405	3	7.065	57.32	DBH	
Elm, Hybrid	425	3	7.065	60.16	DBH	
Elm, Siberian	100	2	3.14	31.85	DBH	only trees that have a DBH of 10" or greater will be appraised. Not available in nursery trade.
Fir	805	12	113.04	67.08	Verical feet	
Fir, Douglas	290	7	38.465	41.43	Verical feet	
Hackberry	385	3.5	9.61625	40.04	DBH	
Hawthorne	405	3	7.065	57.32	DBH	
Honeylocust	335	2.5	4.90625	68.28	DBH	
Juniper (Large)	300	8	50.24	37.50	Verical feet	
Juniper (Small)	245	6	28.26	40.83	Verical feet	
Lilac, Japanese	225	2	3.14	71.66	DBH	
Linden, American	470	3	7.065	66.53	DBH	
Linden, European	470	3	7.065	66.53	DBH	
London planetree	385	3	7.065	54.49	DBH	
Maple, Acer freemanii	395	3	7.065	55.91	DBH	
Maple, Ginnala	15.95	0.5	0.19625	81.27	DBH	
Maple, Hotwings	325	2.5	4.90625	66.24	DBH	
Maple, Norway	320	2.5	4.90625	65.22	DBH	
Maple, Red	345	2.5	4.90625	70.32	DBH	
Maple, Rocky Mountain Glow	425	3	7.065	60.16	DBH	
Maple, Silver	100	2	3.14	31.85	DBH	
Maple, State Street	305	2.5	4.90625	62.17	DBH	
Maple, Sugar	380	3	7.065	53.79	DBH	
Oak (upright)	375	2.5	4.90625	76.43	DBH	
Oak, Bicolor	425	3	7.065	60.16	DBH	
Oak, Bur	430	3	7.065	60.86	DBH	
Oak, Chinkapin	430	3	7.065	60.86	DBH	
Oak, English	435	3	7.065	61.57	DBH	
Oak, Northern Red	460	3	7.065	65.11	DBH	
Oak, Shummard	360	2.5	4.90625	73.38	DBH	
Olive, Russian (Invasive)				0.00	Verical feet	all shall be removed
Pear	355	2.5	4.90625	72.36	DBH	
Pine, Austrian	650	12	113.04	54.17	Verical feet	
Pine, Limber	335	8	50.24	41.88	DBH	
Pine, Limber (Vanderwolf)	630	12	113.04	52.50	Verical feet	
Pine, Pinon	465	12	113.04	38.75	Verical feet	
Pine, Ponderosa	565	10	78.5	56.50	Verical feet	
Pine, Scotch	375	8	50.24	46.88	Verical feet	
Pine, Southwestern White	380	8	50.24	47.50	Verical feet	
Poplar, Hybrid	275	3	7.065	91.67	DBH	
Poplar spp.				20.80	DBH	Not available in nursery trade
Plum, American	160	7	38.465	22.86	DBH	
Redbud	425	3	7.065	60.16	DBH	
Redbud (clump)	355	8	50.24	44.38	Verical feet	
Spruce	720	13	132.665	55.38	Verical feet	
Willow	275	2.5	4.90625	56.05	DBH	
Zelkova	360	2.5	4.90625	73.38	DBH	

Prices and sizes from the 2019 Little Valley Wholesale Catalogue

Instructions

Introduction: This form is based on the Guide for Plant Appraisal, from the Council of Tree & Landscape Appraisers, 10th Edition.

1

2 Whenever a development project begins they are required to perform a tree survey with a tree preservation plan.

3 Forestry will review that data and plug the values into the table.

4 Values for the largest available nursery stock were collected from the Little Valley Wholesale Nursery 2019 Cataloge.

Unit costs were derived for each tree species. Trees sold by the vertical foot have unit costs by the foot. Trees sold by caliper inches

5 have the unit cost per the functional area in square inches.

In the comments field on the Forestry Review side make sure to note all depreciation factors that reduce the appraised value of the

6 tree. Descriptions of the depreciation factors and condition are listed on the 'Reference' tab.

The table will automatically subtotal the dbh and appraisal value for all trees that will be removed. The Caliper Inches to Mitigate is

7 calculated by the current DBH of the tree multiplied by the condition percentage.

After appraisal, Forestry will make recommendations to the tree preservation plan and outline the options for reatinage of trees versus

8 mitigation.

The 'tree appraisal' tab is protected by the password, 'tree'.

Tree Preservation Code

13.24.120. - Permit required.

It shall be unlawful for any person to plant, prune, remove, or destroy any tree or shrub on city property without having first obtained an approved permit from the director of public works and natural resources or a designee.

13.24.130. - Tree preservation, damages and cost recovery.

It shall be unlawful to injure damage, destroy, or remove any tree situated upon city property.

A. Any person who injures, damages (including by excessive pruning or topping), or destroys any tree situated upon city property shall repair said damage to the satisfaction of the director of public works and natural resources or a designee.

B. If the director of public works and natural resources or a designee deems a tree to be damaged beyond repair, the responsible party shall compensate the city either the lost monetary value of the tree, as determined by "The Guide for Plant Appraisal", published by the Council of Landscape Appraisers, or the cost of replacing the tree, as determined by the director of public works and natural resources or a designee

C. Any person causing removal of any tree on city property, after being denied a permit to do so, shall be responsible for three times the appraised value of said tree.

15.05.040 - Landscape and Common Area Standards

D. Tree Preservation.

1. All trees within areas proposed to be disturbed by development on- and off-site and in the adjacent right-of-way shall be surveyed and have location, species, size, and condition or health noted in a tree preservation plan.
2. Existing desirable trees shall be preserved and protected from damage during site development.
3. Existing desirable trees shall be incorporated into the design in their existing location whenever possible.
4. Existing desirable trees may be used to satisfy the quantity (number or caliper) requirements of landscape standards.
5. If feasible, a tree that cannot remain in its existing location shall be spaded and relocated by a professional tree spade company. All measures shall be taken to ensure the survival and health of the tree. The city forester shall be consulted for tree relocations.
6. All existing desirable trees that are incorporated into the design shall be adequately protected in the tree protection zone from damage during construction.
7. If the site design precludes incorporation of some or all desirable trees then replacement shall be made as follows:
   a. For any desirable trees that cannot be incorporated or are lost due to or prior to construction, the applicant shall provide the corresponding caliper lost on-site and in the right-of-way adjacent to the property, in addition to meeting or exceeding the minimum tree planting requirements.
   b. If the city forester determines that on-site or right-of-way replacement is not possible, the required replacement shall be provided on an adjacent site or the nearest public land if feasible as determined by the city forester; otherwise the dollar value of the trees (including the estimated cost of installation) shall be deposited into the city's tree planting fund.

CENTENNIAL ARCHAEOLOGY
300 E. Boardwalk, 4-C, Fort Collins, CO 80525 | Phone 1-970-225-6575 | Fax 1-970-225-6577 | www.centennialarchaeology.com

June 29, 2021

Ms. Jade Krueger
Associate Planner
Planning & Development Services
City of Longmont
385 Kimbark Street
Longmont, CO 80501

Re: Terry Lake Regional Sewer – Historic Resources Evaluation of 10157/10161 Ute Highway

Ms. Krueger:

This letter report presents the results of a historic resources evaluation conducted for the Terry Lake Regional Sewer Project. The proposed project consists of the installation of a new sewer main through private property north of State Highway 66 (SH 66) / the Ute Highway. As part of the project, existing buildings at 10157 / 10161 Ute Highway (Parcel No. 120521000010) will be demolished. Due to the nature of this work, the City of Longmont requested that project proponents have an evaluation of the property done by a qualified cultural resource specialist. To that end, The Landhuis Company contracted Centennial Archaeology LLC (Centennial) to conduct an evaluation consisting of an in-field documentation of the property and preparation of this letter report and Colorado Office of Archaeology and Historic Preservation (OAHP) Architectural Inventory Form #1403. No federal funding or permitting is associated with this project and there is therefore no requirement for compliance with Section 106 of the National Historic Preservation Act.

Research Design and Methodology

This intensive documentation was conducted to evaluate the significance of the property. Historic resources are defined minimally as any building, object structure, district, or linear feature suggesting sustained or long-term use (for example, transportation corridors such as old road grades or railroad lines, or irrigation canals). The minimum age criterion for historic sites is 50 years. A preliminary review of Boulder County Assessor's data confirmed that the parcel contains buildings that meet that minimum criterion. Prior to the commencement of fieldwork, a file search was conducted through the OAHP to determine the nature and extent of any previous work in the area as well as any potential significant sites within 0.5 mile of the project area.

Once the file search was concluded, Centennial conducted the fieldwork on June 21, 2021. The boundaries of the subject parcel were uploaded to a hand-held Garmin GPS unit. This unit was

then used to ensure that fieldwork was confined to the parcel. Field survey was conducted by the Principal Investigator. The property was assigned a unique field number with a "21CA" (2021 Centennial Archaeology) prefix and was recorded on the appropriate Colorado Cultural Resource Survey Forms. It was further documented through digital photography. Fieldwork was then supplemented by archival research to facilitate a significance evaluation. Sources of archival research for this project include records on file with the Boulder County Assessor and Clerk and Recorder, the OAHP, the Colorado Historic Newspapers database, and historic maps, aerial photography, and satellite imagery.

File Search Results

A file search was conducted on June 25 and June 28 through the OAHP. Data were initially gathered from the Compass online database maintained by the OAHP. This database provides records of all historical investigations that have been conducted as well as all sites and National Register of Historic Places (NRHP) properties. Supplemental information consisting of GIS shapefiles showing the locations of sites and surveys was requested from the OAHP. Additionally, records available through the Boulder County Assessor's office were consulted to determine the ages of the buildings on the property. Given the low vertical profile of the proposed project, the file search area was constrained to the subject parcel as well as a 0.25-mile buffer extending out in all directions. Because this investigation is only focused on the built environment, information on archaeological resources is omitted.

The OAHP file search revealed that two previous cultural resource investigations intersect the file search area. One of these surveys (BL.LG.R150) was conducted by Centennial in 2012 as part of the Terry Lake Neighborhood Regional Detention Pond project. The other (BL.CH.NR23) was an intensive resource inventory along SH 66 conducted in 2001 by the Colorado Department of Transportation. However, neither directly intersects the subject parcel.

According to the information on file at the OAHP, eight historic built environment cultural resources have been documented in the file search area. These sites are shown in Table 1. Most are segments of the Rough and Ready Ditch that flows through the northeast corner of the subject parcel. No documentation of this ditch occurred as part of the project, but it should be noted that all segments in the file search are non-supporting of the larger NRHP eligibility of the resource. None of the documented segments intersect the parcel. The file search revealed that the subject property was previously documented in 1997 as 5BL6938. At that time, it was found to be officially eligible for the NRHP. However, because the documentation is 24 years old, a new documentation was conducted in order to bring the recording up to current standards. None of the other properties in the file search area are eligible for or supporting the eligibility of the resource.

Table 1. Historic Resources in the Class I File Search Area

Site Number	Site Description	NRHP Eligibility
5BL3113.68	Rough and Ready Ditch (Segment)	Non-Supporting
5BL3113.69	Rough and Ready Ditch (Segment)	Non-Supporting
5BL3113.70	Rough and Ready Ditch (Segment)	Non-Supporting
5BL3113.71	Rough and Ready Ditch (Segment)	Non-Supporting
5BL3113.72	Rough and Ready Ditch (Segment)	Non-Supporting

Table 1. Historic Resources in the Class I File Search Area

Site Number	Site Description	NRHP Eligibility
5BL6938	Nishida Farms Property	Officially Eligible
5BL8729	Townley Homestead / Beauprez Farm at 9911 Ute Road	Officially Not Eligible
5BL11641.1	Thompson 1 B Seep D	Non-Supporting

Investigation Results

Nishida Farms – 10157 / 10161 Ute Highway (5BL6938): A single historic property was reevaluated as part of this investigation. The attached site form provides the full results including photographs of the extant buildings and a plan map; however, the larger conclusions are summarized here.

Although the Nishida Farms property was previously found to be Officially Eligible for the NRHP when it was originally documented 24 years ago, Centennial found that the property had deteriorated significantly in the intervening years. During the previous recording it was also found to be eligible for Boulder County Historic Landmark status. A review of the County website showed that it was never actually designated as a landmark. In 1997 a total of 15 features were documented. However, at present only five features remain including a metal workshop that was constructed in the 1980s. The four remaining historic buildings are the two primary residences, an outbuilding identified in 1997 as a produce sales and processing building, and a small single-car garage. Many of the significant buildings directly tied to the Nishida family's use of the property as a vegetable farm and roadside store including two greenhouses, a bath house, and four small buildings that housed migrant workers have been removed. The remaining buildings are in poor condition and have largely had the windows and doors boarded up. While Centennial agrees that the property as it was in 1997 would have been eligible for both the NRHP under Criterion A and Boulder County Historic Landmark Status under Standard 1, the physical and historical integrity of the property has been diminished to the point that it can no longer support eligibility.

Please contact me (kgensmer@centennialarch.com or 970-225-6575) if you have questions or need additional information.

Sincerely,

Kristin Gensmer
Principal Investigator

Attachments: Survey Logs (Tables 2 and 3)

Enclosures: Cultural Resource Inventory Form for 5BL6938

cc: Jeff Mark, The Landuis Company
Stephanie Thomas, Northern Engineering

Table 2. Survey Log: Surveyed Resources by Smithsonian Number

Site Number	Field Number	Address / Name	Name	NRHP Assessment	Criteria
5BL6938	21CA098	10157 / 10161 Ute Highway	Nishida Farms	Not Eligible	-

Table 3. Survey Log: Surveyed Resources by Address

Address / Name	Site Number	Field Number	Name	NRHP Assessment	Criteria
10157 / 10161 Ute Highway	5BL6938	21CA098	Nishida Farms	Not Eligible	-

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

OAHP1403
Rev. 9/98

COLORADO CULTURAL RESOURCE SURVEY

Architectural Inventory Form

Official eligibility determination
(OAHP use only)
Date _____Initials _____
_____ Determined Eligible- NR
_____ Determined Not Eligible- NR
_____ Determined Eligible- SR
_____ Determined Not Eligible- SR
_____ Need Data
_____ Contributes to eligible NR District
_____ Noncontributing to eligible NR District

I. IDENTIFICATION

1. **Resource number**: 5BL6938
2. **Temporary resource number**: 21CA098
3. **County**: Boulder
4. **City**: Unincorporated Boulder County
5. **Historic building name**: Nishida Farms – Building B
6. **Current building name**: Nishida Farms - Primary Residence (Feature 1)
7. **Building address**: 10157 / 10161 Ute Highway, Unincorporated Boulder County
8. **Owner name and address**: Maple Leaf Investors, LLC, 1500 W. Hampden Ave, Ste. 3H, Sheridan CO, 80110

II. GEOGRAPHIC INFORMATION

9. P.M. __6__ Township __3N__ Range __69W__
   __SE__ ¼ of __SE__ ¼ of section __21__
10. **UTM reference**
    Zone __13__; __460968__mE __4446190__mN
11. **USGS quad name**: Longmont
    Year: 1979 Map scale: 7.5' __X__ 15'____ Attach photo copy of appropriate map section.
12. Lot(s): ___
    Addition: _____Year of Addition:
13. **Boundary Description and Justification**: The boundary for the Nishida Farm Property is defined by the current parcel boundary (No. 120521000010) on file with the Boulder County Assessor. It encompasses 57 acres.

III. Architectural Description

14. **Building plan (footprint, shape):** Irregular Plan
15. **Dimensions in feet**: 66 ft (N/S) x 40 ft (E/W)
16. **Number of stories**: 1 Story
17. **Primary external wall material(s)**: Wood – Weatherboard - Horizontal Siding
18. **Roof configuration**: Gabled Roof – Side Gabled Roof
19. **Primary external roof material**: Asphalt
20. **Special features**: None
21. **General architectural description:** This single-story house (Feature 1) is identified as the primary residence on site based on archival data discussed below. The Nishida Farms Site was previously recorded by Cultural Resource Historians in 1997. A plan map is largely missing from the site form on file with the OAHP and the site appears to have changed significantly in the 24 years since that

documentation occurred. However, based on the general description and photographs it is identified as House – Map ID Code B. No building B is shown on the truncated/incomplete plan map.

As it was described in 1997, the building was one story and rectangular plan and included a core and two additions. The gabled roof was covered with gray asphalt shingles. A red brick chimney covered with concrete pargeting was present on the core. Walls were clad with horizontal wood siding on the core and south addition and horizontal Masonite siding on the north addition. Walls were painted white. Windows including double-hung and fixed pain elements on the core and horizontal sliders on the additions. All windows had wood frames and exterior metal storm windows. Doors consisted of a white wood-paneled element with a metal storm door on the west elevation and a solid wood door with a metal screen door located at the south end of the east elevation. Both doors opened onto concrete stoops. The foundation was poured concrete.

At present, the residence consists of an older core with a large addition on the rear elevation. A small area thought to be an older addition extends from the west side of the south-facing façade. The building has an irregular footprint and is approximately 66 ft (N/S) x 40 ft (E/W) in maximum dimension based on measurements taken on Google Earth. It has a complex side-gabled roof consisting of asphalt shingles covering dimensional lumber. Eaves are open and rafters are enclosed with wood fascia. The roof of the rear addition has a shallower pitch. The shingles are in better condition than the siding but are gray in color and may be the same ones that were in place in 1997. A brick chimney with metal flashing and thin, deteriorating concrete pargeting protrudes from the gable ridge of the core. Straps have been placed around the chimney, presumably for stabilization. A metal chimney pipe emerges from the eastern slope of the addition. Satellite dishes have also been mounted to the roof. Walls of the core and small, front addition are clad with horizontal wood weatherboards. In places, these boards have fallen revealing a dimensional lumber frame and interior walls. The north addition is clad with horizontal Masonite siding that is much wider and appears newer though it is also in poor condition. All three door openings and all window openings on the main story are covered with plywood in various states of deterioration. A single double-hung window is visible beneath the gable on the north elevation of the rear addition. Door openings were situated on the east, south, and west elevations. The opening on the east elevation led onto a small, poured concrete stoop sheltered by a collapsing shed roof supported by two wood posts. On the south elevation, the door leads into the rear addition and opens onto two steps made of concrete pavers. This opening is not mentioned in the 1997 site form but a photo shows that it was in place and covered with a storm door. The door on the west elevation opened onto poured concrete steps. The walls on this side are in poor condition. The foundations of the core and front addition are difficult to see but appear to be poured concrete. The rear addition has a cinderblock foundation.

County assessor data indicate it was built in 1940. A building in this location is visible in 1948 and 1949 imagery. In 1949 it appears to have been an L-Shaped residence with the cutout at the approximate location of the west-facing door. By 1967 it is rectangular in plan, and by 1983 the building appears to have the current footprint (Historic Aerials 2021).

22. **Architectural style/building type**: No Style – Vernacular

23. **Landscaping or special setting features:** The Nishida Farm property is an abandoned agricultural complex located immediately north of the Ute Highway (State Highway 66). It is accessible from the highway at two points linked by a dirt driveway. In places the fill associated with the turn offs has eroded so there is a substantial bump between the concrete edge of the highway and the driveways for the property. The eastern access point extends in front of Feature 5 before intersecting the western access point, which is thought to be the primary and original access to the property. A substantial graveled driveway loops around the primary residence (Feature 1) and provides access to a concrete pad linking Features 3 and 4. Substantial concrete walks and work areas are also present adjacent to the locations of two buildings that have since been removed. One of the sidewalks includes finger markings made when the concrete was wet indicating it was poured on 7/11/1987. Small yard areas around both

residences were demarcated with chain link fences that are now collapsing. Thick, living privacy screens protect the residences from easy view along the highway. Vegetation around Feature 1 includes cottonwood, elm, and aspen trees and thick shrubs. Low-growing juniper and irises were also planted around the south elevation. While effective, this privacy screen is less formal than that associated with the secondary residence (Feature 2). The screen in that case consists of two separate, linear stands of vegetation. The first is a dense, linear stand of conifers that extends north/south for approximately 100 ft blocking the residence and side of the garage from easy view. Then, approximately 40 ft in front of the house, a thick stand of non-native bushes blocks the property from view. A lawn area is maintained and mowed immediately around the buildings, though in other areas of the property the grasses grow tall. Other vegetation on the property includes Russian Olive trees. Behind the buildings, the property remains an undeveloped agricultural field that appeared fallow at the time of this recording. Minor, unnamed field ditches provide irrigation for this area. Tap lines including wood mast poles provide power to the buildings from an overhead distribution line that is situated in the Ute Highway right-of-way.

24. **Associated buildings, features, or objects**: As it was described during the 1997 documentation, the site consisted of two houses, a produce sales and processing building, a railroad cattle car, an equipment storage building, a shed, four buildings identified as migrant farm workers' quarters, a bathhouse, two greenhouses, a metal-framed workshop, and a small garage. In total this list encompasses 15 features. Most of these buildings are no longer present on site. Remaining features are described below. Without the plan map, it is difficult to determine where on the property many of the other features were located, but it is thought that they were linked by the extensive concrete walkways and platforms that remain.

At present, this site is an abandoned agricultural complex situated on the north side if the Ute Highway. The site boundary is defined by the current parcel boundary on file with the Boulder County Assessor. While it encompasses 57 acres, the building complex that forms the architectural property is concentrated in the southeast corner of the parcel. The remainder of the parcel was used for agricultural purposes in the recent past. The site is currently comprised of seven features. Features include two residences (Feature 1 and Feature 2), a garage converted to a shed (Feature 3), a modern metal-framed workshop (Feature 4), the produce sales and processing building (Feature 5), and two changes in vegetation demarcating former building locations (Features 6 and 7).

Although Boulder County Assessor's data were consulted to try and identify the ages of the existing buildings, there seem to be multiple discrepancies between that data source and a review of historic aerial and satellite imagery of the property, perhaps related to when (and if) permits were filed for the construction of the various buildings. Of the existing features, all but the modern machine shop (Feature 4) are historic in age. Feature 4 was constructed between 1971 and 1983 based on its presence/absence on aerial imagery of those ages (Historic Aerials 2021). Given the modern age it is not further discussed.

No definitively historic artifacts were found though modern debris were omnipresent between the buildings. Modern trash included discarded clothing, broken amber and colorless glass bottles, plastic bottles, various food wrappers, plastic jugs that may contain used motor oil, shopping carts, and plastic and metal debris. Old trucks and truck beds filled with debris were also present.

Feature 2: This secondary residence is described on an attached architectural inventory form.

Feature 3: Feature 3 is a small, rectangular-plan, single-car garage that has a covered porch or pergola with a swing attached to it. The building is 16 ft (E/W) x 12 ft (N/S) in maximum dimension. The pergola structure extends another 12 ft to the south and covers a concrete pad. The dimensions of this pad suggest a covered parking area but the swing as well as the orientation of the concrete patio or parking area in front of it suggest that it was not used for that purpose recently. The front-gabled roof consists of deteriorating asphalt shingles over dimensional lumber. The eaves are open, and rafters are exposed. Walls of the building are board-and-batten siding and much of the paint is peeling.

Fenestration consists of a small circular fixed window and a more standard fixed window in a wood frame on the north elevation. The single-bay garage door opened to the east. The garage door is missing, and the opening is covered by corrugated vinyl and metal sheeting that is held closed with a chain and padlock. The chain appears newer than the other door materials. Plywood has been used to expediently patch a hole in the base of the door. Cylindrical concrete blocks suggestive of footers are in front of the building and may help hold the door closed. The foundation is poured concrete. The garage does not appear to have changed substantially since 1997; the only difference seems to be a deterioration in condition from fair to poor and the addition of the circular fixed window. It is listed on the previous site form as Site Plan Item O.

No age for the building is provided in the previous form and no buildings correspond to a garage or non-agricultural/non-residential feature in the Assessor's data. A small building that appears consistent in form with this one is shown on a 1955 image, but it is situated further to the east than this garage. By a 1967 image, the garage is in place in its current location (Historic Aerials 2021).

Feature 5: Feature 5 is a large, rectangular plan building that was identified in the 1997 documentation as the Produce Processing / Sales Building. In form it is similar to a barn or shop with a covered work area on the north elevation giving the roof an L-Shape. With the covered work area, the building is 100 ft (E/W) x 60 ft (N/S) in maximum dimension. The gabled roof and the walls are clad with corrugated sheet metal that covers the wood frame. Three large metal vents along the roof provide air circulation for the building. Other ventilation consists of single vents on the walls under the gables on either end. A mast and tap on the west elevation indicate that the structure had electricity. Large sliding barn doors are present on the south and west elevations and a steel door is on the north elevation. The door on the south elevation opens onto a heavily overgrown concrete pad. Three 2x2 light fixed windows are present on the south elevation. The glass is broken or missing from the fenestration and the window west of the door is covered on the interior with OSB. The window on the east has metal bars on the inside and is covered behind the bars with OSB and what appears to be a blanket. The foundation is difficult to see but is likely poured concrete. In 1997 the building, which is Site Plan Item C, was listed as being in deteriorated condition. It appears to have deteriorated further but no substantial changes have occurred.

While the dimensions of this building do not correspond with the areas of the agricultural outbuildings shown in the Boulder County Assessor's data, there is one that is close and that was constructed in 1960. The 1997 form indicates a pre-1959 construction date. Aerial imagery confirms that Feature 5 was constructed between 1955 and 1967. The covered work area appears to have been added to the building between 1967 and 1971 (Historic Aerials 2021).

Feature 6: Feature 6 is a faint change in vegetation as well as concrete pad remnants indicative of the location of a past outbuilding. The area is rectangular in form and is 110 ft (E/W) x 32 ft (N/S). The entirety of the structure does not appear to have had a concrete floor and much of the area is heavily overgrown with knee-high grasses. It appears to have been connected to Feature 5 as well as other areas of the property by a series of poured concrete walkways and work areas. No evidence of a superstructure remains.

Without the plan map from the previous documentation, it is difficult to determine which of the features this building corresponded to. However, an examination of the footprints of the buildings on historic satellite imagery available through Google Earth suggests that this feature was two abutting buildings, potentially the Shed (Site Plan Item F) and Garage / Equipment Storage Building (Site Plan Item E). Both buildings appear to have been in poor condition in 1997. No evidence of the superstructures remains.

A much smaller rectangular building is shown in this approximate location on a 1948 aerial image. The building appears to open onto a small corral or fenced area suggesting a loafing shed. By 1955 it has been expanded to encompass the current footprint, though a difference in shading on the roof

seems to confirm that it was two abutting structures. Images from 1967 and 1971 seem to confirm a break or difference of some sort in the roof line. It appears to have been removed from the site between 2011 and 2013 (Historic Aerials 2021). A single rectangular polygon for the feature remains extant in Boulder County Assessor's GIS data.

Feature 7: Like Feature 6, this feature is a slight change in vegetation indicative of the location of a past outbuilding. It is rectangular in form and measures approximately 122 ft (E/W) x 40 ft (N/S). The area is bracketed on either side by concrete pads thought to represent work areas or driveways.

The size of the building and the east/west orientation suggests that was one of the greenhouses (Site Plan Item M) described in the 1997 documentation. It was in fair condition at that time.

Based on a review of aerial imagery, this building was constructed between 1967 and 1971. In the 1971 image it was rectangular in form and had a gabled roof. It was removed from the site between 1999 and 2004 (Historic Aerials 2021).

IV. Architectural History

25. **Date of Construction**: Estimate: ____ Actual: 1940
    Source of information: Boulder County Assessor
26. **Architect**: Unknown
    Source of information: N/A
27. **Builder/Contractor**: Unknown
    Source of information: N/A
28. **Original owner**: James S. Gregory
    Source of information: Boulder County Clerk and Recorder
29. **Construction history** (include description and dates of major additions, alterations, or demolitions):
    County assessor data indicate it was built in 1940. A building in this location is visible in 1948 and 1949 imagery. In 1949 it appears to have been an L-Shaped residence with the cutout at the approximate location of the west-facing door. By 1967 it is rectangular in plan, and by 1983 the building appears to have the current footprint (Historic Aerials 2021).
30. Original location __X__ Moved ____ Date of move(s): N/A

V. Historical Associations

31. **Original use(s):** Domestic – Single Dwelling
32. **Intermediate use(s):** Domestic – Single Dwelling – Rental Residence
33. **Current use(s):** None - Vacant
34. **Site type(s):** Residence
35. **Historical background**: Archival research conducted for this property included an ownership trace conducted through the Boulder County Clerk and Recorder, internet searches of past property owners including an examination of historic newspapers (Colorado Historic Newspapers 2021), a review of Boulder County Assessor's data, and a review of historic maps and aerial/satellite imagery of the property. Information from the 1997 documentation has been integrated into the information gathered for this recording.

    As is discussed above, Assessor's data indicate that the primary residence (Feature 1) was constructed in 1940. An aerial image from 1948, which is the earliest available for this area, confirms that it was in place at that time. Historic maps including the 1904 Niwot 1:62,500-scale topographic map and the 1950 Longmont 1:24,00 scale topographic map available through the USGS show a single building in this general area at the time the documents were produced. However, there is no way to tell if the building in the area in 1904 is this residence or not. If it is, it has been modified in form and material to the point that it is no longer recognizable as a house dating to the late 19th century or start of the 20th

century. However, due to the 1904 map, the ownership trace was conducted through to the patent and did not stop in 1940 like the research in 1997 did.

Aerial and satellite imagery provides evidence that the property grew from a simple farmstead to a more robust complex between the 1950s and 1980s. Then, it began to contract in the 2010s before being completely abandoned. Aerial imagery from 1948 and 1949 clearly shows a small farmstead with a single residence and outbuilding and a much simpler drive. The privacy trees have not been planted yet and a single tree near what is now Feature 5 grows on the property. By 1955 the property has expanded. The tree is gone and the garage (Feature 3) and the buildings that were Feature 6 are in place. The yard has been expanded to include a larger gravel or concrete work and parking area. Then, in 1967, the property had expanded again to include the second residence (Feature 2) as well as another outbuilding (Feature 5). Another building is present to the east of the complex. The second access point from the Ute Highway is in place as is the driveway in front of Feature 5. The privacy bushes are not in place yet. By 1971 the second of the former outbuildings (Feature 7) is in place and most of the building complex appears to be graveled or dirt. There are some smaller rectangular shapes that may be the other buildings (migrant houses and bathhouse) mentioned in the 1997 documentation. The building to the east of the main complex is gone. The privacy hedge to the west of Feature 2 is in place. In 1983 the complex takes on its maximum density with the modern barn (Feature 4) in place. At least one of the large trees in front of the primary residence has been planted. The area still appears to be graveled. There do appear to be smaller buildings east of Feature 7 that are thought to be the smaller buildings mentioned in 1997. By 1999 some of the concrete work areas, especially those between Features 3 and 4 and adjacent to Features 6 and 7 are likely in place. The privacy hedges in front of the Feature 2 have also been planted. By 2004 the property has begun to contract. Feature 7 has been removed. Then, between 2011 and 2013 it took on the present configuration with the removal of Feature 6 (Historic Aerials 2021).

The ownership trace (Table 1) extends back to the initial patent. It should be noted that a document specifically passing the property from the heirs of Jabez Bury to Elizabeth Small and Matilda Coats could not be found. However, documents related to another tract of land that Bury patented at the same time as he patented this property indicate that his property passed to his wife, Alice Bury (Book 49, Page 159). The Quit Claim Deed filed for this land in 1913 specifies that Elizabeth Small and Matilda Coats are the sole heirs of Alice Bury.

Table 1. Site 5BL6938 Ownership Trace

Date	Grantor	Grantee	Deed	Citation
12/23/2019	Highway 119 Holdings LLC	Maple Leaf Investors LLC	Warranty Deed	Rec no. 03756724
12/30/2009	Lifebridge Christian Church	Highway 119 Holdings LLC	Warranty Deed	Rec no. 03050524
12/22/2001	Zeek Partnership LTD	Lifebridge Christian Church	Warranty Deed	Rec. No. 2236972
5/22/1996	Hiview Acres North, Inc.	Zeek Partnership LTD	Warranty Deed	Rec. No. 1610420
11/24/1992	First National Bank	Hiview Acres North, Inc.	Warranty Deed	Rec. No. 1242622&4
5/15/1992	Nishida Farms; Msary Nishida, Tome M and Martha S. Nishida, Public Trustee	First National Bank	Public Trustees Deed	Rec. No. 1185128

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Table 1. Site 5BL6938 Ownership Trace

Date	Grantor	Grantee	Deed	Citation
12/14/1987	Nishida Farms; Msary Nishida, Tome M and Martha S. Nishida, Public Trustee	First National Bank	Deed of Trust	Rec No. 00893525
11/24/1971	Federal Land Bank	Isaac Jun Nishida and Martha Sayeko Nishida; Tom M. Nishida and Mary Nishida, Jim Nishida and Phyllis Nishida	Release of Mortgage	Rec No. 02420
7/9/1957	Isaac Jun Nishida and Martha Sayeko Nishida; Tom Masami Nishida, Jim Nishida	Farmers Home Administration	Deed of Trust	Book 1050, Page 0266
4/9/1957	Colorado State	Estate of James S. Gregory	Release of Inheritance Tax Lien	Book 1041, Page 0199
4/17/1922	Matilda Coats	James S. Gregory	Warranty Deed	Book 478, Page 0521
6/23/1913	Elizabeth Small	Matilda Coats	Quit Claim Deed	Book 0381, Page 008
2/4/1895	Heirs of Jabez Bury	US Government	Patent	BLM GLO

If the 1940 date of construction is correct James S. Gregory was the owner when the residence was built and was responsible for the initial expansion of the property. Then, after his death, the Nishida family acquired it and was responsible for the period of greatest expansion in the 1970s and 1980s. After the Nishida Family lost the property, it appears to have passed from holding company to holding company until the present owners acquired it.

With the exception of James S. Gregory, no additional information that could be directly tied to any of the early owners could be found. A death certificate filed for Mr. Gregory indicates that he died of pneumonia in Pueblo in 1954 at the age of 77. His residence was on Kimbark Street in Longmont at that time. He was born in Kentucky on August 25, 1876. Mr. Gregory was married, and his occupation is listed as farmer (Book 956, Page 297).

Information from the 1997 documentation indicates that brothers Isaac (Ike) and Tom Nishida purchased the property from Gregory in 1953. While this date is possible, the ownership trace suggests a complicated transaction related to the death of Mr. Gregory and it is likely that it wasn't formalized until slightly later. The Nishida Family farmed the land and operated a roadside produce stand between 1953 and 1991. Ike and Tom were the children of Yonezo and Miye (Oishi) Nishida who were Japanese immigrants who moved to Longmont in early 1942 after Pearl Harbor. Yonezo was born in the Fukuoka, Japan in 1885, immigrated to California in 1905, but returned to Fukuoka to marry Miye in 1920. The couple returned to California and had seven children (three boys and four girls). The family earned their living as farmers. Then, once Yonezo, Miye, Tom, and Ike moved to Longmont, the boys began farming for Kikutaro and Yukino Mayeda, Japanese immigrants who moved to Longmont in the 1920s and operated a vegetable farm. The families were soon united by two marriages when Ike married Martha Mayeda and Martha's brother George married Ike's sister Sumi. Yonezo Nishida died in 1976 and Miye passed in 1977. After Ike's death in 1982, Tom and Martha continued to operate the farm until 1991 when the property was foreclosed on.

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It passed through a series of corporate owners, and in 1997 when Zeek Partnership, LTD was the owner, portions of it were rented out. In particular, the two greenhouses were leased by Ute Trail Greenhouse, and the modern metal shop (Feature 4) was rented to SET Construction, Inc. All other buildings on site were listed as abandoned and in various states of deterioration. A photo in the 1997 site form indicates that a sign saying Nishida Farms was still in place in

36. **Sources of information**: Boulder County Clerk and Recorder's Office and Boulder County Assessor's Office as well as the previous site form for 5BL6938.

Historic Aerials
2021 Historic Aerials Viewer. Electronic Document, https://www.historicaerials.com/viewer, accessed 6/22/2021.

VI. SIGNIFICANCE

37. **Local landmark designation**: Yes ____ No __X__ Date of designation: _____
Designating authority:
38. **Applicable National Register Criteria**:
____ A. Associated with events that have made a significant contribution to the broad pattern of our history;
____ B. Associated with the lives of persons significant in our past;
____ C. Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or that possess high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or
____ D. Has yielded, or may be likely to yield, information important in history or prehistory.
____ Qualifies under Criteria Considerations A through G (see Manual)
__X__ Does not meet any of the above National Register criteria
39. **Area(s) of significance**: N/A
40. **Period of significance**: N/A
41. Level of significance: National ____ State ____ Local _____
42. **Statement of significance**: The Nishida Farms property (5BL6938) was previously evaluated as eligible for Boulder County Landmark designation under Criterion 1-501-A(1). It was considered significant for its association with the development of agriculture after World War II and for its cultural association with Japanese immigrants who established vegetable farms and roadside produce stands in the Longmont area. While such family-owned vegetable stands were prominent in the area, the Nishida Farm was the last to remain in business until it went bankrupt and closed in 1991. The 1997 form is unclear but seems to indicate that the second house (Feature 2), the two greenhouses that have since been removed, and the metal shed (Feature 4) were non-contributing. Additionally, it indicates that the cattle car and migrant quarters, none of which remain, were likely added in the 1950s and would be non-contributing. Then, it goes on to state that the bathhouse, which no longer exists, was unusual and that buildings associated with the Nishida family would be eligible under National Register of Historic Places (NRHP) Criterion A and potentially Criteria Consideration G. All the buildings that they said were non-contributing would have been associated with the Nishida family. Official OAHP concurrence with this determination was made on 10/12/2000. A review of Boulder County Registered Historic Landmark Sites shows that the property was not designated as a county landmark.

Based on the results of this documentation, Centennial evaluates the property as not eligible for the NRHP. Although it is a farm complex, the buildings on the property date to the 1940s through the 1980s. Agriculture in the area emerged in the 1860s and greatly expanded in the 1870s through the end of the 19th century. This farmstead therefore post-dates the early settlement and the development of agriculture as a dominant industry in the area. While it was expanded Post World War II, many of the

agricultural outbuildings have been removed or are in poor condition. They are not easily physically discernable as farm buildings from the 1940s and 1950s. It therefore is considered to have lost the historical and physical integrity necessary to support this association. The Nishida family was unquestionably a past owner and is known to have operated a roadside produce stand and farm at this location from the 1950s through the 1990s. However, many distinctive features that would tie the buildings to them directly including the Nishida Farm sign that existed in 1997 and many of the outbuildings including the migrant houses and green houses no longer exist. The two residences that members of the family lived in, the small garage, the modern metal shop, and the Produce Processing / Sales Building are all that remain. The produce building is the only one of the features that would tie directly to the farming operations, and from the exterior it is nothing more than a large metal shed. Additionally, as it exists the site does not display any architectural characteristics or features that would specifically tie it into Japanese diaspora and adaptation. The removal of buildings, particularly the green houses, and the deterioration of the remaining features is thought to be so significant that the property can no longer support eligibility under Criterion A. None of the past owners are known to have been individuals of historic significance on a national, state, or local level precluding the site from eligibility under Criterion B. The remaining buildings on the property are heavily modified and are in poor physical condition. The construction of additions as well as the covering of most of the window and door openings with plywood and the replacement of siding and roofing has diminished the integrity of materials, design, workmanship, and feeling. None of the features exhibit a clearly defined architectural style or are representative of a major feat of engineering or the work of a master and the site is not eligible under Criterion C. While modern debris were prevalent, there is no evidence of historic middens or artifact concentrations. Additionally, occupation dates to the mid-to-late 20th century when removal of trash was common practice. It is unlikely that further investigation of the property will generate data of archaeological or historical significance, and it does not meet Criterion D. The bathhouse, which the 1997 documentation indicates was the feature that could have supported eligibility under Criteria Consideration G, has been removed.

In its current condition, site 5BL6938 is also assessed as not eligible for Boulder County Landmark status. It does not meet Standard 1 and 2 for the same reasons it does not fulfill NRHP Criterion A. As with Criterion B, none of the individual owners significantly contributed to local history and it does not meet Standard 3. The buildings, as discussed above under Criterion C, lack architectural distinction, and are not associated with specific architects or feats of innovation precluding the site from meeting Standards 4, 5, and 7. No evidence of substantial buried deposits was found, and the property does not meet Standard 6 for the same reason it doesn't meet Criterion D. Finally, the site has no clear ties to other farmsteads or distinctive buildings, sites, or districts in the area that are of historic significance and does not fulfill Standard 8 as described in the Boulder County Land Use Code (15-501).

43. **Assessment of historic physical integrity related to significance**: The remaining buildings on the property are heavily modified and are in poor physical condition. The construction of additions as well as the covering of most of the window and door openings with plywood and the replacement of siding and roofing has diminished the integrity of materials, design, workmanship, association, and feeling. The surrounding area has been heavily developed into housing subdivisions diminishing integrity of setting. While integrity of location remains, this aspect alone is not sufficient to support eligibility.

VII. NATIONAL REGISTER ELIGIBILITY ASSESSMENT

44. **National Register eligibility field assessment**:
Eligible ____ Not Eligible __X__ Need Data __

45. **Is there National Register district potential?** Yes ___ No _X

Discuss: The surrounding area has been heavily developed into modern housing subdivision and businesses along the Ute Highway.

If there is National Register district potential, is this building: Contributing ___ Noncontributing ____

46. If the building is in existing National Register district, is it: Contributing ___ Noncontributing ____

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VIII. RECORDING INFORMATION

47. **Photograph numbers**: CA Roll 2021-25 #s 1-73
    Negatives filed at: Centennial Archaeology LLC
48. **Report title**: None – letter report provided to the City of Longmont
49. **Date(s):** 6/21/2021
50. **Recorder(s):** Kristi Gensmer
51. **Organization**: Centennial Archaeology LLC
52. **Address**: Building 4-C, 300 E Boardwalk Dr, Fort Collins, CO 80525
53. **Phone number(s):** 970-225-6575

NOTE: Please include a sketch map, a photocopy of the USGS quad map indicating resource location, and photographs.

Colorado Historical Society - Office of Archaeology & Historic Preservation
1300 Broadway, Denver, CO 80203
(303) 866-3395

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Architectural Inventory Form

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Date _____Initials _____
_____ Determined Eligible- NR
_____ Determined Not Eligible- NR
_____ Determined Eligible- SR
_____ Determined Not Eligible- SR
_____ Need Data
_____ Contributes to eligible NR District
_____ Noncontributing to eligible NR District

I. IDENTIFICATION

1. **Resource number**: 5BL6938
2. **Temporary resource number**: 21CA098
3. **County**: Boulder
4. **City**: Unincorporated Boulder County
5. **Historic building name**: Nishida Farms – Building A
6. **Current building name**: Nishida Farms – Secondary Residence (Feature 2)
7. **Building address**: 10161 Ute Highway, Unincorporated Boulder County
8. **Owner name and address**: Maple Leafe Investors, LLC, 1500 W Hampden Ave, Ste. 3H, Sheridan, CO.

II. GEOGRAPHIC INFORMATION

9. P.M. 6 Township 3N Range 69W
   SE ¼ of SE ¼ of section 21
10. **UTM reference**
    Zone 13 ; 460968 mE 4446190 mN
11. **USGS quad name**: Longmont
    Year: 1979 Map scale: 7.5' X 15'____ Attach photo copy of appropriate map section.
12. Lot(s): ___
    Addition: _____Year of Addition:
13. **Boundary Description and Justification**: The boundary for the Nishida Farms site is defined by the current parcel boundary (No. 120521000010).

III. Architectural Description

14. **Building plan (footprint, shape):** L- Shaped Plan
15. **Dimensions in feet**: 58 ft (N/S) x 24 ft (E/W)
16. **Number of stories**: 1.5 Story
17. **Primary external wall material(s)**: Wood – Weatherboard: Horizontal Siding
18. **Roof configuration**: Gabled Roof – Front Gabled Roof
19. **Primary external roof material**: Asphalt
20. **Special features**: None
21. **General architectural description:** Feature 2 is a smaller secondary residence. It was documented as Map ID Number A during the 1997 documentation. At that time, it was also indicated that the house was built in 1940 but was moved to the site in 1959. It was vacant in 1997. At that time, it was painted white and was described as having a gabled roof with gray asphalt shingles. No chimneys were noted, and the walls were white-painted horizontal weatherboards on wood frame construction. The windows were single or paired 1/1 double-hung sash elements with wood frames and exterior metal screens. The primary door was a wood-paneled element with a silver metal storm door on the south elevation. The door to the rear addition seems to have been a storm door even then. The foundation was painted cinderblock and the doors were accessible by concrete stoops.

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At present the house is 1.5 story in height and has an L-shaped footprint created by a rectangular-plan core and a partial-width addition on the rear (north) elevation. The residence is 58 ft (N/S) x 24 ft (E/W) in maximum dimensions. Based on the roof lines, two additions are present on the north elevation. One may have been a full-length porch that was enclosed, and the other is a utilities / mudroom addition. The core of the building had a front-gabled roof with open eaves and enclosed rafters. The first, full-length addition on the north elevation has a hipped roof that is set at a lower pitch than that of the core roof and rafters that are closer to the walls than those of the primary building. The mudroom has a shed roof set at an even shallower angle than that of the first addition. The roof of the core and first addition are covered with the same composition shingles that cover the roof of the other residence. The mudroom is covered by composition roll roofing. Two metal stovepipes emerge from the mudroom addition roof. An electrical mast, a broken TV antenna, and two satellite dishes are mounted to the roof. Various vents also were visible. Walls of the core and first addition are covered with horizontal simple drop wood siding. There is a small line in the siding where the addition and the core meet. The Mudroom addition is clad with a variety of materials including narrow horizontal wood strips, plywood, and corrugated metal panels. All of these elements have been painted to match the siding of the house. The narrow strip of wall beneath the gable and before the roof of the first addition is covered with horizontal wood weatherboards. All windows on the core save for a small, wood-framed, double-hung element beneath the gable on the south-facing façade are covered with oriented strand board (OSB) sheets. Fenestration on the mudroom addition is more intact and includes two divided-light, wood-framed fixed elements, a small single-pane fixed window, a single-hung aluminum-framed window, and an aluminum-framed sliding window. One window opening on this addition was covered with plywood and contains a dryer vent cover. A water heater is visible through the windows in this portion of the addition and a wall is visible suggesting that it was divided into a mudroom and a utility room. Doorways are present on the south and east elevations of the residence. The door on the south elevation is covered with OSB and opened onto a concrete stoop with three steps. A narrow concrete walkway led to this door. Three wood posts emerge from the ground, but it is not clear what their purpose was. On the east elevation, the door consists of an aluminum-framed storm door. While a second door would have been behind it, it appeared to be missing. The door from the mudroom into the house appears to have been a hollow-core wood element. This door opened onto a poured concrete stoop with three steps. A large concrete patio or parking area is adjacent to the northside of the house and the small area on the northwest formed by the L-shaped building is fenced with chain link fencing. The foundation of the core is cinderblock, but the additions appear to have a poured concrete foundation.

Boulder County Assessor's data also list this residence as having been constructed in 1940. However, a review of the historic aerials for the property show that it was constructed between 1955 and 1967. The rectangular core is in place at that time, but, given the quality of the image and the shadows, it is not clear if the rear additions had been constructed yet. The mudroom is clearly visible by 1971 (Historic Aerials 2021). The 1997 site form notes that there is a handwritten note on the Assessor's property card stating that it was "moved in for 1959."

22. **Architectural style/building type**: No Style

23. **Landscaping or special setting features:** See this section on the form for Feature 1.

24. **Associated buildings, features, or objects**: See this section on the form for Feature 1.

IV. ARCHITECTURAL HISTORY

25. **Date of Construction**: Estimate: 1955 - 1967 Actual: _____
Source of information: Historic Aerials 2021

26. **Architect**: Unknown
Source of information: N/A

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

27. **Builder/Contractor**: Unknown
    Source of information: N/A
28. **Original owner**: Isaac Jun Nishida and Martha Sayeko Nishida; Tom Masami Nishida, Jim Nishida
    Source of information: Boulder County Clerk and Recorder
30. **Construction history (include description and dates of major additions, alterations, or demolitions):** Boulder County Assessor's data also list this residence as having been constructed in 1940. However, a review of the historic aerials for the property show that it was constructed between 1955 and 1967. The rectangular core is in place at that time, but, given the quality of the image and the shadows, it is not clear if the rear additions had been constructed yet. The mudroom is clearly visible by 1971 (Historic Aerials 2021). The 1997 site form notes that there is a handwritten note on the Assessor's property card stating that it was "moved in for 1959."
30. **Original location** ____ **Moved** __X__ **Date of move(s):** 1959 based on the 1997 documentation and a note on the Boulder County Assessor's property card.

V. HISTORICAL ASSOCIATIONS

31. **Original use(s):** Domestic – Single Dwelling
32. **Intermediate use(s):** Domestic – Single Dwelling
33. **Current use(s):** Vacant
34. **Site type(s):** Residence; Agricultural Complex
35. **Historical background**: See the Historical Background section on the form for Feature 1.
36. **Sources of information**: Boulder County Clerk and Recorder's Office and Boulder County Assessor's Office

VI. SIGNIFICANCE

37. **Local landmark designation**: Yes ____ No __X__ Date of designation: _____
    Designating authority:
38. **Applicable National Register Criteria**:
    ____ A. Associated with events that have made a significant contribution to the broad pattern of our history;
    ____ B. Associated with the lives of persons significant in our past;
    ____ C. Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or that possess high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or
    ____ D. Has yielded, or may be likely to yield, information important in history or prehistory.
    ____ Qualifies under Criteria Considerations A through G (see Manual)
    __X__ Does not meet any of the above National Register criteria
40. **Area(s) of significance**: N/A
40. **Period of significance**: N/A
41. Level of significance: National ____ State ____ Local _____
42. **Statement of significance**: See statement of significance statement in the previous form.
43. **Assessment of historic physical integrity related to significance**: In addition to the integrity statement on the previous form, this building was moved to the site.

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

VII. NATIONAL REGISTER ELIGIBILITY ASSESSMENT

44. **National Register eligibility field assessment**:
Eligible ____ Not Eligible __X__ Need Data __

45. **Is there National Register district potential?** Yes ___ No _X_
Discuss: While other residences are present along SH 7, they lack a cohesive history and style.
If there is National Register district potential, is this building: Contributing ___ Noncontributing ____

46. If the building is in existing National Register district, is it: Contributing ___ Noncontributing ____

VIII. RECORDING INFORMATION

25. **Photograph numbers**: CA Roll 2021-25 #s 1-73
Negatives filed at: Centennial Archaeology LLC

48. **Report title**: None – letter report provided to the City of Longmont

49. **Date(s):** 6/21/2021

50. **Recorder(s):** Kristi Gensmer

51. **Organization**: Centennial Archaeology LLC

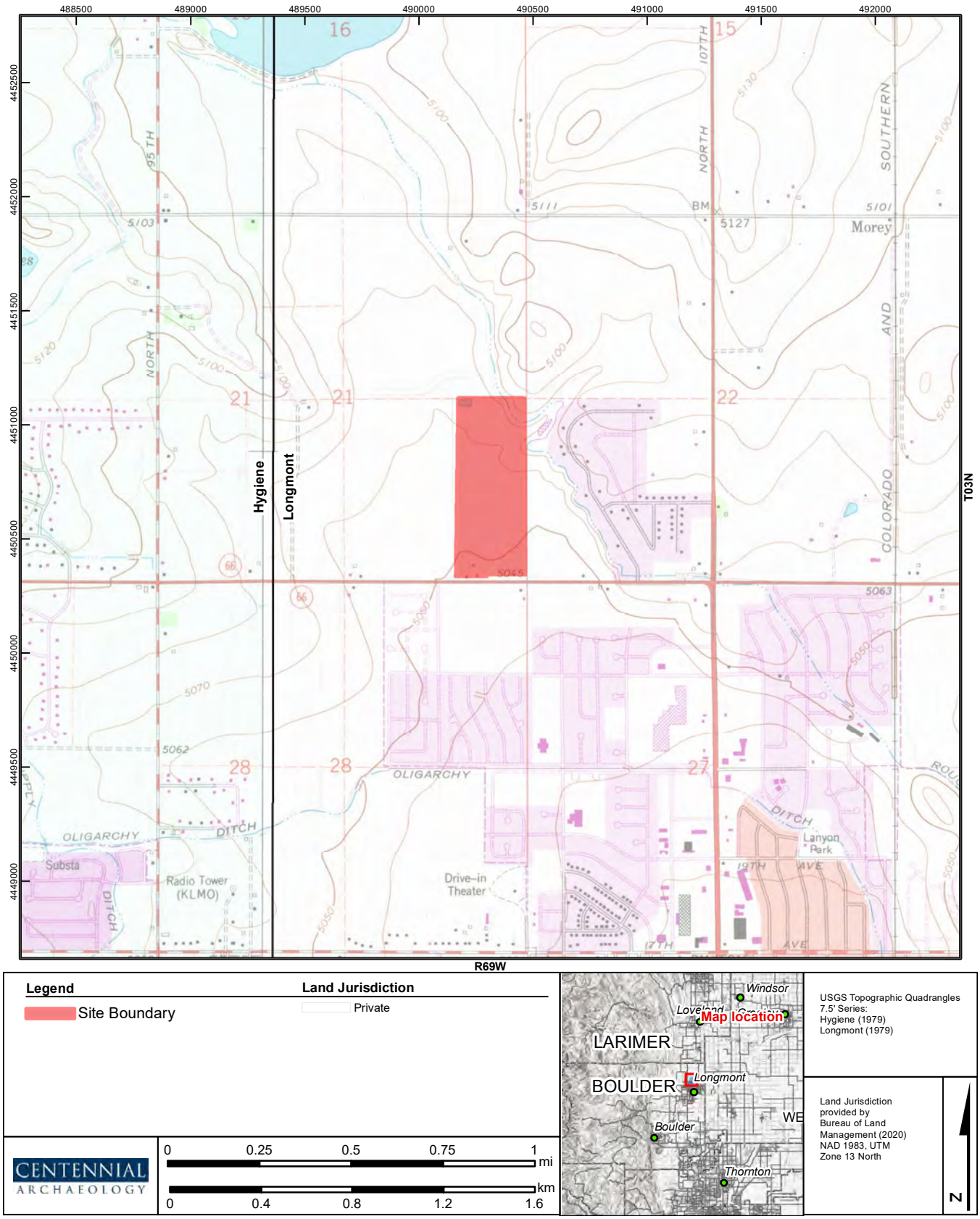
52. **Address**: Building 4-C, 300 E Boardwalk Dr, Fort Collins, CO 80525

53. **Phone number(s):** 970-225-6575

NOTE: Please include a sketch map, a photocopy of the USGS quad map indicating resource location, and photographs.

Colorado Historical Society - Office of Archaeology & Historic Preservation
1300 Broadway, Denver, CO 80203
(303) 866-3395

Resource Number: 5BL6938
Temporary Resource Number: 21CA098



USGS map at 1:24,000 scale showing location of Site 5BL6938.

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

Site 5BL6938 plan map

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

Site 5BL6938 close view of building complex.

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

Site 5BL6938. Overview of property from west entrance off the Ute Highway, facing northwest. K. Gensmer 6/21/2021.

Site 5BL6938. Overview of property from west entrance off the Ute Highway, facing northeast. K. Gensmer 6/21/2021.

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

Site 5BL6938. Overview of property from eastern end facing, west. Feature 1 (Left), Feature 3 (Center), and Feature 4 (Right) visible. K. Gensmer 6/21/2021.

Site 5BL6938. Overview of property from western edge near Feature 4, facing southeast. Feature 1 (Left), Feature 2 (Center), and Feature 3 (Right) visible. K. Gensmer 6/21/2021.

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

Site 5BL6938. East elevation of Feature 1, facing northwest. K. Gensmer 6/21/2021.

Site 5BL6938. Close view of door on east elevation of Feature 1, facing northwest. K. Gensmer 6/21/2021.

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

Site 5BL6938. South and west elevations of Feature 1, facing east. K. Gensmer 6/21/2021.

Site 5BL6938. West elevation of Feature 1, facing east. K. Gensmer 6/21/2021.

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

Site 5BL6938. North elevation of Feature 1, facing south. K. Gensmer 6/21/2021.

Site 5BL6938. South and east elevations of Feature 2, facing northwest. K. Gensmer 6/21/2021.

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

Site 5BL6938. North and east elevations of Feature 2, facing southwest. K. Gensmer 6/21/2021.

Site 5BL6938. North and west elevations of Feature 2, facing south/southeast. K. Gensmer 6/21/2021.

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

Site 5BL6938. South and east elevations of Feature 3, facing west. K. Gensmer 6/21/2021.

Site 5BL6938. North and east elevations of Feature 3, facing southwest. K. Gensmer 6/21/2021.

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

Site 5BL6938. North and west elevations of Feature 3, facing south. K. Gensmer 6/21/2021.

Site 5BL6938. South and east elevations of Feature 4 (modern), facing northwest. K. Gensmer 6/21/2021.

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

Site 5BL6938. North and west elevations of Feature 4 (modern), facing southeast. K. Gensmer 6/21/2021.

Site 5BL6938. South and east elevations of Feature 5, facing northwest. K. Gensmer 6/21/2021.

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

Site 5BL6938. West and north elevations of Feature 5, facing east. K. Gensmer 6/21/2021.

Site 5BL6938. View of open area containing Features 6 and 7 from edge of concrete near Feature 4 toward Feature 5, facing southeast. K. Gensmer 6/21/2021.

Resource Number: 5BL6938
Temporary Resource Number: 21CA098

Site 5BL6938. View of concrete pads east of Feature 7, facing east. K. Gensmer 6/21/2021.

Site 5BL6938. View of concrete pads and space where Feature 6 was, facing south towards Feature 5. K. Gensmer 6/21/2021.

Architecture
Structural
Geotechnical

RMG
Employee Owned

Materials Testing
Forensic
Civil/Planning

SUBSURFACE SOIL INVESTIGATION

CO SH 66
Terry Lake Sanitary Sewer
Longmont, Colorado

PREPARED FOR:

Northern Engineering
301 N. Howes St.
Suite 100
Fort Colins, CO 80521

JOB NO. 185855

December 3, 2021

Respectfully Submitted,
RMG – Rocky Mountain Group

Zachary Munstermann, E.I.
Geotechnical Staff Engineer

Reviewed by,
RMG – Rocky Mountain Group

COLORADO LICENSED
DALE W. GUILLEN
38433
12/3/21
PROFESSIONAL ENGINEER

Dale W. Guillen, P.E.
Geotechnical Project Manager

Scope of Investigation

RMG - Rocky Mountain Group drilled five test borings at the above-referenced address on July 22 and 31, 2021. The layout of the site and the approximate location of our explorations are provided in Figure 1, Aerial Site Map. Our findings, conclusions and observations are provided in this report. The purpose is to provide soil data and profiles for future construction purposes.

This report presents geotechnical engineering observations of the subsurface strata encountered in or borings. The following is excluded from the scope of this report including but not limited to geotechnical engineering recommendations, geologic, natural and environmental hazards such as landslides, unstable slopes, seismicity, snow avalanches, water flooding, corrosive soils, erosion, radon, wild fire protection, hazardous waste and natural resources.

Site Description and Proposed Construction

At the time of our field exploration, the proposed alignment had structures and utilities along the portion that is adjacent to Highway 66, borings B-1 through B-4. Where the alignment turns north, near borings B-3 and 4, there is a single-family residence with several ancillary structures. From boring B-5 through B-12 there were fewer permanent structures. The existing vegetation consists of native and cultivated grasses, weeds, and occasional trees. The project alignment is relatively flat with a few irrigation ditches and fences along the majority of the proposed alignment.

Based on information provided by our client, it is our understanding a proposed Sanitary Sewer line will consist of approximately 5,600 feet along the alignment. The anticipated depth along the alignment will range from 15 to 25 feet below existing grade.

Approximate Boring Locations and Elevations

Table No. 1

Boring	Latitude	Longitude	Elevation
B-1*	40.203436	-105.110660	5052
B-2*	40.203437	-105.112284	5052
B-3*	40.203415	-105.114045	5053
B-4*	40.203430	-105.115660	5056
B-5	40.205075	-105.115660	5055
B-6	40.206666	-105.115682	5059
B-7	40.206705	-105.117022	5058
B-8	40.206692	-105.118455	5060
B-9	40.206730	-105.121530	5068
B-10*	40.206753	-105.123166	5070
B-11	40.206769	-105.124700	5074
B-12	40.206754	-105.126503	5079

Boring coordinates and elevations were determined from Google Earth in the field at the time of drilling.
*Boring locations were inaccessible at the time of drilling due to utility markings and private fencing

Subsurface Materials

Site Geology

The Terry Lake Regional Sanitary Sewer alignment is located in an area mapped by the USGS as Pierre Shale, on the western third of the alignment, and Eolian Deposits, on the eastern portion. The upper unit of the Pierre Shale is comprised of Cretaceous marine shale with interbedded sandstone. The Quaternary Eolian Deposits are often typified by dune sand, silt, and Peoria Loess.

The subsurface materials encountered during the explorations were generally classified using the Unified Soils Classification System (USCS).

Native Soils

Underlying the surficial topsoil, native soils were encountered in the test borings. The native soils were generally classified as medium-stiff to stiff silty clay overlying medium-dense to dense sand with varying amounts of clay and gravel. The native soils were visually described as light brown to blue-gray, tan to red, and moist to wet.

Bedrock

In the test borings, bedrock was encountered below the native soils in the two western-most borings, B-11 and B-12 continuing to the termination depths. The bedrock was generally classified as firm to very hard claystone. The bedrock was visually described as light brown to dark gray with oxidation staining and moist to wet.

Groundwater

Groundwater was encountered in all of our drilled borings at the locations explored, please refer to the table below for approximate depths, at the time of drilling and 24 hours after the boring was completed. Fluctuations in groundwater and subsurface moisture conditions may occur due to variations in rainfall and other factors not readily apparent at this time. Development of adjacent properties may also affect groundwater levels.

Table No. 2

Boring Number	Groundwater*		Caving Conditions*
	During Drilling	24 hrs. After Drilling	
B-5	10.0	2.0	10.0-25.0
B-6	12.0	5.0	13.5-25.0
B-7	12.0	10.0	12.0-25.0
B-8	10.0	10.0	11.5-25.0
B-9	11.5	14.0	15.0-25.0
B-11	N.E.**	6.0	10.0-25.0
B-12	N.E.**	11.0	17.5-25.0

*Depths measured from existing grade (feet)
** Not Encountered

Additional descriptions and the interpreted distribution (approximate depths) of the subsurface materials are presented in the Test Boring Logs. The soil/rock classifications shown on the logs are based upon the engineer's classification of samples. Lines shown on the logs represent the approximate boundary between subsurface materials, and the actual transition may be gradual and vary across the site. An Explanation of the Test Boring Logs, the Test Boring Logs, a Summary of Laboratory Test Results, Soil Classification Data, and Swell Test Results are presented at the end of this report.

Excavations

Excavations for the project are expected to encounter primarily silty sand and clayey sand and high groundwater. The native soils will generally be excavatable with heavy-duty earth moving equipment. However, due to the high groundwater table, caving conditions, and inconstancies in the soil the contractor should be prepared to use temporary trench-shoring in all excavations. Braced excavations should be designed by a professional engineer.

The contractor should provide safely sloped excavations or an appropriately designed and constructed braced-shoring system, in compliance with Occupational Safety and Health Administration (OSHA, 2005) guidelines, for employees working in an excavation that may expose employees to the danger of moving ground. In our opinion, the native soils should generally be considered a Type “C” soil when applying the OSHA guidelines. For these soil conditions, OSHA recommends a temporary slope inclination of 1 1/2H:1V or flatter for excavations 20 feet or less in depth. Some surface sloughing may occur on the slope face at these angles. Steeper cut slopes may be utilized for excavations less than 4 feet deep depending on the strength, moisture content, and homogeneity of the soils as observed in the field. Appropriate slope inclinations should be evaluated in the field by an OSHA-qualified “Competent Person” based on the actual conditions encountered.

Utilities

The settlement of the utility trench backfill can have a detrimental effect on the surrounding properties and surface water drainage. We recommend that utility trench backfill be placed in thin loose lifts, moisture conditioned as required and compacted to the recommendations outlined in the **Structural Fill** section of this report. The placement and compaction of utility trench backfill should be observed and tested by a representative of RMG – Rocky Mountain Group during construction. Use of “flowable fill,” (i.e., a controlled low strength material (CLSM), or a similar material) should be considered in lieu of compacted soil backfill for areas with low tolerances for surface settlements in deep excavations and areas with difficult access.

Underdrains may be placed in the sanitary sewer trenches in areas where groundwater is anticipated will likely be the "active" type, which uses a perforated drain pipe. In areas where groundwater is not anticipated, “passive” type underdrains may be used. The outfall for the sanitary sewer trench underdrain was not known at the time of this investigation because the development plan and grading plan were not available for our review.

Structural Fill - General

All structural and non-structural fill should be observed and tested per the governing municipality. Below are given standard practice guidelines fill placement if none are given by the governing jurisdiction.

Areas to receive structural fill should have topsoil, organic material, or debris removed. The upper 6 inches of the exposed surface soils should be scarified and moisture conditioned to facilitate compaction (usually within 2 percent of the optimum moisture content) and compacted to a minimum of 95 percent of the maximum dry density as determined by the Standard Proctor test (ASTM D-698) or to a minimum of 92 percent of the maximum dry density as determined by the Modified Proctor test (ASTM D-1557) prior to placing structural fill.

- Materials used for granular structural fill should be approved by RMG prior to use. Structural fill should not be placed on frozen subgrade or allowed to freeze during moisture conditioning and placement.

- To verify the condition of the compacted soils, density tests should be performed during placement. The first density tests should be conducted when 24 inches of fill have been placed.

Granular Structural Fill

Structural fill placement for the upper 4 feet of the excavation should consist entirely of granular, non-expansive material. Structural fill placement of granular, non-expansive soils should be placed in loose lifts not exceeding 8 to 12 inches, moisture conditioned to facilitate compaction (usually within 2 percent of the optimum moisture content) and compacted to a minimum of 92 percent of the maximum dry density as determined by the Modified Proctor test, ASTM D-1557. The materials should be compacted by mechanical means.

Moisture-Conditioned Structural Fill

Moisture conditioned structural fill shall consist of a moisture-conditioned, on-site cohesive fill material. The fill material shall be moisture conditioned and replaced as follows:

- Fill shall be free of deleterious material and shall not contain rocks or cobbles greater than 6 inches in diameter.

- Fill materials shall be moisture-conditioned to a minimum of 1 percent to 4 percent above optimum moisture content (as determined by the Standard Proctor test, ASTM D-698), with an average of not less than 1 1/2 percent above optimum moisture content.

- The moisture-conditioned materials should be placed in maximum 6" compacted lifts. These materials should be compacted to a minimum of 95 percent of the maximum dry density as determined by the Standard Proctor test (ASTM D-698) or to a minimum of 92 percent of the maximum dry density as determined by the Modified Proctor test (ASTM D-1557). Material not meeting the above requirements shall be reprocessed.

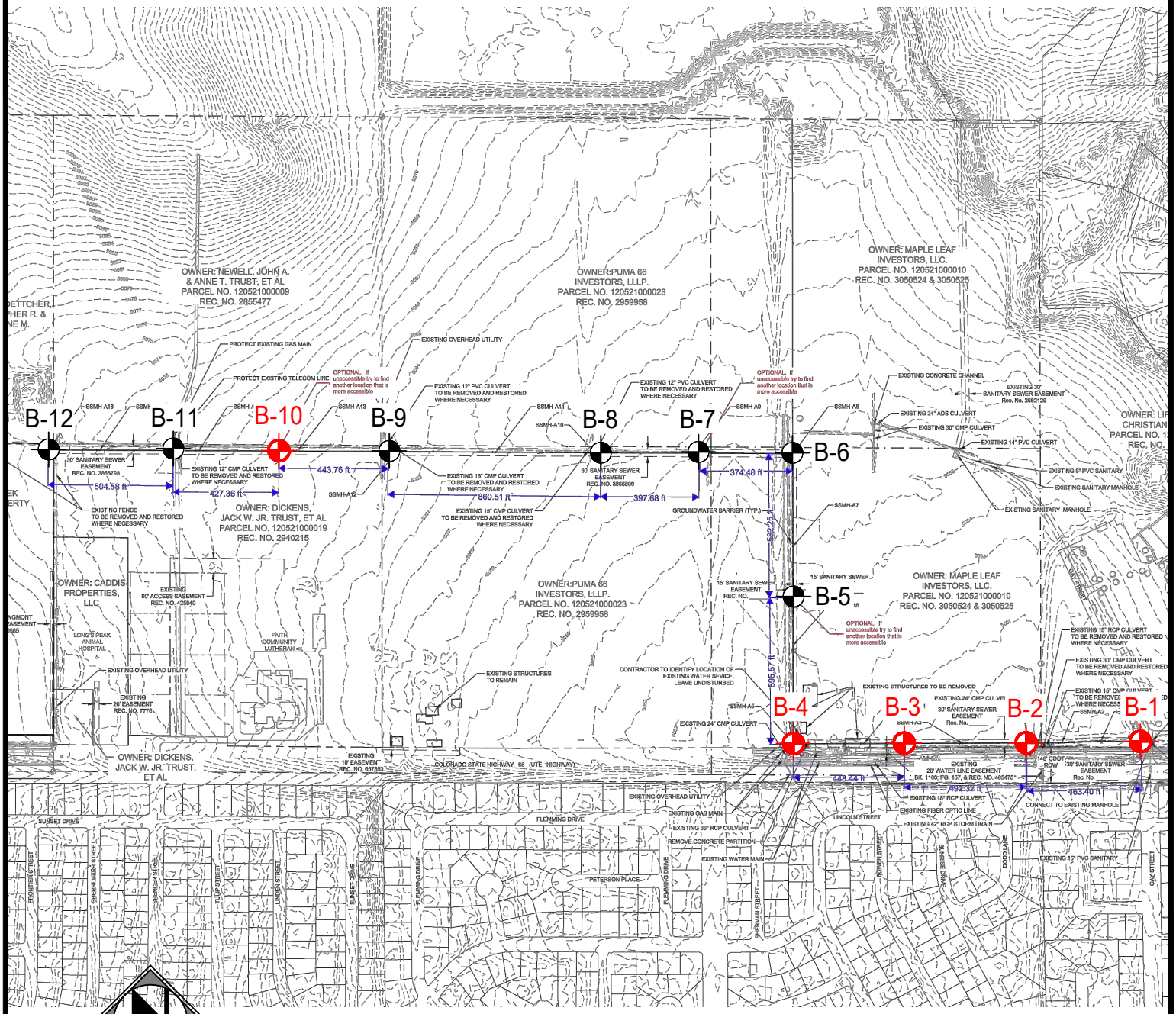
Concrete (if applicable)

Type I/II cement or an equivalent mixture according to ACI 201.2R-10 is suggested for concrete in contact with the subsurface materials. Cement type shall be designed and approved by a licensed Colorado Professional Engineer and Foundation Designer. Calcium chloride should not be used for the onsite soils. The concrete should not be placed on frozen ground. If placed during periods of cold temperatures, the concrete should be kept from freezing. This may require covering the concrete with insulated blankets and heating. Concrete work should be completed in accordance with the latest applicable guidelines and standards published by ACI.

General Remarks

The data provided in this report are based upon the subsurface conditions encountered in the test borings and accepted engineering practices and principles in the area at the time of report preparation. No warranty is made or implied in this report that this firm has an all-inclusive knowledge of every portion of the subsurface materials on or under the site. There is no evaluation detailed enough to reveal every subsurface condition. The nature and extent of variations across the site may not become evident until construction commences or thereafter. The construction or disturbance process itself may also alter subsurface conditions. If variations appear evident at the time of construction, our office should be notified. If needed and/or if desired, we can re-examine our analyses.

If we can be of further assistance in discussing the contents of this report or analysis of the proposed project, from a geotechnical engineering point-of-view, please feel free to contact us.



ARCHITECTS RMG ENGINEERS
ROCKY MOUNTAIN GROUP

Southern Office
Colorado Springs,CO 80918
(719) 548-0600
Central Office:
Englewood, CO 80112
(303) 688-9475
Northern Office:
Greeley / Evans, CO 80620
(970) 330-1071

TEST BORING SITE MAP

CO SH 66
LONGMONT, COLORADO

NORTHERN ENGINEERING

JOB No. 185855

FIGURE 1

DATE: 11-22-2021

SOILS DESCRIPTION

LOW PLASTICITY CLAY

CLAYSTONE

SAND WITH GRAVEL

SANDY CLAY

CLAYEY SAND

SILTY CLAY

SILTY SAND

UNLESS NOTED OTHERWISE, ALL LABORATORY
TESTS PRESENTED HEREIN WERE PERFORMED BY:
RMG - ROCKY MOUNTAIN GROUP
14 INVERNESS DR. EAST, SUITE E-136
ENGLEWOOD, COLORADO

SYMBOLS AND NOTES

XX — STANDARD PENETRATION TEST - MADE BY DRIVING A SPLIT-BARREL SAMPLER INTO THE SOIL BY DROPPING A 140 LB. HAMMER 30", IN GENERAL ACCORDANCE WITH ASTM D-1586. NUMBER INDICATES NUMBER OF HAMMER BLOWS PER FOOT (UNLESS OTHERWISE INDICATED).

XX — UNDISTURBED CALIFORNIA SAMPLE - MADE BY DRIVING A RING-LINED SAMPLER INTO THE SOIL BY DROPPING A 140 LB. HAMMER 30", IN GENERAL ACCORDANCE WITH ASTM D-3550. NUMBER INDICATES NUMBER OF HAMMER BLOWS PER FOOT (UNLESS OTHERWISE INDICATED).

FREE WATER TABLE

DEPTH AT WHICH BORING CAVED

BULK — DISTURBED BULK SAMPLE

AUG — AUGER "CUTTINGS"

4.5 — WATER CONTENT (%)

ROCKY MOUNTAIN GROUP

Architectural
Structural
Forensics

ARCHITECTS RMG ENGINEERS

Geotechnical
Materials Testing
Civil, Planning

Colorado Springs: (Corporate Office)
2910 Austin Bluffs Parkway
Colorado Spings, CO 80918
(719) 548-0600
SOUTHERN COLORADO, DENVER METRO, NORTHERN COLORADO

EXPLANATION OF TEST BORING LOG

JOB No. 185855

FIGURE No. 2

DATE Nov/22/2021

TEST BORING: **B-01** DATE DRILLED: NO GROUNDWATER ON	DEPTH (FT)	SYMBOL	SAMPLES	BLOWS PER FT.	WATER CONTENT %
Borehole location not accessible due to utilities	5 10 15 20 25				

TEST BORING: **B-02** DATE DRILLED: NO GROUNDWATER ON	DEPTH (FT)	SYMBOL	SAMPLES	BLOWS PER FT.	WATER CONTENT %
Borehole location not accessible due to utilities	5 10 15 20 25				

ROCKY MOUNTAIN GROUP

Architectural
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Forensics

ARCHITECTS RMG ENGINEERS

Geotechnical
Materials Testing
Civil, Planning

Colorado Springs: (Corporate Office)
2910 Austin Bluffs Parkway
Colorado Spings, CO 80918
(719) 548-0600
SOUTHERN COLORADO, DENVER METRO, NORTHERN COLORADO

TEST BORING LOG

JOB No. 185855

FIGURE No. 3

DATE Nov/30/2021

TEST BORING: **B-03** DATE DRILLED: NO GROUNDWATER ON	DEPTH (FT)	SYMBOL	SAMPLES	BLOWS PER FT.	WATER CONTENT %
Borehole location not accessible due to utilities	5 10 15 20 25				

TEST BORING: **B-04** DATE DRILLED: NO GROUNDWATER ON	DEPTH (FT)	SYMBOL	SAMPLES	BLOWS PER FT.	WATER CONTENT %
Borehole location not accessible due to utilities	5 10 15 20 25				

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Geotechnical
Materials Testing
Civil, Planning

Colorado Springs: (Corporate Office)
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TEST BORING LOG

JOB No. 185855

FIGURE No. 4

DATE Nov/30/2021

TEST BORING: **B-05**

DATE DRILLED:
11/1/21
GROUNDWATER @ 2.0 '
11/2/21

DEPTH (FT)	SYMBOL	SAMPLES	BLOWS PER FT.	WATER CONTENT %
	Silty CLAY - brown, medium-stiff, very moist, with sand			
5			9	21.0
	Silty SAND - tan to red, loose, wet			
10	**Groundwater at 10' during drilling**		10	21.6
	- gravel			
15	- becomes red-brown, saturated		7	17.4
20				24.3
	- becomes brown			
	Clayey SAND - brown-gray, loose to medium-stiff, wet, with trace gravel			
25				25.3

TEST BORING: **B-06**

DATE DRILLED:
11/1/21
GROUNDWATER @ 5.0 '
11/2/21

DEPTH (FT)	SYMBOL	SAMPLES	BLOWS PER FT.	WATER CONTENT %
	Silty CLAY - dark brown, stiff, very moist			
5			14	15.5
	Clayey SAND - dark brown to red-brown, dense, with occasional gravel and organics			
10	**'Groundwater at 12' during drilling**		41	11.7
15	- becomes brown gray, medium-dense, wet		26	18.9
20	- gravel			20.8
	Sandy CLAY - gray, medium-stiff to stiff			
25				27.7

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TEST BORING LOG

JOB No. 185855

FIGURE No. 5

DATE Nov/30/2021

TEST BORING: **B-07**

DATE DRILLED:
11/1/21
GROUNDWATER @ 10.0 '
11/2/21

DEPTH (FT)	SYMBOL	SAMPLES	BLOWS PER FT.	WATER CONTENT %
	Silty CLAY - dark brown to brown, stiff, moist to very moist			
5			14	18.9
	Sandy CLAY - light brown, soft, very moist			
10 ▽			4	22.9
	Groundwater at 12' during drilling			
	- becomes medium-stiff, with gravel		9	25.6
15				
	SAND - red-brown, medium-dense, wet, with gravel			
20				7.2
	CLAY - yellow-brown, medium-stiff to stiff, moist			
25				26.5

TEST BORING: **B-08**

DATE DRILLED:
11/1/21
GROUNDWATER @ 10.0 '
11/2/21

DEPTH (FT)	SYMBOL	SAMPLES	BLOWS PER FT.	WATER CONTENT %
	Silty CLAY - brown to light brown, stiff, moist			
5			7	16.7
10 ▽	SAND - red-brown, wet, with gravel		13	19.8
	Groundwater at 10' during drilling			
	Sandy CLAY - red-brown, stiff, very moist, with gravel			15.4
15				
20				20.1
	CLAY - gray, medium-stiff to stiff, very moist			
25				18.5

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TEST BORING LOG

JOB No. 185855

FIGURE No. 6

DATE Nov/30/2021

TEST BORING: **B-09**

DATE DRILLED:
11/1/21
GROUNDWATER @ 14.0 '
11/2/21

DEPTH (FT)	SYMBOL	SAMPLES	BLOWS PER FT.	WATER CONTENT %
5			12	17.8
10			16	19.8
15			27	11.2
20				22.0
25				35.3

Silty CLAY - brown to light brown, stiff, moist

Groundwater at 11.5' during drilling

SAND - red-brown, medium-dense, wet, gravelly

- beocmes clayey

CLAY - gray, stiff, wet

TEST BORING: **B-10**

DATE DRILLED:

NO GROUNDWATER ON

DEPTH (FT)	SYMBOL	SAMPLES	BLOWS PER FT.	WATER CONTENT %
5				
10				
15				
20				
25				

Borehole location not accessible due to fence

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TEST BORING LOG

JOB No. 185855

FIGURE No. 7

DATE Nov/30/2021

TEST BORING: **B-11**

DATE DRILLED:
11/1/21
GROUNDWATER @ 6.0 '
11/2/21

DEPTH (FT)	SYMBOL	SAMPLES	BLOWS PER FT.	WATER CONTENT %
Silty CLAY - brown, stiff, moist to very moist				
5			10	23.6
Groundwater at 6': 24 hours post-drilling				
- becomes gray, very stiff, ferrous				
10			24	18.7
CLAYSTONE - brown with dark gray, firm, moist, ferrous, with silty interbeds				
15			42	14.7
- becomes hard				
20			50/6"	11.8
25				14.1

TEST BORING: **B-12**

DATE DRILLED:
11/1/21
GROUNDWATER @ 11.0 '
11/2/21

DEPTH (FT)	SYMBOL	SAMPLES	BLOWS PER FT.	WATER CONTENT %
Silty CLAY - dark brown, stiff, semi-moist				
5			11	16.5
CLAYSTONE - dark brown to light brown, firm, moist, ferrous				
10			40	15.0
Groundwater at 11': 24 hours post-drilling				
15			50/8"	13.7
- becomes gray, medium-hard				
20				13.3
25			50/5.25"	12.7
- becomes hard				

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TEST BORING LOG

JOB No. 185855

FIGURE No. 8

DATE Nov/30/2021

Test Boring No.	Depth	Water Content (%)	Dry Density (pcf)	Liquid Limit	Plasticity Index	% Retained No.4 Sieve	% Passing No. 200 Sieve	Load at Saturation (psf)	% Swell/ Collapse	USCS Classification
B-05	4.0	21.0		40	27		78.8			CL
B-05	9.0	21.6	110.6						0.0	
B-05	14.0	17.4								
B-05	19.0	24.3								
B-05	24.0	25.3		35	22		41.2			SC
B-06	4.0	15.5	113.4						0.1	
B-06	9.0	11.7		37	25		43.4			SC
B-06	14.0	18.9		24	12		22.2			SC
B-06	19.0	20.8								
B-06	24.0	27.7								
B-07	4.0	18.9	105.9						0.0	
B-07	9.0	22.9	102.1						0.0	
B-07	14.0	25.6								
B-07	19.0	7.2								
B-07	24.0	26.5		42	26		87.7			CL
B-08	4.0	16.7								
B-08	9.0	19.8	105.9						- 0.5	
B-08	14.0	15.4		36	23		41.5			SC
B-08	19.0	20.1								
B-08	24.0	18.5								
B-09	4.0	17.8								
B-09	9.0	19.8	108.3						0.7	
B-09	14.0	11.2		NP	NP	17.6	9.3			SW-SM
B-09	19.0	22.0								
B-09	24.0	35.3		49	34		90.4			CL
B-11	4.0	23.6								
B-11	9.0	18.7								
B-11	14.0	14.7		37	24		96.8			CL
B-11	19.0	11.8	120.8						0.3	
B-11	24.0	14.1								
B-12	4.0	16.5								
B-12	9.0	15.0		49	30		84.6			CL
B-12	14.0	13.7	123.4						2.5	
B-12	19.0	13.3								

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SUMMARY OF LABORATORY TEST RESULTS

JOB No. 185855
FIGURE No. 9
PAGE 1 OF 2
DATE Nov/22/2021

Test Boring No.	Depth	Water Content (%)	Dry Density (pcf)	Liquid Limit	Plasticity Index	% Retained No.4 Sieve	% Passing No. 200 Sieve	Load at Saturation (psf)	% Swell/ Collapse	USCS Classification
B-12	24.0	12.7	122.8						1.8	

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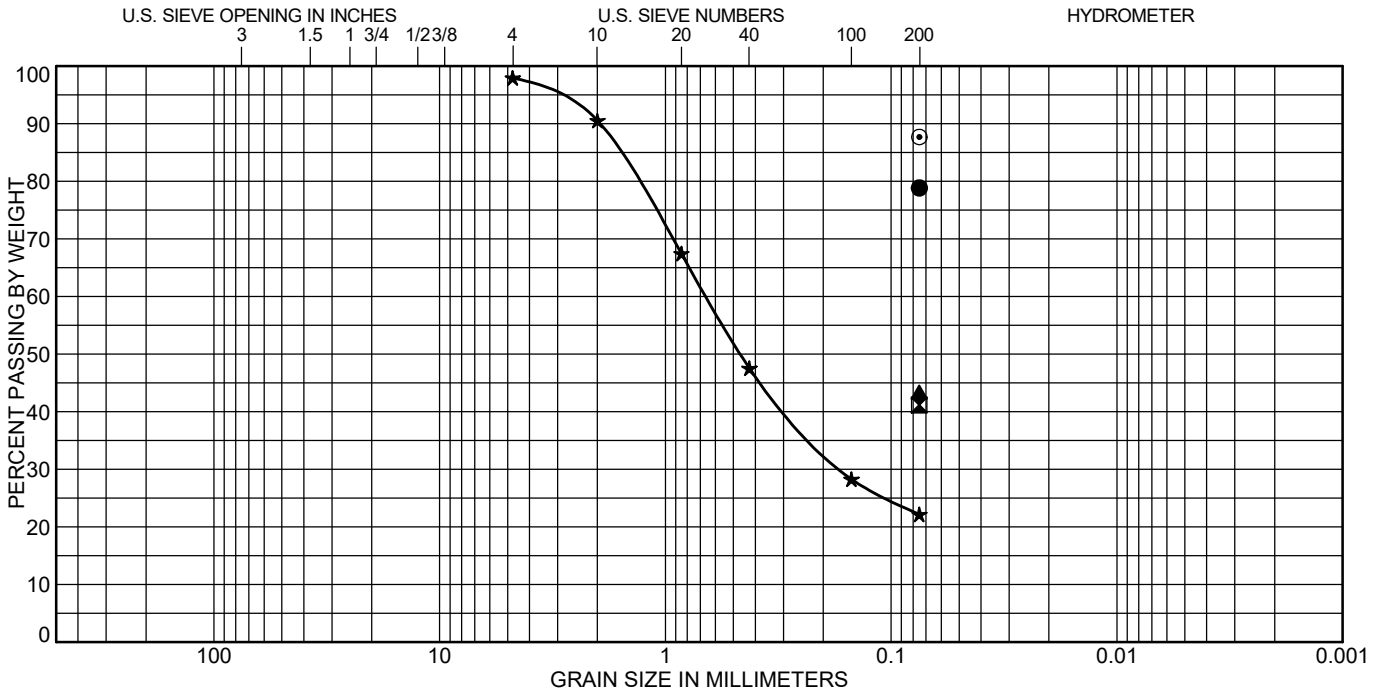
SUMMARY OF LABORATORY TEST RESULTS

JOB No. 185855
FIGURE No. 9
PAGE 2 OF 2
DATE Nov/22/2021



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Test Boring	Depth (ft)	Classification	LL	PL	PI
●	B-05	4.0	LEAN CLAY with SAND(CL)	40	13	27
⧓	B-05	24.0	CLAYEY SAND(SC)	35	13	22
▲	B-06	9.0	CLAYEY SAND(SC)	37	12	25
★	B-06	14.0	CLAYEY SAND(SC)	24	12	12
⊙	B-07	24.0	LEAN CLAY(CL)	42	16	26

	Test Boring	Depth (ft)	%Gravel	%Sand	%Silt	%Clay
●	B-05	4.0			78.8	
⧓	B-05	24.0			41.2	
▲	B-06	9.0			43.4	
★	B-06	14.0		75.8	22.2	
⊙	B-07	24.0			87.7	

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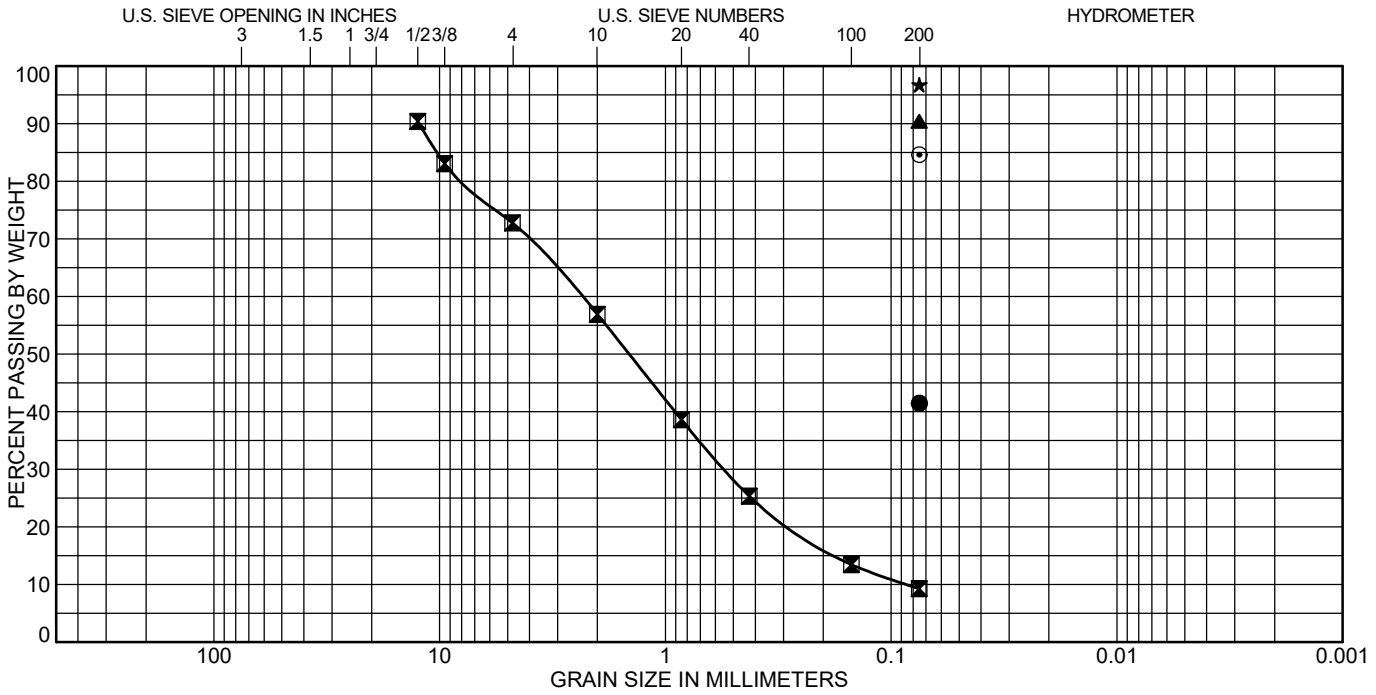
SOIL CLASSIFICATION DATA

JOB No. 185855

FIGURE No. 10

DATE Nov/22/2021



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Test Boring	Depth (ft)	Classification	LL	PL	PI
●	B-08	14.0	CLAYEY SAND(SC)	36	13	23
⊠	B-09	14.0	WELL-GRADED SAND with SILT and GRAVEL(SW-SM)	NP	NP	NP
▲	B-09	24.0	LEAN CLAY(CL)	49	15	34
★	B-11	14.0	LEAN CLAY(CL)	37	13	24
⊙	B-12	9.0	LEAN CLAY with SAND(CL)	49	19	30

	Test Boring	Depth (ft)	%Gravel	%Sand	%Silt	%Clay
●	B-08	14.0			41.5	
⊠	B-09	14.0	17.6	63.5	9.3	
▲	B-09	24.0			90.4	
★	B-11	14.0			96.8	
⊙	B-12	9.0			84.6	

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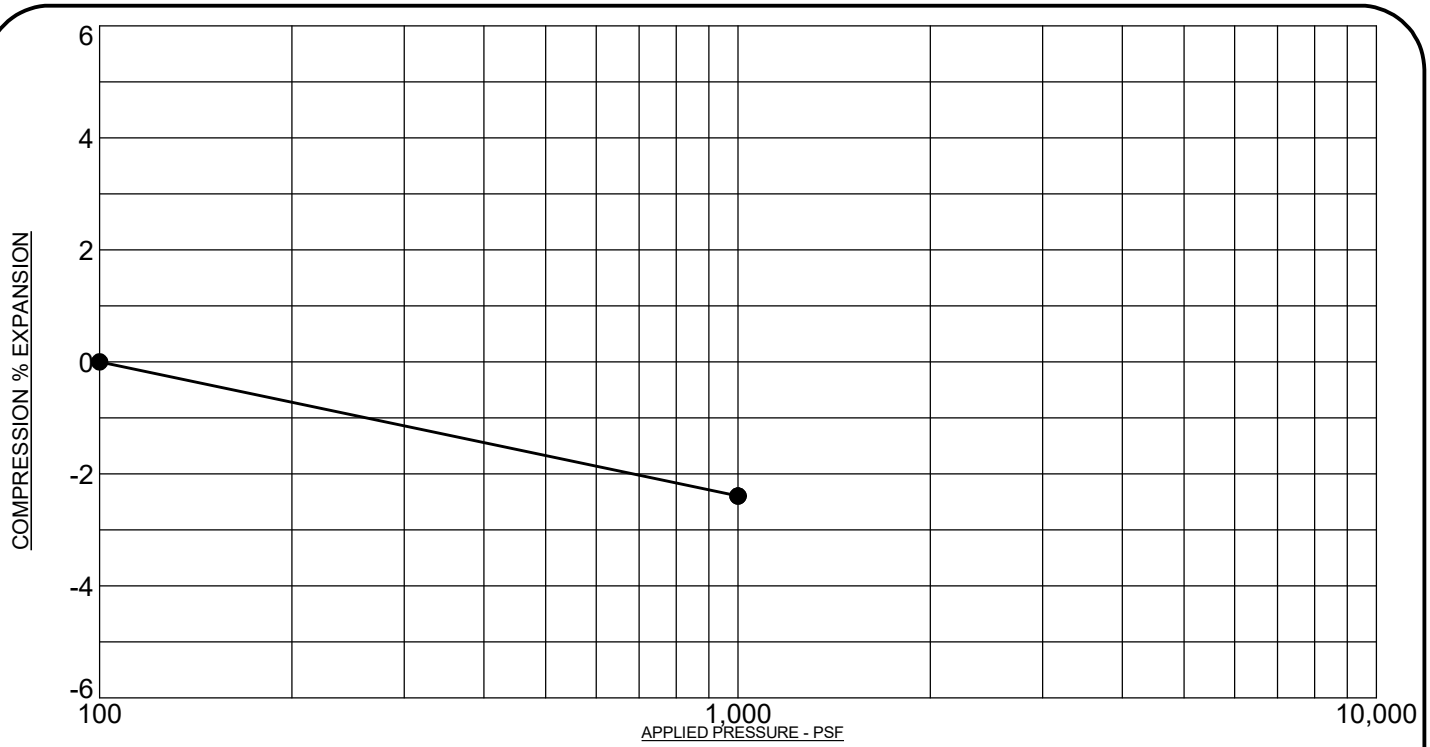
SOIL CLASSIFICATION DATA

JOB No. 185855

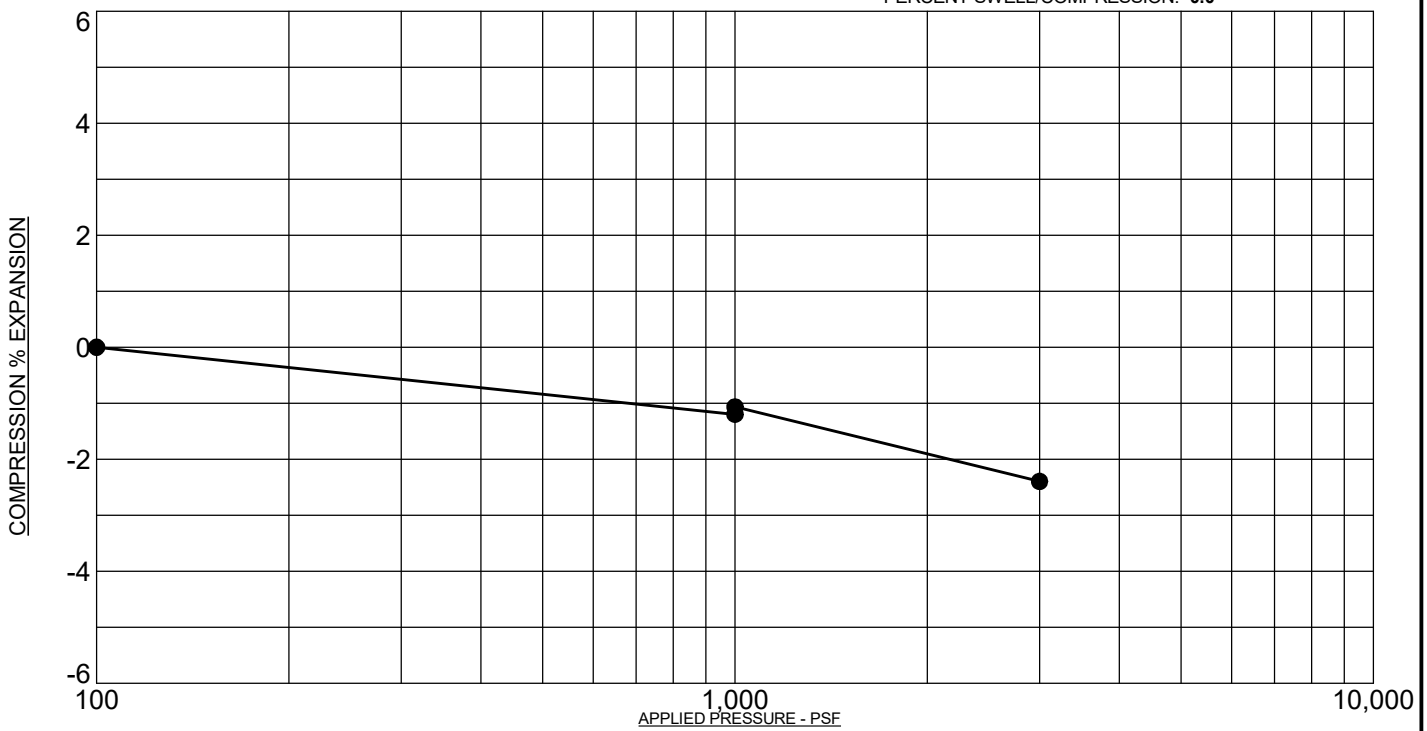
FIGURE No. 11

DATE Nov/22/2021



PROJECT: **Terry Lake Regional Sanitary Sewer Longmont, Colorado**
SAMPLE DESCRIPTION: **Silty Sand**
NOTE: SAMPLE WAS INUNDATED WITH WATER AT 1000 PSF

SAMPLE LOCATION: **B-05 @ 9 FT**
NATURAL DRY UNIT WEIGHT: **110.6 PCF**
NATURAL MOISTURE CONTENT: **21.6%**
PERCENT SWELL/COMPRESSION: **0.0**



PROJECT: **Terry Lake Regional Sanitary Sewer Longmont, Colorado**
SAMPLE DESCRIPTION: **Silty Clay**
NOTE: SAMPLE WAS INUNDATED WITH WATER AT 1000 PSF

SAMPLE LOCATION: **B-06 @ 4 FT**
NATURAL DRY UNIT WEIGHT: **113.4 PCF**
NATURAL MOISTURE CONTENT: **15.5%**
PERCENT SWELL/COMPRESSION: **0.1**

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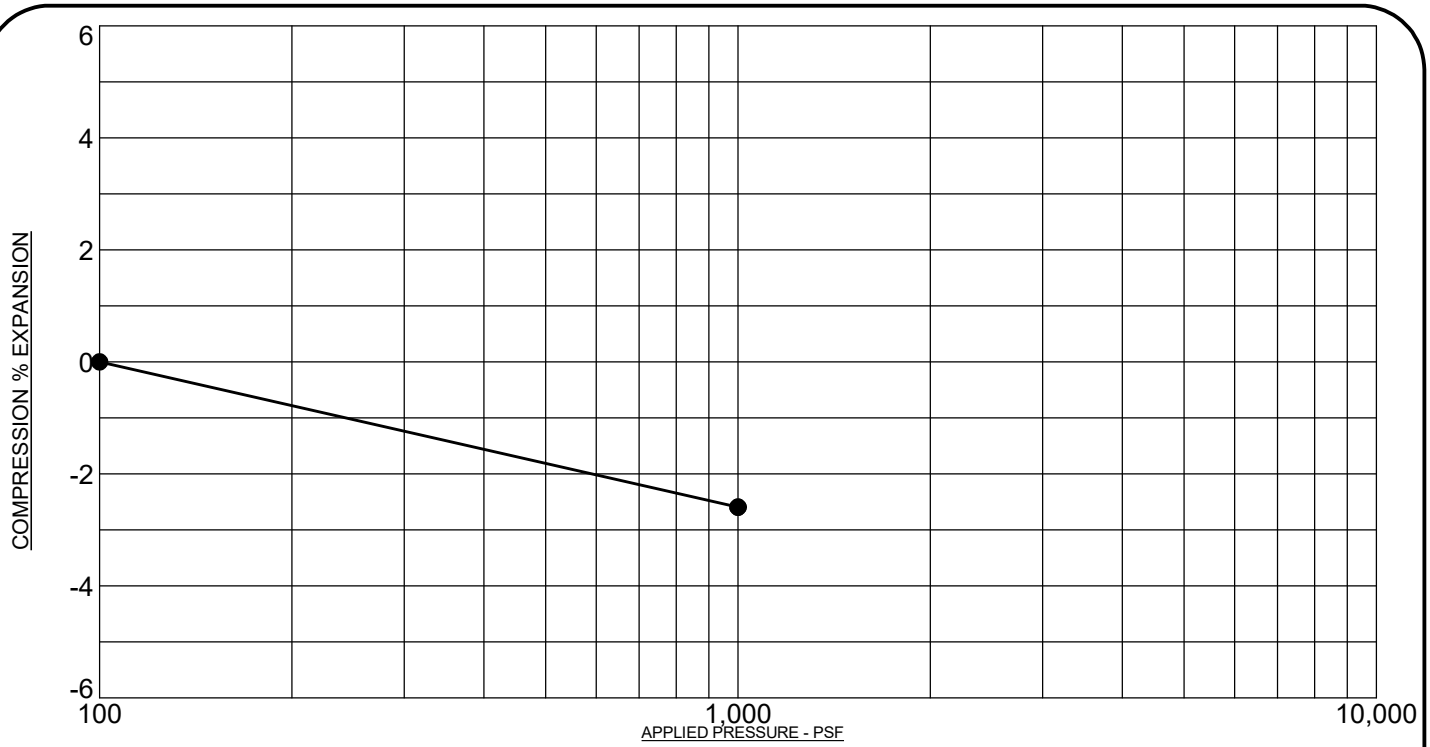
SWELL/CONSOLIDATION TEST RESULTS

JOB No. 185855

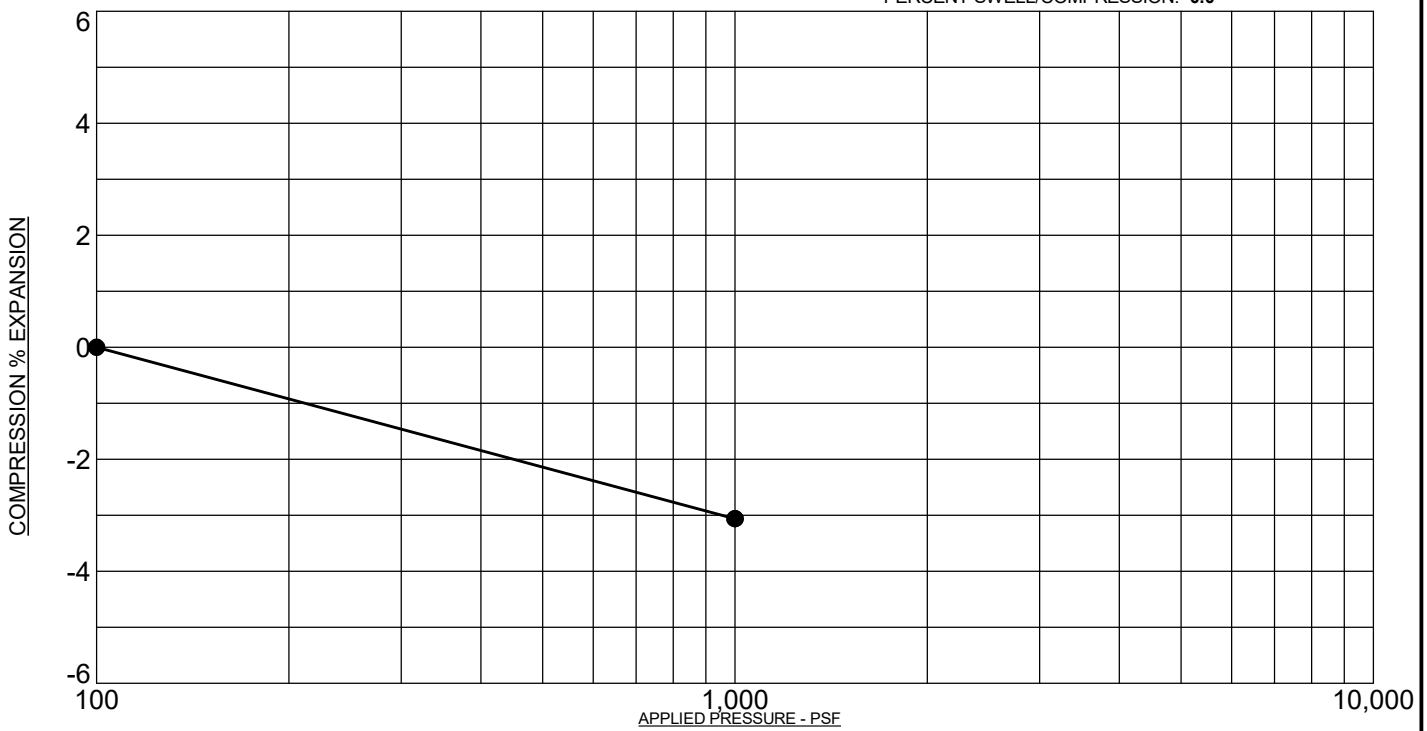
FIGURE No. 12

DATE Nov/22/2021



PROJECT: **Terry Lake Regional Sanitary Sewer Longmont, Colorado**
SAMPLE DESCRIPTION: **Silty Clay**
NOTE: SAMPLE WAS INUNDATED WITH WATER AT 1000 PSF

SAMPLE LOCATION: **B-07 @ 4 FT**
NATURAL DRY UNIT WEIGHT: **105.9 PCF**
NATURAL MOISTURE CONTENT: **18.9%**
PERCENT SWELL/COMPRESSION: **0.0**



PROJECT: **Terry Lake Regional Sanitary Sewer Longmont, Colorado**
SAMPLE DESCRIPTION: **Sandy Clay**
NOTE: SAMPLE WAS INUNDATED WITH WATER AT 1000 PSF

SAMPLE LOCATION: **B-07 @ 9 FT**
NATURAL DRY UNIT WEIGHT: **102.1 PCF**
NATURAL MOISTURE CONTENT: **22.9%**
PERCENT SWELL/COMPRESSION: **0.0**

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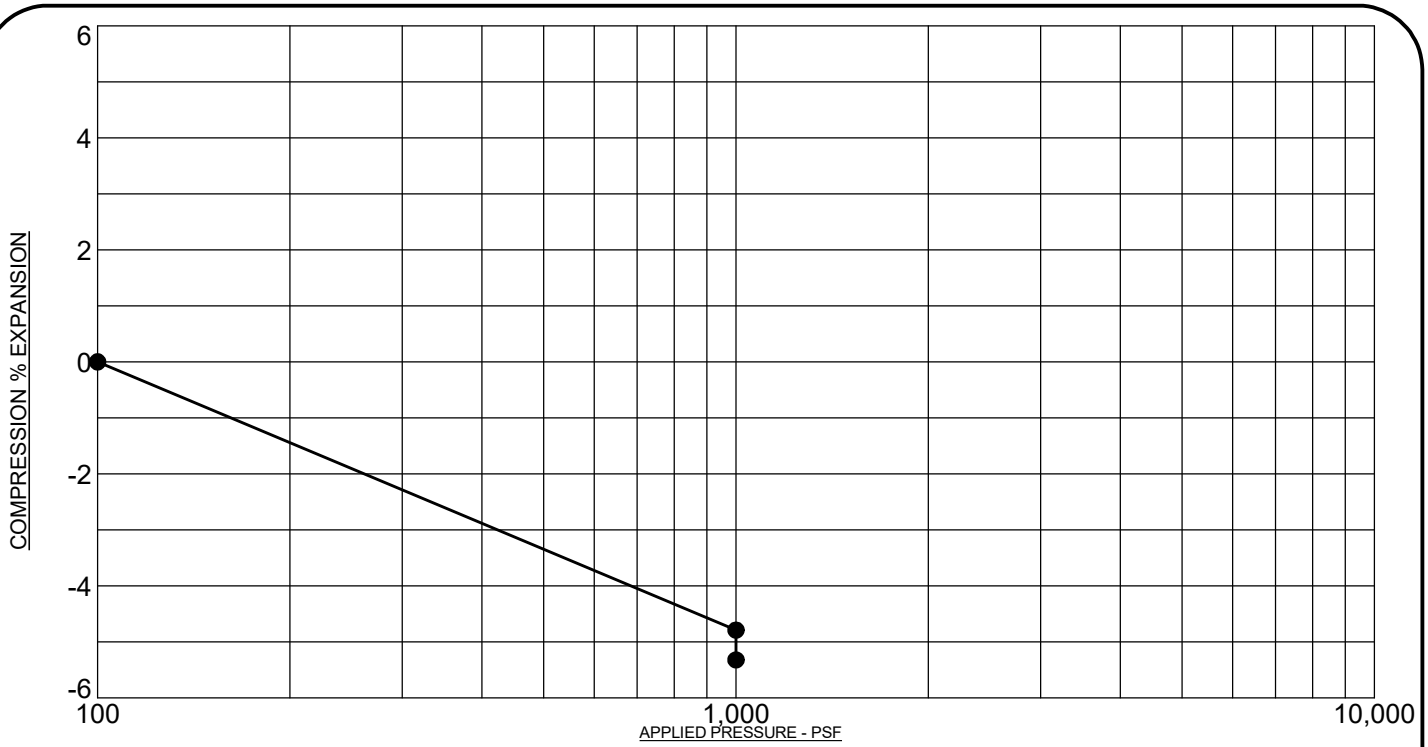
SWELL/CONSOLIDATION TEST RESULTS

JOB No. 185855

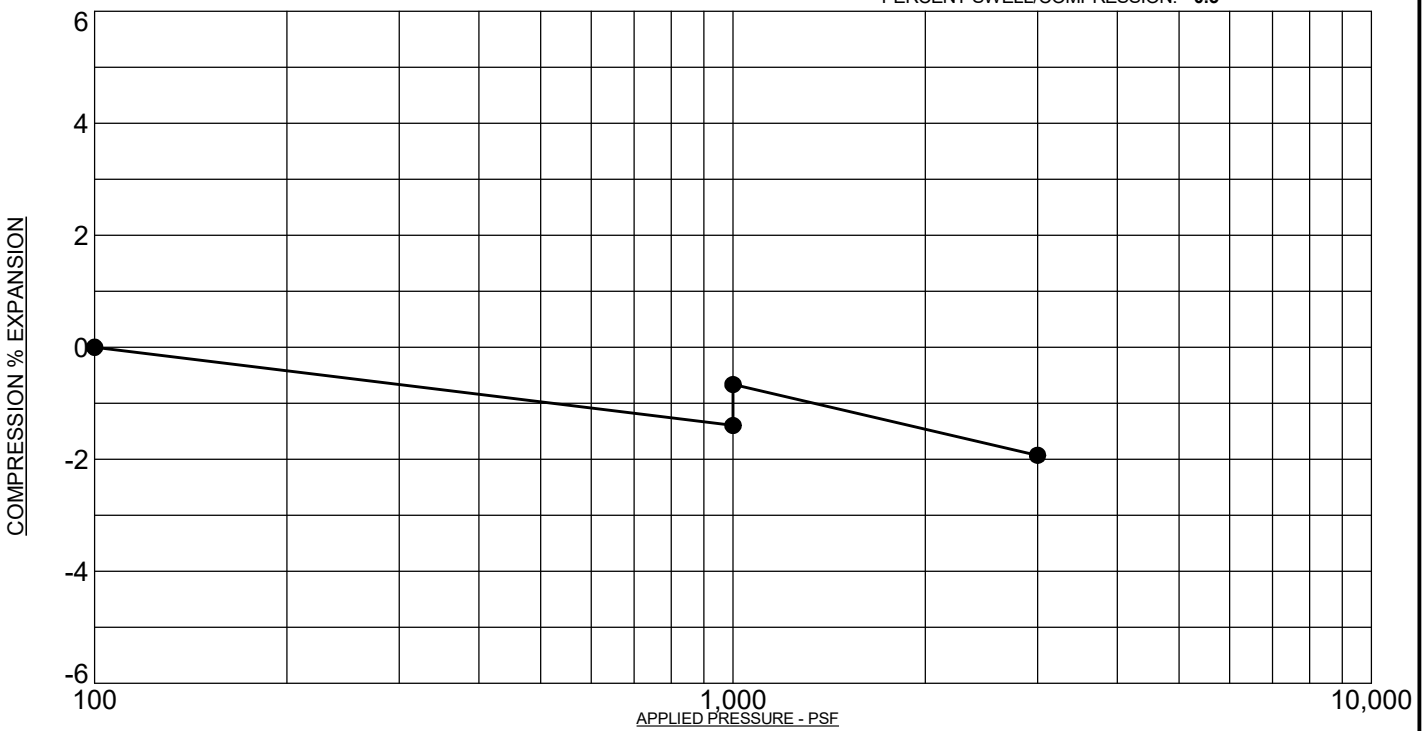
FIGURE No. 13

DATE Nov/22/2021



PROJECT: **Terry Lake Regional Sanitary Sewer Longmont, Colorado**
SAMPLE DESCRIPTION: **Sand**
NOTE: SAMPLE WAS INUNDATED WITH WATER AT 1000 PSF

SAMPLE LOCATION: **B-08 @ 9 FT**
NATURAL DRY UNIT WEIGHT: **105.9 PCF**
NATURAL MOISTURE CONTENT: **19.8%**
PERCENT SWELL/COMPRESSION: **- 0.5**



PROJECT: **Terry Lake Regional Sanitary Sewer Longmont, Colorado**
SAMPLE DESCRIPTION: **Silty Clay**
NOTE: SAMPLE WAS INUNDATED WITH WATER AT 1000 PSF

SAMPLE LOCATION: **B-09 @ 9 FT**
NATURAL DRY UNIT WEIGHT: **108.3 PCF**
NATURAL MOISTURE CONTENT: **19.8%**
PERCENT SWELL/COMPRESSION: **0.7**

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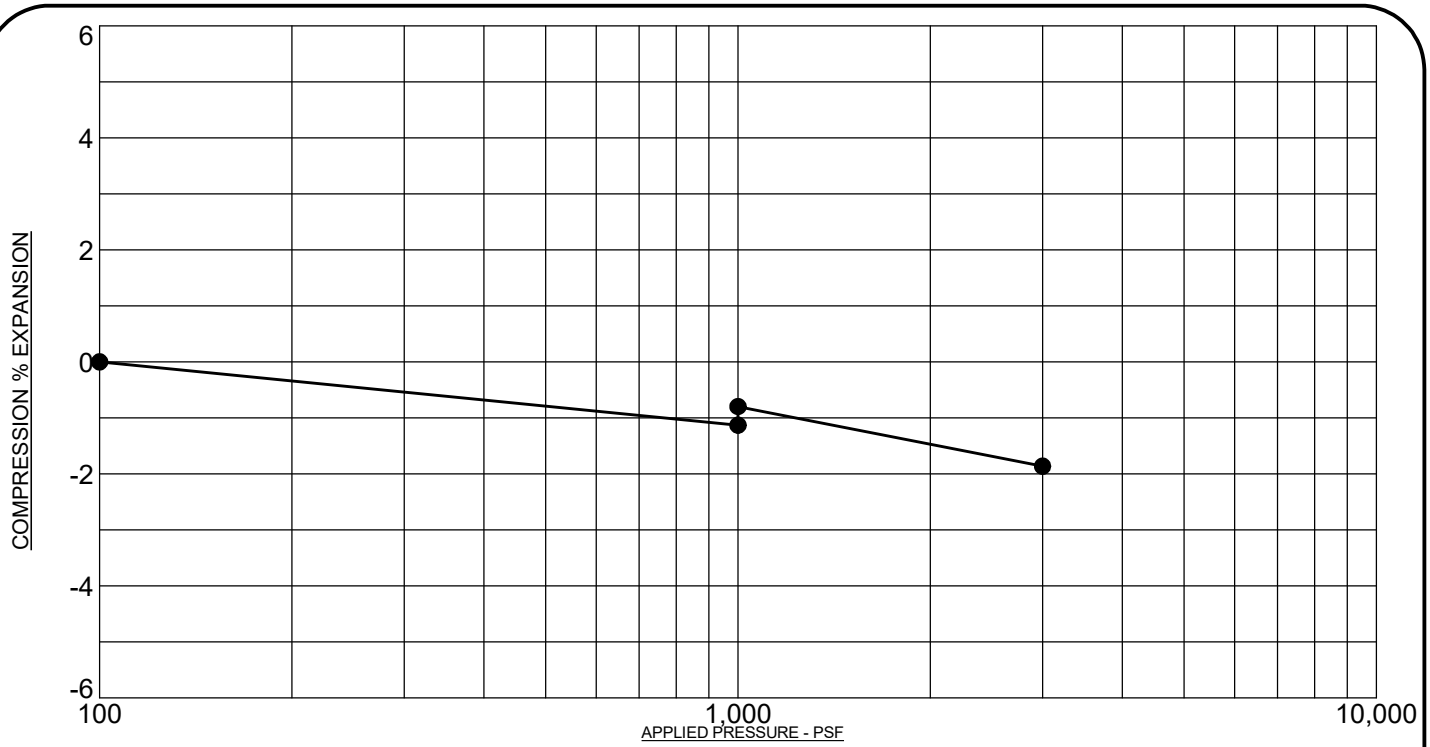
SWELL/CONSOLIDATION TEST RESULTS

JOB No. 185855

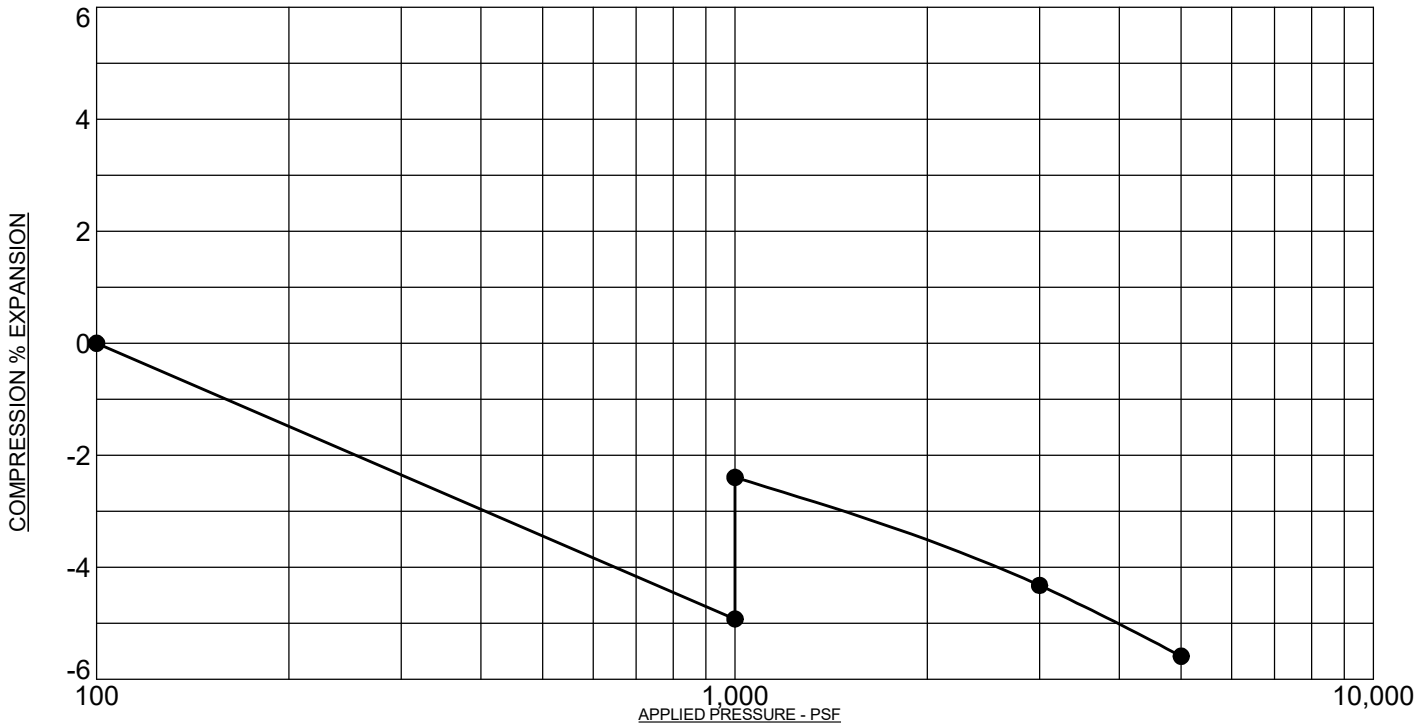
FIGURE No. 14

DATE Nov/22/2021



PROJECT: **Terry Lake Regional Sanitary Sewer Longmont, Colorado**
SAMPLE DESCRIPTION: **Claystone**
NOTE: SAMPLE WAS INUNDATED WITH WATER AT 1000 PSF

SAMPLE LOCATION: **B-11 @ 19 FT**
NATURAL DRY UNIT WEIGHT: **120.8 PCF**
NATURAL MOISTURE CONTENT: **11.8%**
PERCENT SWELL/COMPRESSION: **0.3**



PROJECT: **Terry Lake Regional Sanitary Sewer Longmont, Colorado**
SAMPLE DESCRIPTION: **Claystone**
NOTE: SAMPLE WAS INUNDATED WITH WATER AT 1000 PSF

SAMPLE LOCATION: **B-12 @ 14 FT**
NATURAL DRY UNIT WEIGHT: **123.4 PCF**
NATURAL MOISTURE CONTENT: **13.7%**
PERCENT SWELL/COMPRESSION: **2.5**

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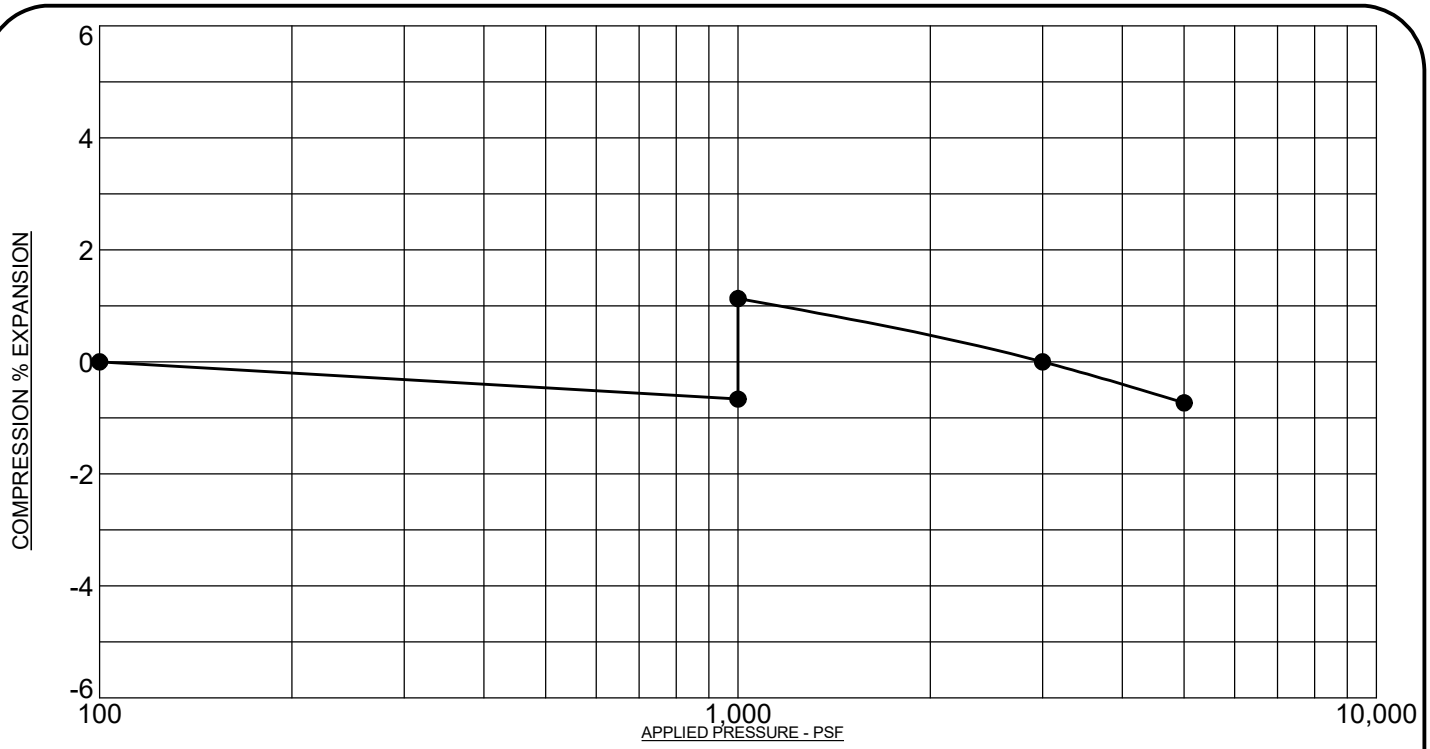
SWELL/CONSOLIDATION TEST RESULTS

JOB No. 185855

FIGURE No. 15

DATE Nov/22/2021



PROJECT: **Terry Lake Regional Sanitary Sewer Longmont, Colorado**
SAMPLE DESCRIPTION: **Claystone**
NOTE: SAMPLE WAS INUNDATED WITH WATER AT 1000 PSF

SAMPLE LOCATION: **B-12 @ 24 FT**
NATURAL DRY UNIT WEIGHT: **122.8 PCF**
NATURAL MOISTURE CONTENT: **12.7%**
PERCENT SWELL/COMPRESSION: **1.8**

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SWELL/CONSOLIDATION TEST RESULTS

JOB No. 185855

FIGURE No. 16

DATE Nov/22/2021

NORTHERN ENGINEERING

Date: 2/4/2022
Worksheet Prepared by: S. Hallauer

THIS IS AN ENGINEER'S COST ESTIMATE ONLY. THIS IS NOT A BID.

Terry Lake Regional Sanitary Sewer

Public Improvement Agreement - Budgeting Worksheet

Northern No. 911-016

Item No.	Item Description	Unit	Quantity	Unit Cost	Extended Cost
Removals/Demolition					
	Strip and Respread Topsoil	SY	18800	$0.50	$9,400.00
	Sawcut Roadway - Gay Street	LF	65	$10.00	$646.00
	Remove and Replace Fence	LF	30	$10.00	$300.00
	Demolish Existing Asphalt Roadway - Gay Street	SY	38	$5.00	$189.86
	Remove Tree	EA	16	$650.00	$10,400.00
	Remove Building and Concrete Pad	LS	6	$16,000.00	$96,000.00
	SUBTOTAL				**$116,935.86**
Sanitary Sewer					
	10" Sewer, 8-12' Depth	LF	1407	$55.00	$77,357.50
	12" Sewer, 8-12' Depth	LF	1600	$85.00	$136,000.00
	15" Sewer, 8-12' Depth	LF	2565	$139.00	$356,535.00
	Manhole, 48"	EA	16	$4,000.00	$64,000.00
	Boring Under Wetland Area	LF	30	$1,200.00	$36,000.00
	Wetland Bore 24" Casing	LF	30	$2,000.00	$60,000.00
	Dewatering/Trench Stabilization	LF	1687	$125.00	$210,875.00
	Tie into Existing Sanitary Stub	EA	1	$1,000.00	$1,000.00
	SUBTOTAL				**$941,767.50**
Drainage Infrastructure					
	Remove and Replace 12" CMP Culvert	EA	1	$950.00	$950.00
	Remove and Replace 15" CMP Culvert	EA	3	$1,100.00	$3,300.00
	Remove and Replace 18" CMP Culvert	EA	1	$1,200.00	$1,200.00
	Remove and Replace 30" CMP Culvert	EA	1	$2,500.00	$2,500.00
	SUBTOTAL				**$7,950.00**
General Conditions					
	Contingency			10.00%	$106,665.34
	Traffic Control	LS	1	$22,000.00	$22,000.00
	Mobilization	LS	1	$54,000.00	$54,000.00
	Surveying	LS	1	$16,000.00	$16,000.00
	Erosion Control	LS	1	$55,000.00	$55,000.00
	Pothole Existing Utilties	LS	1	$8,000.00	$8,000.00
	SUBTOTAL				**$261,665.34**
	TOTAL - Terry Lake Regional Sanitary Sewer				**$1,328,318.69**

Assumptions: **General Items**

Sanitary Sewer: Approximately 30% of sanitary sewer assumed to need dewatering. Groundwater varies in the area.

Additional Items:

Unit Pricing: Unit pricing shall not include a built in contingency. A contingency line item has been provided at 10%.

Notes: This quantity takeoff is based on the Terry Regional Sanitary Sewer construction plans dated 02.04.22

This is not a bid. Cost estimate shall be provided by contractor.

03892088 06/14/2021 09:19 AM
RF: $43.00 DF: $0.00 Page: 1 of 7
Electronically recorded in Boulder County Colorado. Recorded as received.

CORRECTED EASEMENT AGREEMENT

THIS EASEMENT AGREEMENT is made this 20th day of May, 2021, by and between PUMA 66 INVESTORS, LLLP ("Grantor"), whose mailing address is 4100 E. Mississippi Avenue, Suite 500, Denver, Colorado 80246 and the City of Longmont, Colorado, a municipal corporation ("Grantee"), whose mailing address is 350 Kimbark Street, Longmont, Colorado 80501.

RECITALS

The Parties entered into an Easement Agreement on October 30, 2020, which was recorded in the office of the Boulder County Clerk and Recorder on March 11, 2021 at Reception No. 03866800 ("Easement Agreement"). Exhibit "A" to the Easement Agreement contains a scrivener's error, which this Corrected Easement Agreement is intended to correct the error and replace the Easement Agreement in its entirety.

AGREEMENT

FOR GOOD AND VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, the parties agree as follows:

1. That the Grantor has granted, sold and conveyed, and by this Easement Agreement does grant, sell, convey and confirm to the Grantee, its successors and assigns, forever, a permanent non-exclusive easement on and under the land described in Exhibit A ("Easement"), attached hereto and incorporated herein by this reference, located in Boulder County, Colorado, for the purposes of:

1.1 Surveying, locating, installing, constructing, using, operating, maintaining, inspecting, repairing, altering, removing, and replacing a sanitary sewer line, in whole or in part, and all necessary subsurface and surface appurtenances;

1.2 Marking the location of the Easement, and any improvements, by suitable markers set and maintained in the ground at locations which shall not interfere with such reasonable use as Grantor shall make of the Easement under the terms of this Easement Agreement; and

1.3 Right of ingress and egress over and on the lands described in Exhibit A to enforce the rights, terms and conditions given by this Easement Agreement.

2. That the Grantor reserves the right to use and occupy the Easement for any lawful purpose consistent with the rights and privileges granted herein which will not interfere with or endanger any of the Grantee's rights or improvements on or under the Easement or Grantee's use thereof, provided that Grantor may construct or allow the construction of paving or landscaping on or under the Easement but shall not construct or allow the construction of any building, structure, or other improvement on or under the Easement, or take any action which would impair or in any way modify the improvements or lateral or subjacent support for the improvements, without obtaining

the specific written permission of the Grantee, not to be unreasonably withheld or delayed, except as agreed upon by the parties in a final subdivision plat for the land described in Exhibit A.

3. That the Grantor covenants and agrees to cause the Easement area and any improvements installed thereon by the Grantor, but not including any improvements installed by the Grantee, to be maintained and kept, at its sole cost and expense, in reasonably good condition and state of repair. If it shall be necessary to disturb the surface of the Easement Property for any of the purposes listed herein, the Grantee shall restore the ground surface, including any authorized paving and any appurtenances, except as may be necessary to accommodate any of Grantee's improvements, as near as practical to their original condition prior to any construction, within twelve (12) months, unless Grantor and Grantee mutually agree in writing otherwise.

4. The Grantor agrees to indemnify and hold harmless the Grantee and its officers and employees from any and all suits, claims, damages, liability or court awards, including costs and attorney fees that are or may be awarded as a result of any loss, injury or damage sustained or claimed to have been sustained by anyone in connection with or arising from Grantor's negligent or willful misconduct relating to Grantor's use, maintenance, or operation of the Easement area or any or all of its improvements installed thereon.

5. That the obligations of the Grantor and Grantee contained in this Easement Agreement shall constitute a covenant which shall run with and burden the land, shall bind all future owners of the land, and shall be enforceable against the Grantor, and the Grantor successors and assigns by the Grantee, and its successors and assigns. In the event that Grantee abandons the use of the Easement for a period of two or more years, Grantor shall file an application for vacation of the Easement with the City pursuant to the City's Land Development Code, which said vacation must be approved by City Council by ordinance.

6. Grantee shall not fence or otherwise enclose the Easement except during periods of construction and repair. Grantee, at all times, shall provide good, safe and adequate vehicular access for all contractors, subcontractors, agents, or employees of Grantor, across the Easement during any period of Grantee's construction, maintaining, or repairing the sanitary sewer located in the Easement.

7. That the Grantor represents that it has the lawful authority to grant this easement and make and enforce the covenants and promises herein.

8. Grantor has provided Grantee with the title insurance commitment, and shall supplant it with a title insurance policy prior to execution of this Easement, insuring Grantee's rights in and to the Easement, subject to the exceptions listed in the title commitment. No representations, warranties, or certifications expressed or implied shall exist as between the parties, except as specifically stated in this Agreement.

9. No representations, warranties, or certifications express or implied shall exist as between the parties, except as specially stated in this Easement Agreement.

10. The provisions of this Easement Agreement shall be construed as to their fair meaning, and not for or against any party based upon any attribution to such party of the source of the language in question.

11. None of the terms or conditions in this Easement Agreement shall give or allow any claim, benefit, or right of action by any third person not a party hereto. Any person other than the Grantee or the Grantor receiving services or benefits under this Easement Agreement shall be only an incidental beneficiary.

12. This Easement Agreement is an integration of the entire understanding of the parties with respect to the matters stated herein. The parties shall only amend this Easement Agreement in writing with the proper official signatures attached hereto.

13. No waiver of any breach or default under this Easement Agreement shall be a waiver of any other or subsequent breach or default.

14. This Easement Agreement shall be governed and construed in accordance with the laws of the State of Colorado.

15. Upon full execution hereof, the Grantee shall record this Agreement in the real property records of Boulder County, Colorado.

IN WITNESS WHEREOF, the parties have executed this Easement Agreement as of the date first above written.

GRANTOR:
PUMA 66 INVESTORS, LLLP
a Colorado limited liability limited partnership
by: PUMA INVESTORS III, LLC, General Partner

By: Lawrence P. Jacobsen
Title: President

State of Colorado)
County of Arapahoe) ss:

The foregoing instrument was acknowledged before me by Lawrence P. Jacobsen
(Name of party signing)

a general partner/limited partner/agent (select one) on behalf of PUMA INVESTORS III, LLC, GENERAL PARTNER OF PUMA 66 INVESTORS, LLLP, a limited liability limited partnership, this 26 day of May, 2021.

Witness my hand and official Seal.

My Commission expires 12/31/23

PATRICK JOHN SCHMITZ
NOTARY PUBLIC
STATE OF COLORADO
Notary ID 20154049532
My Commission Expires December 31, 2023

Notary Public

GRANTEE:
CITY OF LONGMONT
a municipal corporation

Dale Rademacher
Deputy City Manager

APPROVED AS TO FORM:

Assistant City Attorney

CA File: 20-000672

State of Colorado_____)
) ss.
County of Boulder_____)

The foregoing instrument was acknowledged before me this 4th day of June, 2021, by Dale Rademacher as Deputy City Manager for the City of Longmont.

Witness my hand and official seal.

Notary Public

My commission expires 05/29/2022.

HEATHER MCINTYRE
NOTARY PUBLIC - STATE OF COLORADO
NOTARY ID 20184022370
MY COMMISSION EXPIRES MAY 29, 2022

EXHIBIT A

PROPERTY DESCRIPTION

Puma 66 Investors, LLLP
Sanitary Sewer Easement

A parcel of land for easement purposes being a portion of the South Half of the Southeast Quarter (S1/2SE1/4) of Section Twenty-one (21), Township Three North (T.3N.), Range Sixty-nine West (R.69W.), Sixth Principal Meridian (6th P.M.), City of Longmont, County of Boulder, State of Colorado, more particularly described as follows:

COMMENCING at the Center-South Sixteenth Corner of Sections 21 and assuming the North line of the Southwest Quarter of the Southeast Quarter of Section 21 as bearing South 89°42'47" East a distance of 1329.82 feet with all bearings contained herein relative thereto;

THENCE South 00°00'06" East along the West line of the South Half of the Southeast Quarter of said Section 21 a distance of 10.00 feet to a line parallel with and 10.00 feet Southerly of the North line of the Southwest Quarter of the Southeast Quarter of said Section 21 and to the **POINT OF BEGINNING**;

THENCE South 89°42'47" East along said parallel line a distance of 1659.85 feet to the East line of the West 20 Rods of the Southeast Quarter of the Southeast Quarter of said Section 21;
THENCE South 00°05'03" East along the East line of said West 20 Rods of the Southeast Quarter of the Southeast Quarter of Section 21 a distance of 1204.24 feet to the Northerly Right of Way line of Ute Highway (State Highway 66);
THENCE South 89°50'08" West along said Northerly Right of Way line a distance of 15.00 feet to a line parallel with and 15.00 feet Westerly of said East line of the West 20 Rods of the Southeast Quarter of the Southeast Quarter of Section 21;
THENCE North 00°05'03" West along said parallel line a distance of 1174.36 feet to a line parallel with and 40.00 feet Southerly of the North line of the Southwest Quarter of the Southeast Quarter said Section 21;
THENCE North 89°42'47" West along said parallel line a distance of 1644.89 feet to the West line of the Southwest Quarter of the Southeast Quarter of said Section 21;
THENCE North 00°00'06" West along said West line a distance of 30.00 to a line parallel with and 10.00 feet Southerly of the North line of the Southwest Quarter of the Southeast Quarter of said Section 21 and to the **POINT OF BEGINNING**;

Said described easement contains a total of 67,408 sq. ft or 1.55 acre, more or less.

SURVEYOR'S CERTIFICATE

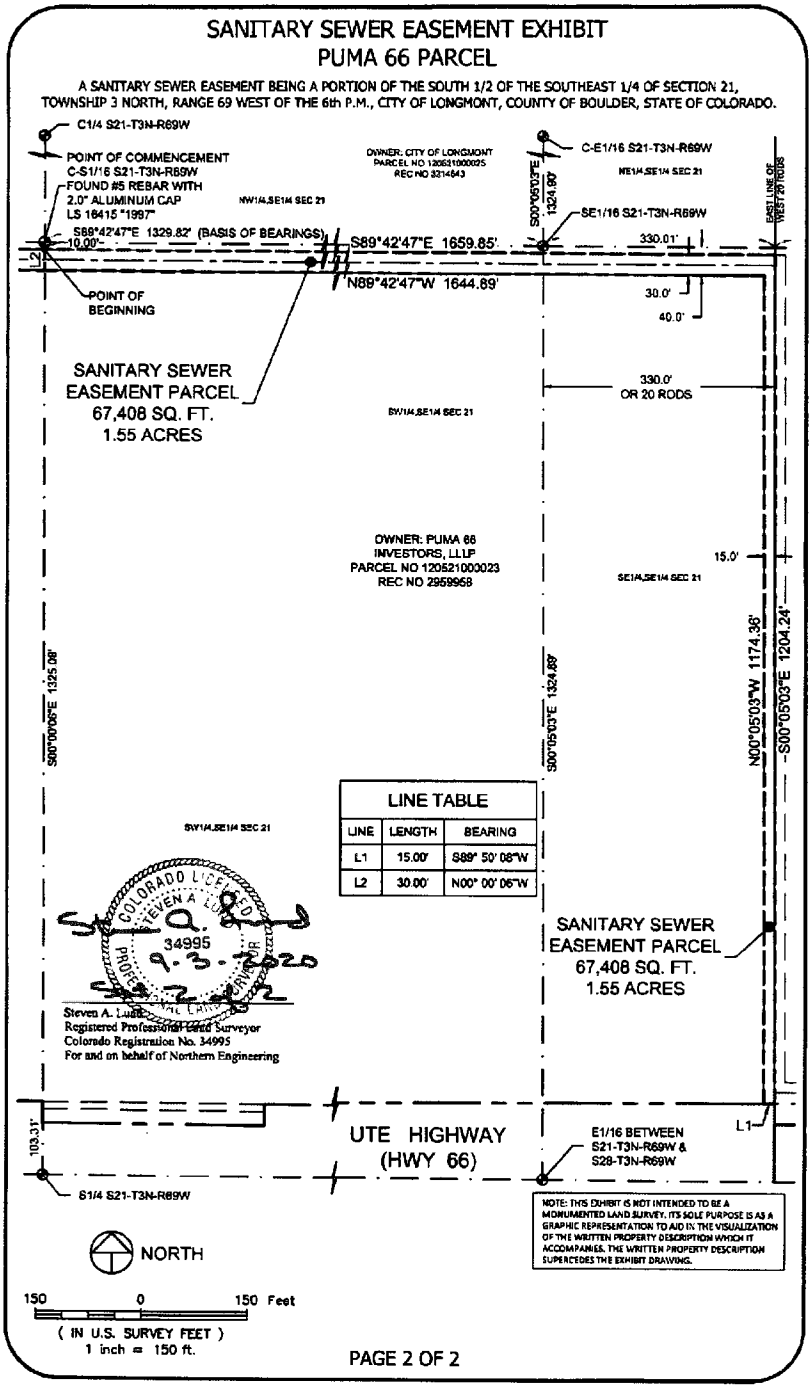
I, Steven A. Lund, a Colorado Registered Professional Land Surveyor do hereby state that this Property Description was prepared under my personal supervision and checking, and that it is true and correct to the best of my knowledge and belief.

COLORADO LICENSED
STEVEN A. LUND
34995
PROFESSIONAL ENGINEER
9-3-2020

Steven A. Lund on behalf of Northern Engineering
Colorado Registered Professional
Land Surveyor #34995

NORTHERN ENGINEERING
820 8th Street
Greeley, Colorado 80631
(970) 488-1113

S:\Survey Jobs\911-916\Descriptions\PUMA 66 INVESTORS LLP_SS EASEMENT_2018-10-09.Docx


SANITARY SEWER EASEMENT EXHIBIT
PUMA 66 PARCEL
A SANITARY SEWER EASEMENT BEING A PORTION OF THE SOUTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 21, TOWNSHIP 3 NORTH, RANGE 69 WEST OF THE 6th P.M., CITY OF LONGMONT, COUNTY OF BOULDER, STATE OF COLORADO.
C1/4 S21-T3N-R69W
POINT OF COMMENCEMENT
C-S1/16 S21-T3N-R69W
FOUND #5 REBAR WITH
2.0" ALUMINUM CAP
LS 16415 "1997"
S89°42'47"E 1329.82' (BASIS OF BEARINGS)
10.00'
POINT OF BEGINNING
OWNER: CITY OF LONGMONT
PARCEL NO 120521000025
REC NO 3214543
C-E1/16 S21-T3N-R69W
S00°05'03"E 1324.89'
SE1/16 S21-T3N-R69W
330.01'
EAST LINE OF WEST 20 RODS
S89°42'47"E 1659.85'
N89°42'47"W 1644.89'
30.0'
40.0'
330.0' OR 20 RODS
SANITARY SEWER EASEMENT PARCEL
67,408 SQ. FT.
1.55 ACRES
OWNER: PUMA 66 INVESTORS, LLLP
PARCEL NO 120521000023
REC NO 2959958
15.0'
S00°00'06"E 1325.06'
S00°05'03"E 1324.89'
N00°05'03"W 1174.36'
S00°05'03"E 1204.24'
LINE TABLE
LINE | LENGTH | BEARING
L1 | 15.00' | S89° 50' 08"W
L2 | 30.00' | N00° 00' 06"W
COLORADO LICENSED
STEVEN A. LUDE
34995
PROFESSIONAL LAND SURVEYOR
9-3-2020
Steven A. Lude
Registered Professional Land Surveyor
Colorado Registration No. 34995
For and on behalf of Northern Engineering
SANITARY SEWER EASEMENT PARCEL
67,408 SQ. FT.
1.55 ACRES
UTE HIGHWAY (HWY 66)
E1/16 BETWEEN S21-T3N-R69W & S28-T3N-R69W
103.31'
S1/4 S21-T3N-R69W
NOTE: THIS EXHIBIT IS NOT INTENDED TO BE A MONUMENTED LAND SURVEY. ITS SOLE PURPOSE IS AS A GRAPHIC REPRESENTATION TO AID IN THE VISUALIZATION OF THE WRITTEN PROPERTY DESCRIPTION WHICH IT ACCOMPANIES. THE WRITTEN PROPERTY DESCRIPTION SUPERCEDES THE EXHIBIT DRAWING.
NORTH
150 0 150 Feet
(IN U.S. SURVEY FEET)
1 inch = 150 ft.
PAGE 2 OF 2

03866800 03/11/2021 11:15 AM
RF: $53.00 DF: $0.00 Page: 1 of 9
Electronically recorded in Boulder County Colorado. Recorded as received.

EASEMENT AGREEMENT

THIS EASEMENT AGREEMENT is made this 30th day of October, 2020, by and between PUMA 66 INVESTORS, LLLP ("Grantor"), whose mailing address is 4100 E. Mississippi Avenue, Suite 500, Denver, Colorado 80246 and the City of Longmont, Colorado, a municipal corporation ("Grantee"), whose mailing address is 350 Kimbark Street, Longmont, Colorado 80501.

FOR GOOD AND VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, the parties agree as follows:

1. That the Grantor has granted, sold and conveyed, and by this Easement Agreement does grant, sell, convey and confirm to the Grantee, its successors and assigns, forever, a permanent non-exclusive easement on and under the land described in Exhibit A ("Easement"), attached hereto and incorporated herein by this reference, located in Boulder County, Colorado, for the purposes of:

1.1 Surveying, locating, installing, constructing, using, operating, maintaining, inspecting, repairing, altering, removing, and replacing a sanitary sewer line, in whole or in part, and all necessary subsurface and surface appurtenances;

1.2 Marking the location of the Easement, and any improvements, by suitable markers set and maintained in the ground at locations which shall not interfere with such reasonable use as Grantor shall make of the Easement under the terms of this Easement Agreement; and

1.3 Right of ingress and egress over and on the lands described in Exhibit A to enforce the rights, terms and conditions given by this Easement Agreement.

2. That the Grantor reserves the right to use and occupy the Easement for any lawful purpose consistent with the rights and privileges granted herein which will not interfere with or endanger any of the Grantee's rights or improvements on or under the Easement or Grantee's use thereof, provided that Grantor may construct or allow the construction of paving or landscaping on or under the Easement but shall not construct or allow the construction of any building, structure, or other improvement on or under the Easement, or take any action which would impair or in any way modify the improvements or lateral or subjacent support for the improvements, without obtaining the specific written permission of the Grantee, not to be unreasonably withheld or delayed, except as agreed upon by the parties in a final subdivision plat for the land described in Exhibit A.

3. That the Grantor covenants and agrees to cause the Easement area and any improvements installed thereon by the Grantor, but not including any improvements installed by the Grantee, to be maintained and kept, at its sole cost and expense, in reasonably good condition and state of repair. If it shall be necessary to disturb the surface of the Easement Property for any of the purposes listed herein, the Grantee shall restore the ground surface, including any authorized paving and any appurtenances, except as may be necessary to accommodate any of Grantee's

improvements, as near as practical to their original condition prior to any construction, within twelve (12) months, unless Grantor and Grantee mutually agree in writing otherwise.

4. The Grantor agrees to indemnify and hold harmless the Grantee and its officers and employees from any and all suits, claims, damages, liability or court awards, including costs and attorney fees that are or may be awarded as a result of any loss, injury or damage sustained or claimed to have been sustained by anyone in connection with or arising from Grantor's negligent or willful misconduct relating to Grantor's use, maintenance, or operation of the Easement area or any or all of its improvements installed thereon.

5. That the obligations of the Grantor and Grantee contained in this Easement Agreement shall constitute a covenant which shall run with and burden the land, shall bind all future owners of the land, and shall be enforceable against the Grantor, and the Grantor successors and assigns by the Grantee, and its successors and assigns. In the event that Grantee abandons the use of the Easement for a period of two or more years, Grantor shall file an application for vacation of the Easement with the City pursuant to the City's Land Development Code, which said vacation must be approved by City Council by ordinance.

6. Grantee shall not fence or otherwise enclose the Easement except during periods of construction and repair. Grantee, at all times, shall provide good, safe and adequate vehicular access for all contractors, subcontractors, agents, or employees of Grantor, across the Easement during any period of Grantee's construction, maintaining, or repairing the sanitary sewer located in the Easement.

7. That the Grantor represents that it has the lawful authority to grant this easement and make and enforce the covenants and promises herein.

8. Grantor has provided Grantee with the title insurance commitment, and shall supplant it with a title insurance policy prior to execution of this Easement, insuring Grantee's rights in and to the Easement, subject to the exceptions listed in the title commitment. No representations, warranties, or certifications expressed or implied shall exist as between the parties, except as specifically stated in this Agreement.

9. No representations, warranties, or certifications express or implied shall exist as between the parties, except as specially stated in this Easement Agreement.

10. The provisions of this Easement Agreement shall be construed as to their fair meaning, and not for or against any party based upon any attribution to such party of the source of the language in question.

11. None of the terms or conditions in this Easement Agreement shall give or allow any claim, benefit, or right of action by any third person not a party hereto. Any person other than the Grantee or the Grantor receiving services or benefits under this Easement Agreement shall be only an incidental beneficiary.

12. This Easement Agreement is an integration of the entire understanding of the parties with respect to the matters stated herein. The parties shall only amend this Easement Agreement in writing with the proper official signatures attached hereto.

13. No waiver of any breach or default under this Easement Agreement shall be a waiver of any other or subsequent breach or default.

14. This Easement Agreement shall be governed and construed in accordance with the laws of the State of Colorado.

15. Upon full execution hereof, the Grantee shall record this Agreement in the real property records of Boulder County, Colorado.

IN WITNESS WHEREOF, the parties have executed this Easement Agreement as of the date first above written.

GRANTOR:
PUMA 66 INVESTORS, LLLP
a Colorado limited liability limited partnership
By: Puma Investors III, LLC
Its: General Partner

By: Lawrence P. Jacobsson
Title: President

State of Colorado)
) ss:
County of Arapahoe)

The foregoing instrument was acknowledged before me by Lawrence Jacobsson,
(Name of party signing)

a general partner/limited partner/agent (select one) on behalf of Puma Investors III, LLC,
General Partner of Puma 66 Investors, LLLP (Name of limited liability limited partnership)
a limited liability limited partnership, this 30th day of October, 2020.

Witness my hand and official Seal.

My Commission expires 8/12/24.

Notary Public

BLAKE AMEN
Notary Public
State of Colorado
Notary ID # 20204027915
My Commission Expires 08-12-2024

GRANTEE:
CITY OF LONGMONT
a municipal corporation

Dale Rademacher
Deputy City Manager

APPROVED AS TO FORM:

Assistant City Attorney

CA File: 20-000672

State of Colorado_____)
) ss.
County of Boulder_____)

The foregoing instrument was acknowledged before me this 3rd day of March, 2021, by Dale F. Rademacher as Deputy City Manager for the City of Longmont.

Witness my hand and official seal.

Heather N. McIntyre
Notary Public

HEATHER MCINTYRE
NOTARY PUBLIC - STATE OF COLORADO
NOTARY ID 20184022370
MY COMMISSION EXPIRES MAY 29, 2022

My commission expires 05/29/2022.

EXHIBIT A

PROPERTY DESCRIPTION

Puma 66 Investors, LLLP
Sanitary Sewer Easement

A parcel of land for easement purposes being a portion of the South Half of the Southeast Quarter (S1/2SE1/4) of Section Twenty-one (21), Township Three North (T.3N.), Range Sixty-nine West (R.69W.), Sixth Principal Meridian (6th P.M.), City of Longmont, County of Boulder, State of Colorado, more particularly described as follows:

COMMENCING at the Center-South Sixteenth Corner of Sections 21 and assuming the North line of the Southwest Quarter of the Southeast Quarter of Section 21 as bearing South 89°42'47" East a distance of 1329.82 feet with all bearings contained herein relative thereto;

THENCE South 00°00'06" East along the West line of the South Half of the Southeast Quarter of said Section 21 a distance of 10.00 feet to a line parallel with and 10.00 feet Southerly of the North line of the Southwest Quarter of the Southeast Quarter of said Section 21 and to the **POINT OF BEGINNING**;

THENCE South 89°42'47" East along said parallel line a distance of 1659.85 feet to the East line of the West 20 Rods of the Southeast Quarter of the Southeast Quarter of said Section 21;
THENCE South 00°05'03" East along the East line of said West 20 Rods of the Southeast Quarter of the Southeast Quarter of Section 21 a distance of 1204.24 feet to the Northerly Right of Way line of Ute Highway (State Highway 66);
THENCE South 89°50'08" West along said Northerly Right of Way line a distance of 15.00 feet to a line parallel with and 15.00 feet Westerly of said East line of the West 20 Rods of the Southeast Quarter of the Southeast Quarter of Section 21;
THENCE North 00°05'03" West along said parallel line a distance of 1174.36 feet to a line parallel with and 40.00 feet Southerly of the North line of the Southwest Quarter of the Southeast Quarter said Section 21;
THENCE North 89°42'47" West along said parallel line a distance of 1644.89 feet to the West line of the Southwest Quarter of the Southeast Quarter of said Section 21;
THENCE North 00°00'06" West along said West line a distance of 30.00 to a line parallel with and 10.00 feet Southerly of the North line of the Southwest Quarter of the Southeast Quarter of said Section 21 and to the **POINT OF BEGINNING**;

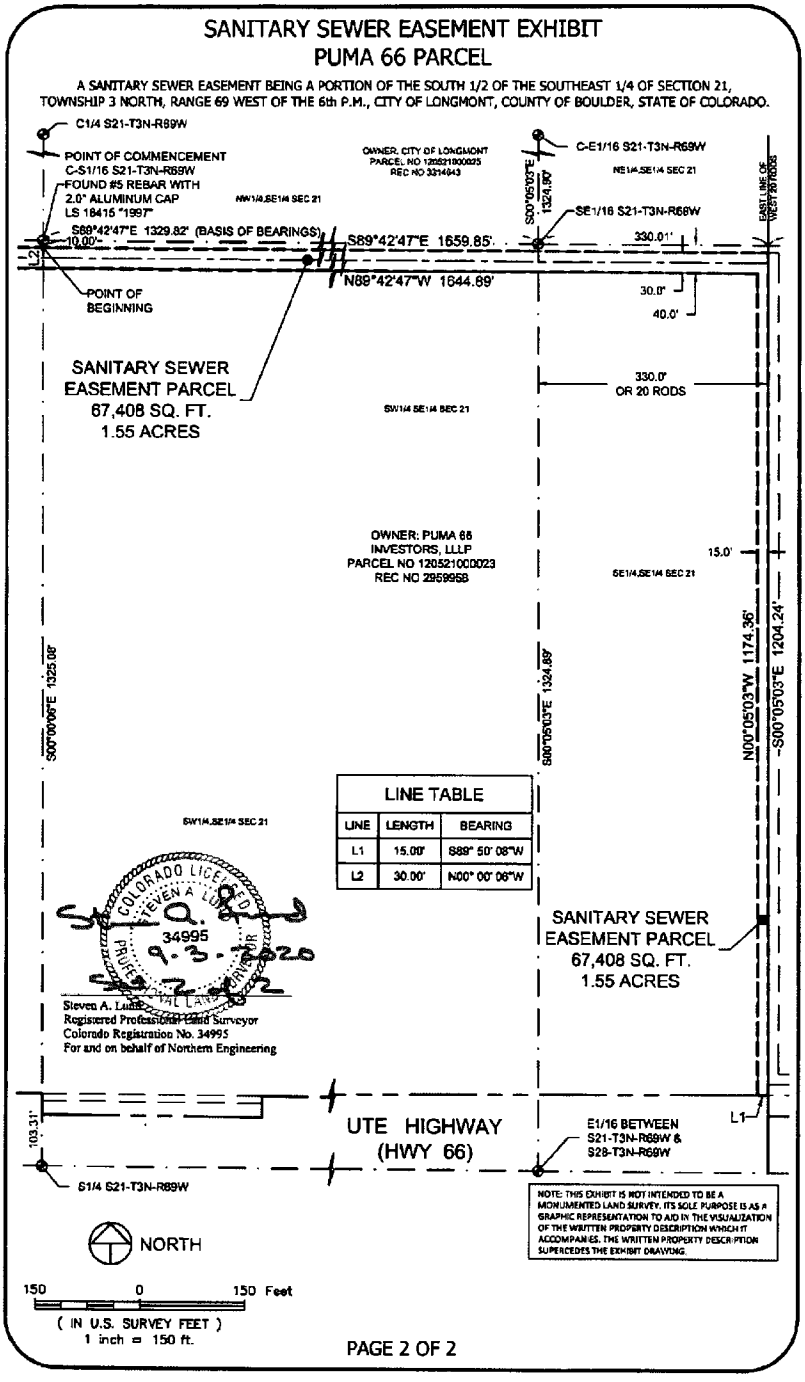
Said described easement contains a total of 67,408 sq. ft or 1.55 acre, more or less.

SURVEYOR'S CERTIFICATE

I, Steven A. Lund, a Colorado Registered Professional Land Surveyor do hereby state that this Property Description was prepared under my personal supervision and checking, and that it is true and correct to the best of my knowledge and belief.

Steven A. Lund – on behalf of Northern Engineering
Colorado Registered Professional
Land Surveyor #34995

NORTHERN ENGINEERING
820 8th Street
Greeley, Colorado 80631
(970) 488-1113


SANITARY SEWER EASEMENT EXHIBIT
PUMA 66 PARCEL
A SANITARY SEWER EASEMENT BEING A PORTION OF THE SOUTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 21, TOWNSHIP 3 NORTH, RANGE 69 WEST OF THE 6th P.M., CITY OF LONGMONT, COUNTY OF BOULDER, STATE OF COLORADO.
C1/4 S21-T3N-R69W
POINT OF COMMENCEMENT
C-S1/16 S21-T3N-R69W
FOUND #5 REBAR WITH 2.0" ALUMINUM CAP LS 18415 "1997"
S89°42'47"E 1329.82' (BASIS OF BEARINGS)
10.00'
POINT OF BEGINNING
OWNER: CITY OF LONGMONT PARCEL NO 120521000025 REC NO 3314943
NW1/4,SE1/4 SEC 21
C-E1/16 S21-T3N-R69W
NE1/4,SE1/4 SEC 21
S00°05'03"E 1324.90'
SE1/16 S21-T3N-R68W
EAST LINE OF WEST 1/2 SE1/4
330.01'
S89°42'47"E 1659.85'
N89°42'47"W 1644.89'
30.0'
40.0'
330.0'
OR 20 RODS
SANITARY SEWER EASEMENT PARCEL
67,408 SQ. FT.
1.55 ACRES
SW1/4 SE1/4 SEC 21
OWNER: PUMA 66 INVESTORS, LLLP
PARCEL NO 120521000023
REC NO 2959958
15.0'
SE1/4,SE1/4 SEC 21
S00°00'06"E 1325.06'
S00°05'03"E 1324.89'
N00°05'03"W 1174.36'
S00°05'03"E 1204.24'
LINE TABLE
LINE | LENGTH | BEARING
L1 | 15.00' | S89° 50' 08"W
L2 | 30.00' | N00° 00' 06"W
SW1/4,SE1/4 SEC 21
COLORADO LICENSED STEVEN A. LUNA 34995 PROFESSIONAL LAND SURVEYOR
9-3-2020
Steven A. Luna
Registered Professional Land Surveyor
Colorado Registration No. 34995
For and on behalf of Northern Engineering
SANITARY SEWER EASEMENT PARCEL
67,408 SQ. FT.
1.55 ACRES
UTE HIGHWAY (HWY 66)
103.31'
L1
E1/16 BETWEEN S21-T3N-R69W & S28-T3N-R69W
S1/4 S21-T3N-R69W
NOTE: THIS EXHIBIT IS NOT INTENDED TO BE A MONUMENTED LAND SURVEY. ITS SOLE PURPOSE IS AS A GRAPHIC REPRESENTATION TO AID IN THE VISUALIZATION OF THE WRITTEN PROPERTY DESCRIPTION WHICH IT ACCOMPANIES. THE WRITTEN PROPERTY DESCRIPTION SUPERCEDES THE EXHIBIT DRAWING.
NORTH
150 0 150 Feet
(IN U.S. SURVEY FEET)
1 inch = 150 ft.
PAGE 2 OF 2

PROPERTY DESCRIPTION

Puma 66 Investors, LLLP
Sanitary Sewer Easement Parcel #2

A parcel of land for easement purposes being a portion of the Southeast Quarter of the Southeast Quarter (SE1/4SE1/4) of Section Twenty-one (21), Township Three North (T.3N.), Range Sixty-nine West (R.69W.), Sixth Principal Meridian (6th P.M.), County of Boulder, State of Colorado, more particularly described as follows:

COMMENCING at the Southeast Corner of Section 21 and assuming the East line of the Southeast Quarter of Section 21 as bearing North 00°09'59" West a distance of 2649.41 feet with all bearings contained herein relative thereto;

THENCE North 00°09'59" West along said East of the Southeast Quarter of Section 21 a distance of 119.18 feet to the **POINT OF BEGINNING;**

THENCE South 89°47'15" West a distance of 1001.53 feet to the East line of the West 20 Rods of the Southeast Quarter of the Southeast Quarter of said Section 21;
THENCE North 00°05'03" West along said East line of the West 20 Rods of the Southeast Quarter of the Southeast Quarter of Section 21 to a line parallel with and 10.00 feet Southerly of the North line of the Southeast Quarter of the Southeast Quarter of said Section 21;
THENCE South 89°42'47" East along said parallel line a distance of 15.00 feet to a line parallel with and 15.00 feet Easterly of the East line of the West 20 Rods of the Southeast Quarter of the Southeast Quarter of said Section 21;
THENCE South 00°05'03" East along said parallel line a distance of 1174.11 feet;
THENCE North 89°47'15" East a distance of 986.48 feet to the East line of the Southeast Quarter of said Section 21;
THENCE South 00°09'59" West along said East line of the Southeast Quarter a distance of 30.00 feet to the **POINT OF BEGINNING;**

Said described easement contains a total of 47,661 sq. ft or 1.09 acre, more or less.

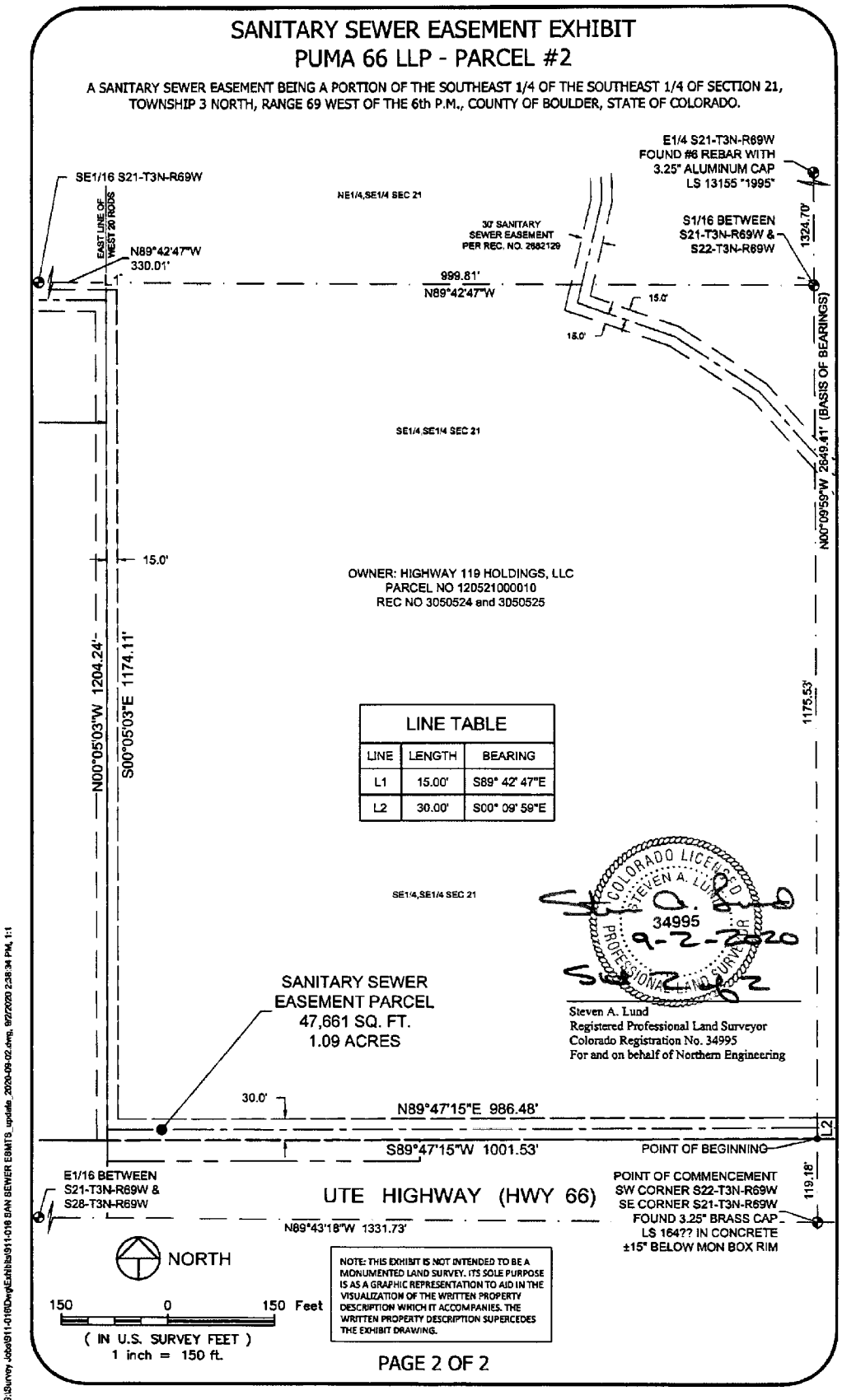
SURVEYOR'S CERTIFICATE

I, Steven A. Lund, a Colorado Registered Professional Land Surveyor do hereby state that this Property Description was prepared under my personal supervision and checking, and that it is true and correct to the best of my knowledge and belief.

COLORADO LICENSED
STEVEN A. LUND
34995
9-2-2020
PROFESSIONAL LAND SURVEYOR

Steven A. Lund – on behalf of Northern Engineering
Colorado Registered Professional
Land Surveyor #34995

NORTHERN ENGINEERING
820 8th Street
Greeley, Colorado 80631
(970) 488-1113


SANITARY SEWER EASEMENT EXHIBIT
PUMA 66 LLP - PARCEL #2
A SANITARY SEWER EASEMENT BEING A PORTION OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 21, TOWNSHIP 3 NORTH, RANGE 69 WEST OF THE 6th P.M., COUNTY OF BOULDER, STATE OF COLORADO.
SE1/16 S21-T3N-R69W
EAST LINE OF WEST 20 RODS
N89°42'47"W 330.01'
NE1/4,SE1/4 SEC 21
30' SANITARY SEWER EASEMENT PER REC. NO. 2682129
E1/4 S21-T3N-R69W FOUND #6 REBAR WITH 3.25" ALUMINUM CAP LS 13155 "1995"
S1/16 BETWEEN S21-T3N-R69W & S22-T3N-R69W
1324.70'
999.81' N89°42'47"W
15.0'
18.0'
SE1/4,SE1/4 SEC 21
N00°09'59"W 2649.41' (BASIS OF BEARINGS)
15.0'
OWNER: HIGHWAY 119 HOLDINGS, LLC
PARCEL NO 120521000010
REC NO 3050524 and 3050525
N00°05'03"W 1204.24'
S00°05'03"E 1174.11'
1175.53'
LINE TABLE
LINE | LENGTH | BEARING
L1 | 15.00' | S89° 42' 47"E
L2 | 30.00' | S00° 09' 59"E
SE1/4,SE1/4 SEC 21
COLORADO LICENSED STEVEN A. LUND 34995 PROFESSIONAL LAND SURVEYOR
9-2-2020
SANITARY SEWER EASEMENT PARCEL 47,661 SQ. FT. 1.09 ACRES
Steven A. Lund
Registered Professional Land Surveyor
Colorado Registration No. 34995
For and on behalf of Northern Engineering
30.0'
N89°47'15"E 986.48'
S89°47'15"W 1001.53'
POINT OF BEGINNING
L2
E1/16 BETWEEN S21-T3N-R69W & S28-T3N-R69W
UTE HIGHWAY (HWY 66)
N89°43'18"W 1331.73'
POINT OF COMMENCEMENT SW CORNER S22-T3N-R69W SE CORNER S21-T3N-R69W FOUND 3.25" BRASS CAP LS 164?? IN CONCRETE ±15" BELOW MON BOX RIM
119.18'
NORTH
150 0 150 Feet
(IN U.S. SURVEY FEET)
1 inch = 150 ft.
NOTE: THIS EXHIBIT IS NOT INTENDED TO BE A MONUMENTED LAND SURVEY. ITS SOLE PURPOSE IS AS A GRAPHIC REPRESENTATION TO AID IN THE VISUALIZATION OF THE WRITTEN PROPERTY DESCRIPTION WHICH IT ACCOMPANIES. THE WRITTEN PROPERTY DESCRIPTION SUPERCEDES THE EXHIBIT DRAWING.
PAGE 2 OF 2
S:\Survey Jobs\911-016\Dwg\Exhibits\911-016 SAN SEWER EBMTS_update_2020-09-02.dwg, 9/2/2020 2:38:34 PM, 1:1

03866798 03/11/2021 11:15 AM
RF: $43.00 DF: $0.00 Page: 1 of 7
Electronically recorded in Boulder County Colorado. Recorded as received.

EASEMENT AGREEMENT

THIS EASEMENT AGREEMENT is made this 4th day of December 2020 by and between DICKENS-TRUMBLE@66jc, LLC, a limited liability, whose mailing address is 4419 Maxwell Avenue, Longmont, Colorado 80503, the Jack W. Dickens, Jr. Trust, whose mailing address is 2100 Main St., Longmont CO (Dickens-Trumble@66jc and Jack W. Dickens, Jr. Trust are collectively referred to as the "Grantors" herein), and the City of Longmont, Colorado, a municipal corporation ("Grantee"), whose mailing address is 350 Kimbark Street, Longmont, Colorado 80501.

FOR GOOD AND VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, the parties agree as follows:

1. That the Grantor has granted, sold and conveyed, and by this Easement Agreement does grant, sell, convey and confirm to the Grantee, its successors and assigns, forever, a permanent non-exclusive easement on and under the land described in Exhibit A ("Easement"), attached hereto and incorporated herein by this reference, located in Boulder County, Colorado, for the purposes of:

1.1 Surveying, locating, installing, constructing, using, operating, maintaining, inspecting, repairing, altering, removing, and replacing a sanitary sewer line, in whole or in part, and all necessary subsurface and surface appurtenances;

1.2 Marking the location of the Easement, and any improvements, by suitable markers set and maintained in the ground at locations which shall not interfere with such reasonable use as Grantor shall make of the Easement under the terms of this Easement Agreement; and

1.3 Right of ingress and egress over and on the lands described in Exhibit A to enforce the rights, terms and conditions given by this Easement Agreement.

2. That the Grantor reserves the right to use and occupy the Easement for any lawful purpose consistent with the rights and privileges granted herein which will not interfere with or endanger any of the Grantee's rights or improvements on or under the Easement or Grantee's use thereof, provided that Grantor may construct or allow the construction of paving or landscaping on or under the Easement but shall not construct or allow the construction of any building, structure, or other improvement on or under the Easement, or take any action which would impair or in any way modify the improvements or lateral or subjacent support for the improvements, without obtaining the specific written permission of the Grantee, not to be unreasonably withheld or delayed, except as agreed upon by the parties in a final subdivision plat for the land described in Exhibit A.

3. That the Grantor covenants and agrees to cause the Easement area and any improvements installed thereon by the Grantor, but not including any improvements installed by the Grantee, to be maintained and kept, at its sole cost and expense, in reasonably good condition and state of repair. If it shall be necessary to disturb the surface of the Easement Property for any of the purposes listed herein, the Grantee shall restore the ground surface, including any authorized

paving and any appurtenances, except as may be necessary to accommodate any of Grantee's improvements, as near as practical to their original condition prior to any construction, within twelve (12) months, unless Grantor and Grantee mutually agree in writing otherwise.

4. The Grantor agrees to indemnify and hold harmless the Grantee and its officers and employees from any and all suits, claims, damages, liability or court awards, including costs and attorney fees that are or may be awarded as a result of any loss, injury or damage sustained or claimed to have been sustained by anyone in connection with or arising from Grantor's negligent or willful misconduct relating to Grantor's use, maintenance, or operation of the Easement area or any or all of its improvements installed thereon.

5. That the obligations of the Grantor and Grantee contained in this Easement Agreement shall constitute a covenant which shall run with and burden the land, shall bind all future owners of the land, and shall be enforceable against the Grantor, and the Grantor successors and assigns by the Grantee, and its successors and assigns. In the event that Grantee abandons the use of the Easement for a period of two or more years, Grantor shall file an application for vacation of the Easement with the City pursuant to the City's Land Development Code, which said vacation must be approved by City Council by ordinance.

6. Grantee shall not fence or otherwise enclose the Easement except during periods of construction and repair. Grantee, at all times, shall provide good, safe and adequate vehicular access for all contractors, subcontractors, agents, or employees of Grantor, across the Easement during any period of Grantee's construction, maintaining, or repairing the sanitary sewer located in the Easement.

7. That the Grantor represents that it has the lawful authority to grant this easement and make and enforce the covenants and promises herein.

8. Grantor has provided Grantee with the title insurance commitment, and shall supplant it with a title insurance policy prior to execution of this Easement, insuring Grantee's rights in and to the Easement, subject to the exceptions listed in the title commitment. No representations, warranties, or certifications expressed or implied shall exist as between the parties, except as specifically stated in this Agreement.

9. No representations, warranties, or certifications express or implied shall exist as between the parties, except as specially stated in this Easement Agreement.

10. The provisions of this Easement Agreement shall be construed as to their fair meaning, and not for or against any party based upon any attribution to such party of the source of the language in question.

11. None of the terms or conditions in this Easement Agreement shall give or allow any claim, benefit, or right of action by any third person not a party hereto. Any person other than the Grantee or the Grantor receiving services or benefits under this Easement Agreement shall be only an incidental beneficiary.

12. This Easement Agreement is an integration of the entire understanding of the parties with respect to the matters stated herein. The parties shall only amend this Easement Agreement in writing with the proper official signatures attached hereto.

13. No waiver of any breach or default under this Easement Agreement shall be a waiver of any other or subsequent breach or default.

14. This Easement Agreement shall be governed and construed in accordance with the laws of the State of Colorado.

15. Upon full execution hereof, the Grantee shall record this Agreement in the real property records of Boulder County, Colorado.

IN WITNESS WHEREOF, the parties have executed this Easement Agreement as of the date first above written.

GRANTOR:
DICKENS-TRUMBLE@66jc
a Colorado limited liability company

By: _____
Title: _____

State of _____)
) ss:
County of _____)

The foregoing instrument was acknowledged before me by _____,
(Name of party signing)

a member/partner/manager/limited partner/agent (select one) on behalf of _____
(Name of limited liability company)

a limited liability company, this _____ day of _____, 2020.

Witness my hand and official Seal.

My Commission expires _____.

_____
Notary Public

GRANTOR:

Lynn Marie Trumble

State of Colorado)
) ss:
County of Boulder

The foregoing instrument was acknowledged before me by Lynn Marie Trumble
(Name of party signing)

a member/partner/manager/limited partner/agent (select one) on behalf of

Dickens-Trumble @ bdcjc, LLC,

a limited liability company, this 25 day of April, 2018.

Witness my hand and official Seal.

Sharon Myscofski
Notary Public

SHARON MYSCOFSKI
Notary Public
State of Colorado
Notary ID # 20034013788
My Commission Expires 12-19-2020

My Commission expires 12/19/2020.

GRANTOR:
The Jack W. Dickens, Jr. Trust

Trustee

State of Colorado)
ss.
County of Denver)

Sara Graham
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20204032469
MY COMMISSION EXPIRES September 17, 2024

I attest that the foregoing instrument was acknowledged before me this 4 day of December, 2020 by GNB by Melanie marmorstein, as Trustee of the Jack W. Dickens, Jr. Trust, a Colorado Trust.

Witness my hand and official seal.

Notary Public

My commission expires: 09/17/2024

GRANTEE:
CITY OF LONGMONT
a municipal corporation

Dale Rademacher
Deputy City Manager

APPROVED AS TO FORM:

Assistant City Attorney

CA File: 20-000672

State of Colorado_____)
) ss.
County of Boulder_____)

The foregoing instrument was acknowledged before me this 3rd day of March, 2020, by Dale Rademacher as Deputy City Manager for the City of Longmont.

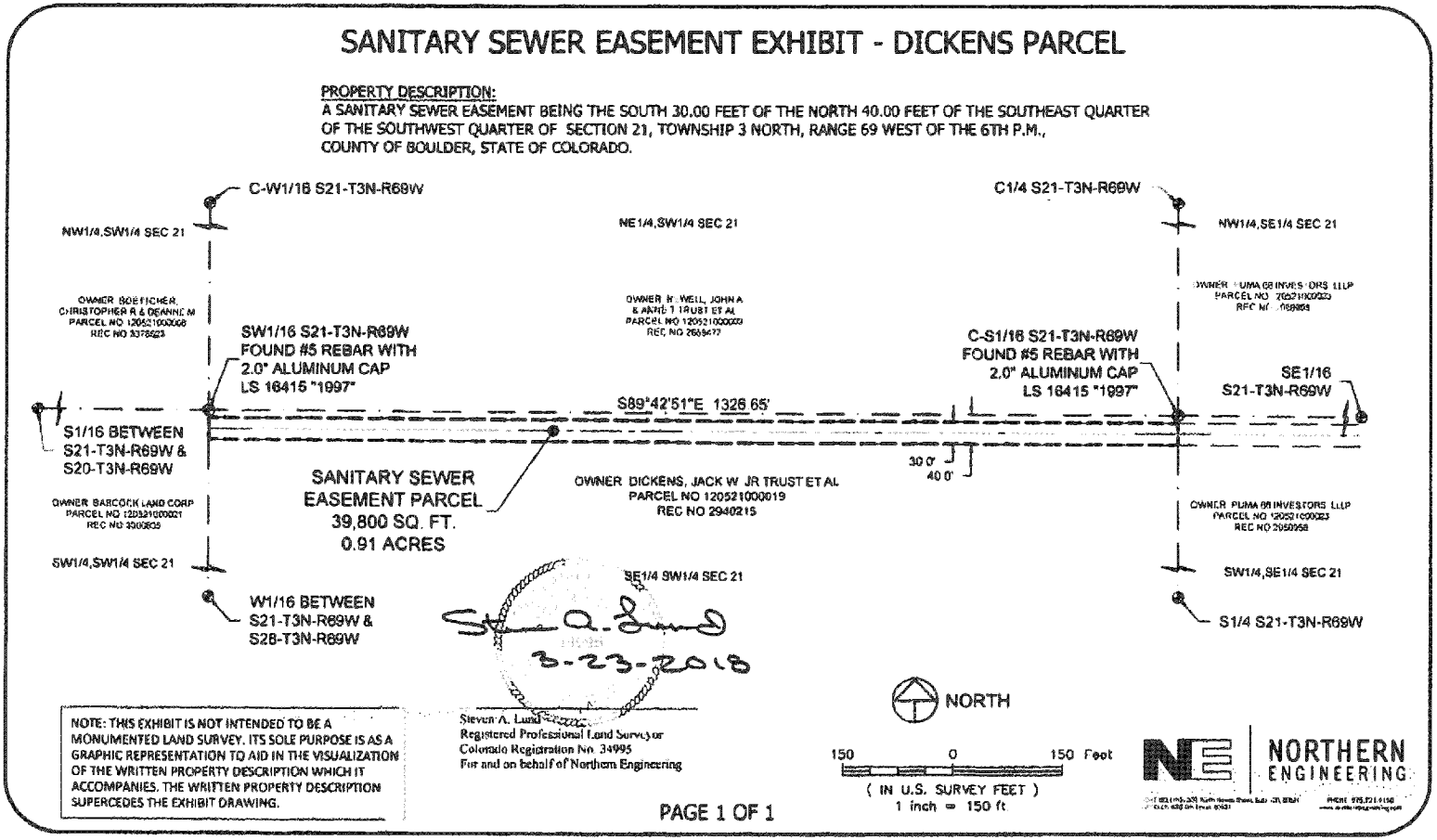
Witness my hand and official seal.

Heather N. McIntyre
Notary Public

HEATHER MCINTYRE
NOTARY PUBLIC - STATE OF COLORADO
NOTARY ID 20184022370
MY COMMISSION EXPIRES MAY 29, 2022

My commission expires 05/29/2022.

EXHIBIT A
Easement



03866799 03/11/2021 11:15 AM
RF: $43.00 DF: $0.00 Page: 1 of 7
Electronically recorded in Boulder County Colorado. Recorded as received.

EASEMENT AGREEMENT

THIS EASEMENT AGREEMENT is made this 23rd day of December 2020, by and between LIFEBRIDGE CHRISTIAN CHURCH, a Colorado non-profit corporation ("Grantor"), whose mailing address is P.O. Box 978, Longmont, CO 80502, and the City of Longmont, Colorado, a municipal corporation ("Grantee"), whose mailing address is 350 Kimbark Street, Longmont, Colorado 80501.

FOR GOOD AND VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, the parties agree as follows:

1. That the Grantor has granted, sold and conveyed, and by this Easement Agreement does grant, sell, convey and confirm to the Grantee, its successors and assigns, forever, a permanent non-exclusive easement on and under the land described in Exhibit A ("Easement"), attached hereto and incorporated herein by this reference, located in Boulder County, Colorado, for the purposes of:

1.1 Surveying, locating, installing, constructing, using, operating, maintaining, inspecting, repairing, altering, removing, and replacing a sanitary sewer line, in whole or in part, and all necessary subsurface and surface appurtenances;

1.2 Marking the location of the Easement, and any improvements, by suitable markers set and maintained in the ground at locations which shall not interfere with such reasonable use as Grantor shall make of the Easement under the terms of this Easement Agreement; and

1.3 Right of ingress and egress over and on the lands described in Exhibit A to enforce the rights, terms and conditions given by this Easement Agreement.

2. That the Grantor reserves the right to use and occupy the Easement for any lawful purpose consistent with the rights and privileges granted herein which will not interfere with or endanger any of the Grantee's rights or improvements on or under the Easement or Grantee's use thereof, provided that Grantor may construct or allow the construction of paving or landscaping on or under the Easement but shall not construct or allow the construction of any building, structure, or other improvement on or under the Easement, or take any action which would impair or in any way modify the improvements or lateral or subjacent support for the improvements, without obtaining the specific written permission of the Grantee, not to be unreasonably withheld or delayed, except as agreed upon by the parties in a final subdivision plat for the land described in Exhibit A.

3. That the Grantor covenants and agrees to cause the Easement area and any improvements installed thereon by the Grantor, but not including any improvements installed by the Grantee, to be maintained and kept, at its sole cost and expense, in reasonably good condition and state of repair. If it shall be necessary to disturb the surface of the Easement Property for any of the purposes listed herein, the Grantee shall restore the ground surface, including any authorized paving and any appurtenances, except as may be necessary to accommodate any of Grantee's

improvements, as near as practical to their original condition prior to any construction, within twelve (12) months, unless Grantor and Grantee mutually agree in writing otherwise.

4. The Grantor agrees to indemnify and hold harmless the Grantee and its officers and employees from any and all suits, claims, damages, liability or court awards, including costs and attorney fees that are or may be awarded as a result of any loss, injury or damage sustained or claimed to have been sustained by anyone in connection with or arising from Grantor's negligent or willful misconduct relating to Grantor's use, maintenance, or operation of the Easement area or any or all of its improvements installed thereon.

5. That the obligations of the Grantor and Grantee contained in this Easement Agreement shall constitute a covenant which shall run with and burden the land, shall bind all future owners of the land, and shall be enforceable against the Grantor, and the Grantor successors and assigns by the Grantee, and its successors and assigns. In the event that Grantee abandons the use of the Easement for a period of two or more years, Grantor shall file an application for vacation of the Easement with the City pursuant to the City's Land Development Code, which said vacation must be approved by City Council by ordinance.

6. Grantee shall not fence or otherwise enclose the Easement except during periods of construction and repair. Grantee, at all times, shall provide good, safe and adequate vehicular access for all contractors, subcontractors, agents, or employees of Grantor, across the Easement during any period of Grantee's construction, maintaining, or repairing the sanitary sewer located in the Easement.

7. That the Grantor represents that it has the lawful authority to grant this easement and make and enforce the covenants and promises herein.

8. Grantor has provided Grantee with the title insurance commitment, and shall supplant it with a title insurance policy prior to execution of this Easement, insuring Grantee's rights in and to the Easement, subject to the exceptions listed in the title commitment. No representations, warranties, or certifications expressed or implied shall exist as between the parties, except as specifically stated in this Agreement.

9. No representations, warranties, or certifications express or implied shall exist as between the parties, except as specially stated in this Easement Agreement.

10. The provisions of this Easement Agreement shall be construed as to their fair meaning, and not for or against any party based upon any attribution to such party of the source of the language in question.

11. None of the terms or conditions in this Easement Agreement shall give or allow any claim, benefit, or right of action by any third person not a party hereto. Any person other than the Grantee or the Grantor receiving services or benefits under this Easement Agreement shall be only an incidental beneficiary.

12. This Easement Agreement is an integration of the entire understanding of the parties with respect to the matters stated herein. The parties shall only amend this Easement Agreement in writing with the proper official signatures attached hereto.

13. No waiver of any breach or default under this Easement Agreement shall be a waiver of any other or subsequent breach or default.

14. This Easement Agreement shall be governed and construed in accordance with the laws of the State of Colorado.

15. Upon full execution hereof, the Grantee shall record this Agreement in the real property records of Boulder County, Colorado.

IN WITNESS WHEREOF, the parties have executed this Easement Agreement as of the date first above written.

GRANTOR:
LIFEBRIDGE CHRISTIAN CHURCH
a Colorado nonprofit corporation

By: _____
Title: TRUSTEE

State of Colorado
County of Boulder) ss:

The foregoing instrument was acknowledged before me by Chris Jefferson,
(Name of party signing)

as TRUSTEE of LIFEBRIDGE CHRISTIAN CHURCH
(Title of party signing) (Name of corporation)

a COLORADO corporation, on behalf of the corporation, this
(State of incorporation)

23RD day of December, 2020.

Witness my hand and official Seal.

My Commission expires 7/24/22.

Patricia L. Kee
Notary Public

PATRICIA L KEE
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 19904004545
MY COMMISSION EXPIRES 07/24/2022

GRANTEE:
CITY OF LONGMONT
a municipal corporation

Dale Rademacher
Deputy City Manager

APPROVED AS TO FORM:

Assistant City Attorney

CA File: 20-000672

State of Colorado)
) ss.
County of Boulder)

The foregoing instrument was acknowledged before me this 3rd day of March, 2020, by Dale Rademacher as Deputy City Manager for the City of Longmont.

Witness my hand and official seal.

Heather N. McIntyre
Notary Public

HEATHER MCINTYRE
NOTARY PUBLIC - STATE OF COLORADO
NOTARY ID 20184022370
MY COMMISSION EXPIRES MAY 29, 2022

My commission expires 05/29/2022.

EXHIBIT A

PROPERTY DESCRIPTION

Lifebridge Christian Church
Sanitary Sewer Easement

A parcel of land for easement purposes being 30.0 feet in width and situate within the Southwest Quarter of the Southwest Quarter (SW1/4SW1/4) of Section Twenty-two (22), Township Three North (T.3N.), Range Sixty-nine West (R.69W.), Sixth Principal Meridian (6th P.M.), County of Boulder, State of Colorado, the centerline of said easement more particularly described as follows:

COMMENCING at the Southwest Corner of Section 22 and assuming the West line of the Southwest Quarter of said Section 22 as bearing North 00°09'59" West a distance of 2649.41 feet with all bearings contained herein relative thereto;

THENCE North 00°09'59" West along said West line a distance of 134.18 feet to the **POINT OF BEGINNING**;

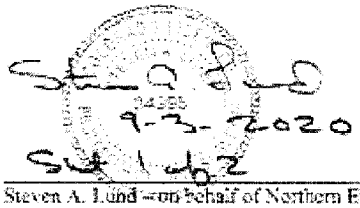
THENCE North 89°47'15" East a distance of 83.46 feet;
THENCE North 87°51'54" East a distance of 157.92 feet;
THENCE South 89°31'39" East a distance of 283.28 feet to a Westerly line of that Sanitary Sewer Easement described in an Easement Agreement recorded April 21, 2005 as Reception No. 2682129 of the Records of Boulder County and to the **POINT OF TERMINATION**;

It is the intent of this description that the sidelines of the aforesaid centerline be elongated or truncated to intersect with the West line of the Southwest Quarter of said Section 22 and also with the Westerly line of said Sanitary Sewer Easement recorded as Reception No. 2682129.

Said described easement contains a total of 12,728 sq. ft or 0.29 acre, more or less.

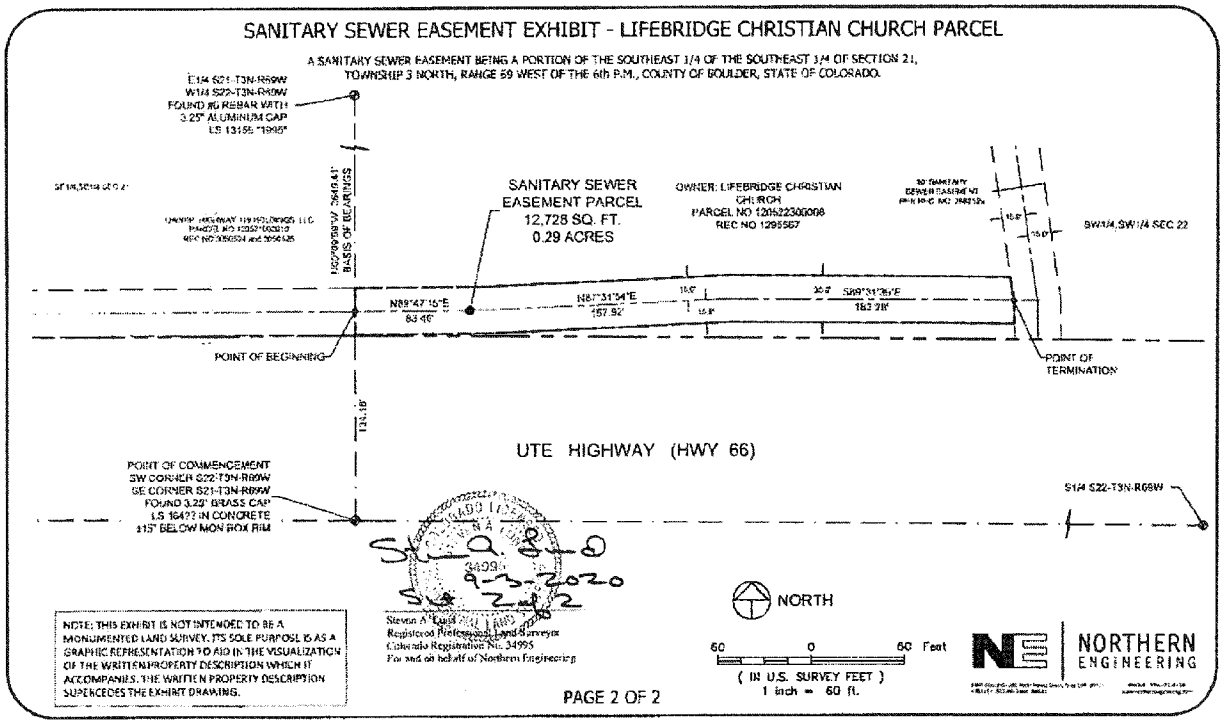
SURVEYOR'S CERTIFICATE

I, Steven A. Lund, a Colorado Registered Professional Land Surveyor do hereby state that this Property Description was prepared under my personal supervision and checking, and that it is true and correct to the best of my knowledge and belief.



Steven A. Lund –on behalf of Northern Engineering
Colorado Registered Professional
Land Surveyor #34995

NORTHERN ENGINEERING
820 8th Street
Greeley, Colorado 80631
(970) 488-1113



Lifebridge Christian Church - Sanitary Sewer Easement_FINAL_09/29/2020

PROPERTY DESCRIPTION

Lifebridge Christian Church
Sanitary Sewer Easement

A parcel of land for easement purposes being 30.0 feet in width and situate within the Southwest Quarter of the Southwest Quarter (SW1/4SW1/4) of Section Twenty-two (22), Township Three North (T.3N.), Range Sixty-nine West (R.69W.), Sixth Principal Meridian (6th P.M.), County of Boulder, State of Colorado, the centerline of said easement more particularly described as follows:

COMMENCING at the Southwest Corner of Section 22 and assuming the West line of the Southwest Quarter of said Section 22 as bearing North 00°09'59" West a distance of 2649.41 feet with all bearings contained herein relative thereto;

THENCE North 00°09'59" West along said West line a distance of 134.18 feet to the **POINT OF BEGINNING**;

THENCE North 89°47'15" East a distance of 83.46 feet;
THENCE North 87°31'54" East a distance of 157.92 feet;
THENCE South 89°31'39" East a distance of 183.28 feet to a Westerly line of that Sanitary Sewer Easement described in an Easement Agreement recorded April 21, 2005 as Reception No. 2682129 of the Records of Boulder County and to the **POINT OF TERMINATION**;

It is the intent of this description that the sidelines of the aforesaid centerline be elongated or truncated to intersect with the West line of the Southwest Quarter of said Section 22 and also with the Westerly line of said Sanitary Sewer Easement recorded as Reception No. 2682129.

Said described easement contains a total of 12,728 sq. ft or 0.29 acre, more or less.

SURVEYOR'S CERTIFICATE

I, Steven A. Lund, a Colorado Registered Professional Land Surveyor do hereby state that this Property Description was prepared under my personal supervision and checking, and that it is true and correct to the best of my knowledge and belief.

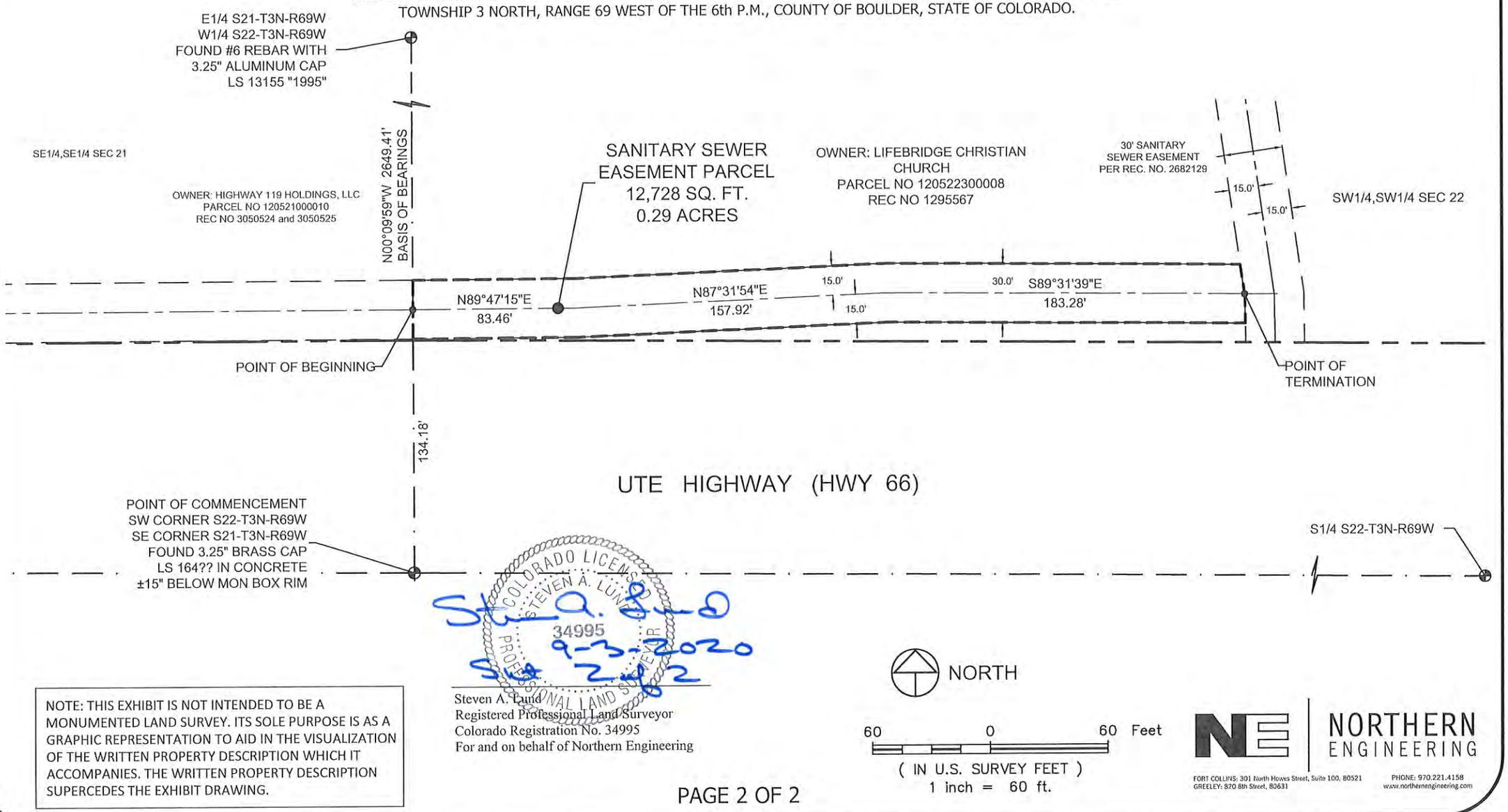
COLORADO LICENSED
STEVEN A. LUND
34995
PROFESSIONAL LAND SURVEYOR
9-3-2020

Steven A. Lund – on behalf of Northern Engineering
Colorado Registered Professional
Land Surveyor #34995

NORTHERN ENGINEERING
820 8th Street
Greeley, Colorado 80631
(970) 488-1113

SANITARY SEWER EASEMENT EXHIBIT - LIFEBRIDGE CHRISTIAN CHURCH PARCEL

A SANITARY SEWER EASEMENT BEING A PORTION OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 21, TOWNSHIP 3 NORTH, RANGE 69 WEST OF THE 6th P.M., COUNTY OF BOULDER, STATE OF COLORADO.



COLORADO LICENSED
STEVEN A. LUND
34995
PROFESSIONAL LAND SURVEYOR

9-3-2020

NOTE: THIS EXHIBIT IS NOT INTENDED TO BE A MONUMENTED LAND SURVEY. ITS SOLE PURPOSE IS AS A GRAPHIC REPRESENTATION TO AID IN THE VISUALIZATION OF THE WRITTEN PROPERTY DESCRIPTION WHICH IT ACCOMPANIES. THE WRITTEN PROPERTY DESCRIPTION SUPERCEDES THE EXHIBIT DRAWING.

Steven A. Lund
Registered Professional Land Surveyor
Colorado Registration No. 34995
For and on behalf of Northern Engineering

NORTH

60 0 60 Feet
(IN U.S. SURVEY FEET)
1 inch = 60 ft.

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
PHONE: 970.221.4158
www.northernengineering.com

PAGE 2 OF 2

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03895929 06/28/2021 11:53 AM
RF: $43.00 DF: $0.00 Page: 1 of 7
Electronically recorded in Boulder County Colorado. Recorded as received.

EASEMENT AGREEMENT

THIS EASEMENT AGREEMENT is made this 11th day of June, 2021, by and between MAPLE LEAF INVESTORS, LLC ("Grantor"), whose mailing address is 1500 West Hampden Avenue, Suite 3H, Sheridan, Colorado 80110, and the City of Longmont, Colorado, a municipal corporation ("Grantee"), whose mailing address is 350 Kimbark Street, Longmont, Colorado 80501.

WHEREAS, the Grantor is the owner of real property located in Boulder County, Colorado, acquired from Highway 119 Holdings, LLC, said property being more particularly described in Exhibit "A," attached hereto and incorporated herein by reference; and

WHEREAS, the Grantor has agreed to grant the easement pursuant to the terms and conditions of this Easement Agreement.

FOR GOOD AND VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, the parties agree as follows:

1. That the Grantor has granted, sold and conveyed, and by this Easement Agreement does grant, sell, convey and confirm to the Grantee, its successors and assigns, forever, a permanent non-exclusive easement on and under the land described in Exhibit A ("Easement"), attached hereto and incorporated herein by this reference, located in Boulder County, Colorado, for the purposes of:

1.1 Surveying, locating, installing, constructing, using, operating, maintaining, inspecting, repairing, altering, removing, and replacing a sanitary sewer line, in whole or in part, and all necessary subsurface and surface appurtenances;

1.2 Marking the location of the Easement, and any improvements, by suitable markers set and maintained in the ground at locations which shall not interfere with such reasonable use as Grantor shall make of the Easement under the terms of this Easement Agreement; and

1.3 Right of ingress and egress over and on the lands described in Exhibit A to enforce the rights, terms and conditions given by this Easement Agreement.

2. That the Grantor reserves the right to use and occupy the Easement for any lawful purpose consistent with the rights and privileges granted herein which will not interfere with or endanger any of the Grantee's rights or improvements on or under the Easement or Grantee's use thereof, provided that Grantor may construct or allow the construction of paving or landscaping on or under the Easement but shall not construct or allow the construction of any building, structure, or other improvement on or under the Easement, or take any action which would impair or in any way modify the improvements or lateral or subjacent support for the improvements, without obtaining the specific written permission of the Grantee, not to be unreasonably withheld or delayed, except as agreed upon by the parties in a final subdivision plat for the land described in Exhibit A.

3. That the Grantor covenants and agrees to cause the Easement area and any improvements installed thereon by the Grantor, but not including any improvements installed by the Grantee, to be maintained and kept, at its sole cost and expense, in reasonably good condition and state of repair. If it shall be necessary to disturb the surface of the Easement Property for any of the purposes listed herein, the Grantee shall restore the ground surface, including any authorized paving and any appurtenances, except as may be necessary to accommodate any of Grantee's improvements, as near as practical to their original condition prior to any construction, within twelve (12) months, unless Grantor and Grantee mutually agree in writing otherwise.

4. The Grantor agrees to indemnify and hold harmless the Grantee and its officers and employees from any and all suits, claims, damages, liability or court awards, including costs and attorney fees that are or may be awarded as a result of any loss, injury or damage sustained or claimed to have been sustained by anyone in connection with or arising from Grantor's negligent or willful misconduct relating to Grantor's use, maintenance, or operation of the Easement area or any or all of its improvements installed thereon.

5. That the obligations of the Grantor and Grantee contained in this Easement Agreement shall constitute a covenant which shall run with and burden the land, shall bind all future owners of the land, and shall be enforceable against the Grantor, and the Grantor successors and assigns by the Grantee, and its successors and assigns. In the event that Grantee abandons the use of the Easement for a period of two or more years, Grantor shall file an application for vacation of the Easement with the City pursuant to the City's Land Development Code, which said vacation must be approved by City Council by ordinance.

6. Grantee shall not fence or otherwise enclose the Easement except during periods of construction and repair. Grantee, at all times, shall provide good, safe and adequate vehicular access for all contractors, subcontractors, agents, or employees of Grantor, across the Easement during any period of Grantee's construction, maintaining, or repairing the sanitary sewer located in the Easement.

7. That the Grantor represents that it has the lawful authority to grant this easement and make and enforce the covenants and promises herein.

8. Grantor has provided Grantee with the title insurance commitment, and shall supplant it with a title insurance policy prior to execution of this Easement, insuring Grantee's rights in and to the Easement, subject to the exceptions listed in the title commitment. No representations, warranties, or certifications expressed or implied shall exist as between the parties, except as specifically stated in this Agreement.

9. No representations, warranties, or certifications express or implied shall exist as between the parties, except as specially stated in this Easement Agreement.

10. The provisions of this Easement Agreement shall be construed as to their fair meaning, and not for or against any party based upon any attribution to such party of the source of the language in question.

11. None of the terms or conditions in this Easement Agreement shall give or allow any claim, benefit, or right of action by any third person not a party hereto. Any person other than the Grantee or the Grantor receiving services or benefits under this Easement Agreement shall be only an incidental beneficiary.

12. This Easement Agreement is an integration of the entire understanding of the parties with respect to the matters stated herein. The parties shall only amend this Easement Agreement in writing with the proper official signatures attached hereto.

13. No waiver of any breach or default under this Easement Agreement shall be a waiver of any other or subsequent breach or default.

14. This Easement Agreement shall be governed and construed in accordance with the laws of the State of Colorado.

15. Upon full execution hereof, the Grantee shall record this Agreement in the real property records of Boulder County, Colorado.

IN WITNESS WHEREOF, the parties have executed this Easement Agreement as of the date first above written.

GRANTOR:
MAPLE LEAF INVESTORS, LLC
a Colorado limited liability company

By: James W. Harmon
Title: Member Manager

State of Colorado)
) ss:
County of Arapahoe)

The foregoing instrument was acknowledged before me by James W. Harmon,
(Name of party signing)

a member/partner/manager/limited partner/agent (select one) on behalf of Maple Leaf Investor, LLC
(Name of limited liability company)

a limited liability company, this 11th day of June, 2021.

Witness my hand and official Seal.

My Commission expires 9/26/2024.

Notary Public

GENEVA M CRUZ-LA SANTA
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 19954007168
MY COMMISSION EXPIRES SEPTEMBER 26, 2024

GRANTEE:
CITY OF LONGMONT
a municipal corporation

Dale Rademacher
Deputy City Manager

APPROVED AS TO FORM:

Assistant City Attorney

CA File: 20-000672

State of Colorado_____)
) ss.
County of Boulder_____)

The foregoing instrument was acknowledged before me this 24th day of June, 2021, by Dale Rademacher as Deputy City Manager for the City of Longmont.

Witness my hand and official seal.

Notary Public

My commission expires 05/29/2022

HEATHER MCINTYRE
NOTARY PUBLIC - STATE OF COLORADO
NOTARY ID 20184022370
MY COMMISSION EXPIRES MAY 29, 2022

EXHIBIT A

PROPERTY DESCRIPTION

Puma 66 Investors, LLLP
Sanitary Sewer Easement Parcel #2

A parcel of land for easement purposes being a portion of the Southeast Quarter of the Southeast Quarter (SE1/4SE1/4) of Section Twenty-one (21), Township Three North (T.3N.), Range Sixty-nine West (R.69W.), Sixth Principal Meridian (6th P.M.), County of Boulder, State of Colorado, more particularly described as follows:

COMMENCING at the Southeast Corner of Section 21 and assuming the East line of the Southeast Quarter of Section 21 as bearing North 00°09'59" West a distance of 2649.41 feet with all bearings contained herein relative thereto;

THENCE North 00°09'59" West along said East of the Southeast Quarter of Section 21 a distance of 119.18 feet to the **POINT OF BEGINNING**;

THENCE South 89°47'15" West a distance of 1001.53 feet to the East line of the West 20 Rods of the Southeast Quarter of the Southeast Quarter of said Section 21;
THENCE North 00°05'03" West along said East line of the West 20 Rods of the Southeast Quarter of the Southeast Quarter of Section 21 to a line parallel with and 10.00 feet Southerly of the North line of the Southeast Quarter of the Southeast Quarter of said Section 21;
THENCE South 89°42'47" East along said parallel line a distance of 15.00 feet to a line parallel with and 15.00 feet Easterly of the East line of the West 20 Rods of the Southeast Quarter of the Southeast Quarter of said Section 21;
THENCE South 00°05'03" East along said parallel line a distance of 1174.11 feet;
THENCE North 89°47'15" East a distance of 986.48 feet to the East line of the Southeast Quarter of said Section 21;
THENCE South 00°09'59" West along said East line of the Southeast Quarter a distance of 30.00 feet to the **POINT OF BEGINNING**;

Said described easement contains a total of 47,661 sq. ft or 1.09 acre, more or less.

SURVEYOR'S CERTIFICATE

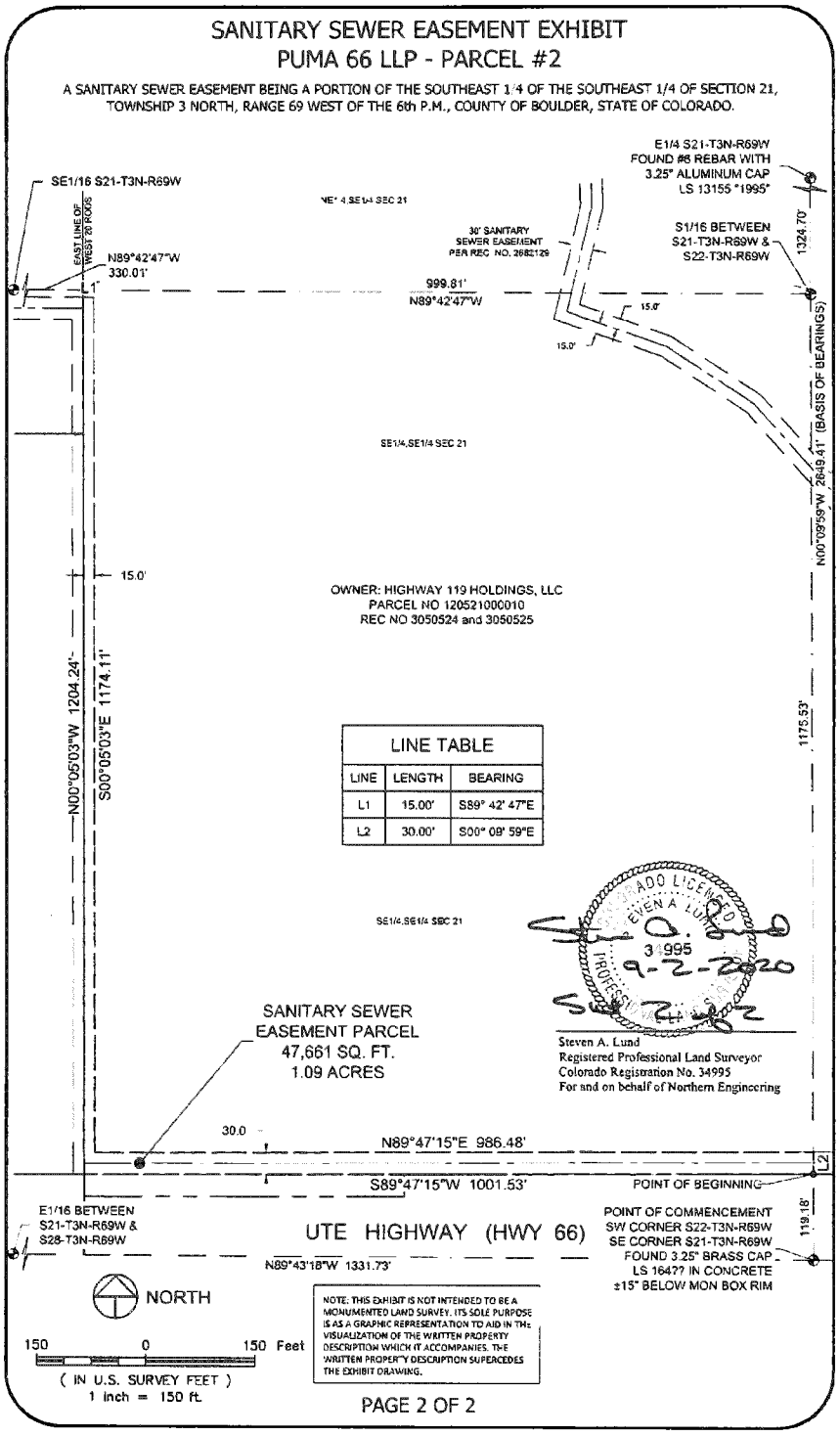
I, Steven A. Lund, a Colorado Registered Professional Land Surveyor do hereby state that this Property Description was prepared under my personal supervision and checking, and that it is true and correct to the best of my knowledge and belief.

COLORADO STEVEN A. LUND 34995 LAND SURVEYOR

9-2-2020

Steven A. Lund on behalf of Northern Engineering
Colorado Registered Professional
Land Surveyor #34995

NORTHERN ENGINEERING
820 8th Street
Greeley, Colorado 80631
(970) 488-1113


SANITARY SEWER EASEMENT EXHIBIT
PUMA 66 LLP - PARCEL #2
A SANITARY SEWER EASEMENT BEING A PORTION OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 21, TOWNSHIP 3 NORTH, RANGE 69 WEST OF THE 6th P.M., COUNTY OF BOULDER, STATE OF COLORADO.
SE1/16 S21-T3N-R69W
EAST LINE OF WEST 20 RODS
N89°42'47"W 330.01'
L1
NE1/4,SE1/4 SEC 21
30' SANITARY SEWER EASEMENT PER REC NO. 2682129
E1/4 S21-T3N-R69W FOUND #6 REBAR WITH 3.25" ALUMINUM CAP LS 13155 "1995"
S1/16 BETWEEN S21-T3N-R69W & S22-T3N-R69W
1324.70'
999.81'
N89°42'47"W
15.0'
15.0'
SE1/4,SE1/4 SEC 21
N00°09'59"W 2649.41' (BASIS OF BEARINGS)
15.0'
OWNER: HIGHWAY 119 HOLDINGS, LLC
PARCEL NO 120521000010
REC NO 3050524 and 3050525
N00°05'03"W 1204.24'
S00°05'03"E 1174.11'
1175.53'
LINE TABLE
LINE | LENGTH | BEARING
L1 | 15.00' | S89° 42' 47"E
L2 | 30.00' | S00° 09' 59"E
SE1/4,SE1/4 SEC 21
COLORADO LICENSED
STEVEN A. LUND
34995
9-2-2020
PROFESSIONAL LAND SURVEYOR
SANITARY SEWER EASEMENT PARCEL
47,661 SQ. FT.
1.09 ACRES
Steven A. Lund
Registered Professional Land Surveyor
Colorado Registration No. 34995
For and on behalf of Northern Engineering
30.0
N89°47'15"E 986.48'
S89°47'15"W 1001.53'
POINT OF BEGINNING
L2
E1/16 BETWEEN S21-T3N-R69W & S28-T3N-R69W
UTE HIGHWAY (HWY 66)
N89°43'18"W 1331.73'
POINT OF COMMENCEMENT SW CORNER S22-T3N-R69W SE CORNER S21-T3N-R69W FOUND 3.25" BRASS CAP LS 16477 IN CONCRETE ±15" BELOW MON BOX RIM
119.18'
NORTH
150 0 150 Feet
(IN U.S. SURVEY FEET)
1 inch = 150 ft.
NOTE: THIS EXHIBIT IS NOT INTENDED TO BE A MONUMENTED LAND SURVEY. ITS SOLE PURPOSE IS AS A GRAPHIC REPRESENTATION TO AID IN THE VISUALIZATION OF THE WRITTEN PROPERTY DESCRIPTION WHICH IT ACCOMPANIES. THE WRITTEN PROPERTY DESCRIPTION SUPERCEDES THE EXHIBIT DRAWING.
PAGE 2 OF 2

July 24th, 2023

Boulder County Land Use Department
2045 13th Street, P.O. Box 471
Boulder, CO 80302

RE: TERRY LAKE REGIONAL SANITARY SEWER
LONGMONT, COLORADO
NE PROJECT #: 911-016

Dear Staff:

Northern Engineering Services is pleased to submit this development application package for the Terry Lake Regional Sanitary Sewer project, in accordance with Boulder County application submittal requirements, for your review. The Terry Lake Neighborhood is located in the southern half of Section 21, Township 3 North, Range 69 West of the 6th P.M., in Longmont, CO and Boulder County unincorporated open space.

This narrative is provided to detail how this proposed improvement complies with the Boulder County application submittal requirements or reference the relevant documents that address said requirements. All provided submittal materials have been approved for construction by the City of Longmont pending permit approval from Boulder County.

This package includes public improvement utility plans, sewer capacity analysis, title commitments, stormwater pollution control plans (SPCP), environmental and habitat conservation assessments, and other necessary documentation.

Overview

The proposed project is contained within the area designated as "*Terry Lake Mixed-Use*" by the ***Envision Longmont Multimodal & Comprehensive Plan*** (https://www.longmontcolorado.gov/home/showpublisheddocument/15099/636080740290800000)

The Terry Lake Regional Sanitary Sewer project proposes to extend westward the existing sanitary sewer located on Gay Street just north of Highway 66. The regional sewer will provide sewer service for the future development of parcels along Highway 66 from Gay Street to Hover Road, known as the Terry Lake Neighborhood. Collaboration with the existing adjacent properties has begun, and easements have been recorded along the sewer alignment.; however, this proposal addresses only the installation of the regional sewer main meant to service future development in the region.

The designed sewer capacity is capped based on capacity of the existing sewer downstream. As such, each future development's density is capped. This is further detailed in the provided *Sewer Capacity Analysis Report* (Northern Engineering, Jul. 24, 2023). The sewer extension is expected to have minimal short-term and no long-term disturbance on the undeveloped properties. The sanitary sewer has been designed in accordance with Longmont City Standards and 10-States Wastewater Standards where applicable.

The proposed sewer improvements will impact 11.6 acres of land during construction but result in no permanent surface impacts to the area after completion. The provided *Public Improvement Plans* (Northern Engineering, Jul. 24, 2023) are designed to the City of Longmont engineering standard, and detail contact information for the relevant applicants and the extent of existing utility infrastructure in the affected area. The

contact information for consultants who provided separate relevant reports and analyses will appear on those reports respectively.

Description of Need

The proposed public improvement will not immediately serve any existing users or communities but will be installed to provide service for future developments in the Terry Lake Neighborhood. The existing sewer capacity at Gay Street has been studied and any future increase in demands are detailed in the *Sewer Capacity Analysis Report*. The density of any future developments are to be designed to be in compliance with the existing sewer capacity.

Environmental Impacts

Land Use

The *Envision Longmont Multimodal and Comprehensive Plan* designates the area's zoning as mixed-use; however, the Terry Lake Regional Sanitary Sewer project described in this application will not change the land use or condition for any of the affected properties shown in the Terry Lake Neighborhood. The region's soil properties are described in the provided geotechnical report titled *Subsurface Soil Investigation – CO SH 66 Terry Lake Sanitary Sewer* (Rocky Mountain Group, Dec. 3, 2021), and the proposed sewer improvements will have no impact on the agricultural productivity capability of the affected land after completion.

There will similarly be no impact to transportation infrastructure in the affected area as it pertains to existing rights-of-way for transmission, distribution, or collector networks.

Provided with this application are the legal descriptions of the recorded utility easements, the Property Owner and Record Numbers of which are as follows: Dickens-Trumble@66jc - 3866798, Lifebridge Christian Church – 3866799, Maple Leaf Investors, LLC – 3895929, Puma66 Investors – 3892088. All easements described are recorded within the real property records of Boulder County.

Water Resources

Available local GIS and FEMA data do not identify the area of the Terry Lake Neighborhood as residing within or near any recognized floodplain, and therefore does not require additional consideration in regard to flood hazards.

The Terry Lake Regional Sanitary Sewer project area is located approximately one mile south of Terry Lake and ¾ miles southeast of Clark Reservoir. Aside from these named bodies of water there is no permanent surface water on or in the vicinity of the proposed site. The drainage pattern of the involved properties trends southeast, and as such stormwater from the site is not conveyed in the direction of any nearby surface water before reaching established stormwater drainage infrastructure.

Existing groundwater depths in the area have been identified in the borings performed for and illustrated in the geotechnical report *Subsurface Soil Investigation – CO SH 66 Terry Lake Sanitary Sewer*. Groundwater depth encountered along the sewer alignment ranges from 2' to 14'. The sanitary sewer is to be installed with groundwater barriers matching City of Longmont specifications upstream of all manholes to prevent the transmission of groundwater along the sanitary sewer trench once the installation is completed.

Terrestrial and Aquatic Life

The existing habitats of terrestrial and aquatic animal and plant life are detailed in the provided conservation plan titled *Terry Lake Regional Sewer Project – Species and Habitat Characterization Plan* (Cedar Creek Associates, Inc., July 2022). The only wildlife observed in the field survey were characterized as "unidentified songbirds", and the site was deemed unlikely to occupy or cross the path of any habitat or migration corridor for any sensitive, unique, or regionally protected species. It is required that the site be surveyed by a qualified biologist directly prior to commencement of construction activity – particularly if that activity should begin between March 1st to July 31st, which is nesting season for most bird species in the area – to verify that the observed condition in the *Terry Lake Regional Sewer Project – Species and Habitat Characterization Plan* have remained consistent.

There is no expected impact on any protected plant habitat or special status species with the proposed sewer improvements, and the provided *Stormwater Pollution Control Plans* (Northern Engineering, Jul. 24, 2023) further detail the erosion control and environmental protection measures approved by the City of Longmont for all construction phases.

The *Terry Lake Regional Sewer Project – Species and Habitat Characterization Plan* also identified the areas directly west of and parallel to the north-south section of the sewer alignment, as well as the area following the north shoulder of Highway 66, as being wetlands, both of which currently serve as irrigation ditches. Provided in this package is an Approved Jurisdictional Determination (ADJ) from the Army Corps of Engineers, wherein the wetland ditches in the area were determined to be non-jurisdictional to the waters of the United States (*Corps File No. NWO-2021-01941-DEN*). Notwithstanding, the sewer design will call for the segment crossing the path of the wetland ditch to be installed by boring underneath and encasing for stability to preserve the integrity of the ditch.

We have also conducted a *Tree Inventory Appraisal* (The Birdsall Group, Feb. 2, 2022) which details the condition of all known trees adjacent to the sanitary sewer alignment. The *Tree Inventory Appraisal* also details which trees will be preserved and which are designated for removal.

By project closeout the disturbed soil will be restored with native seeding, the areas classified as wetland ditches will have been protected throughout, and all trees designated for preservation will have been protected. Should a survey of a qualified biologist identify any terrestrial species habitat prior to beginning construction, the contractor shall be responsible for abiding by any regulations associated with the presence of said species. However, there are currently no identified animal habitats that will be impacted by the proposed improvements.

Air Quality

The proposed installed sanitary sewer improvements are not expected to produce any additional daily trips in the area once completed and will otherwise have no permanent effect on air quality in the region.

Environmental Resources

As designed, the Terry Lake Regional Sanitary Sewer project is not in the vicinity of, nor will it have an impact on any environmental features that have been classified as natural hazards, public outdoor recreation or open space areas, or areas of unique geologic, historic, or archaeological significance.

Visual Aesthetics

The proposed sewer improvements will not have any negative effect on the viewshed, landscape, or vistas associated with the project area as it will not be changing the overall landscape of the area nor will be blocking any viewsheds.

Transportation Impacts

The proposed sewer improvements will have no long-term effect on traffic in the area, as no transportation facilities or roads will be constructed, altered or improved in any fashion, and no new commercial or residential structures will be built as a part of these improvements. In the short term, construction vehicles accessing the site via Hover Street and Gay Street may result in minimal temporary impacts. The contractor shall be responsible for maintaining cleanliness of the public roads to be used for site access during construction activities and any repairs that become necessary as a result of construction activity.

Alternatives

Alternative alignments for the sanitary sewer were assessed as a part of this project. These alternatives assessed the topography of the area as it related to the serviceability of the parcels. After discussion with all affected property owners, a preferred alignment was decided. The chosen alternative impacts the least amount of ground, aligns with the future roadway shown in *Envision Longmont*, and coincides with existing access farm roads. This alternative is shown in the *Sewer Capacity Analysis Report*. At this time, the easements for the preferred alternative have been recorded with the City of Longmont.

If there are any questions, please feel free to contact us at your convenience.

Sincerely,
NORTHERN ENGINEERING SERVICES, INC.

Jacob O'Banion, EI
Project Engineer

Stephanie Thomas, PE
Project Manager

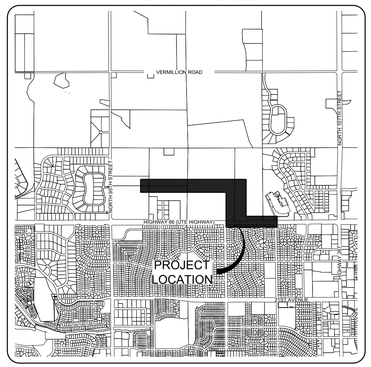
Attachment B - Revised Application Materials

STORMWATER POLLUTION CONTROL PLANS

TERRY LAKE REGIONAL SANITARY SEWER

A TRACT OF LAND LOCATED IN THE SOUTHERN HALF OF SECTION 21, TOWNSHIP 3 NORTH,
RANGE 69 WEST OF THE 6TH P.M., CITY OF LONGMONT,
COUNTY OF BOULDER, COLORADO

AUGUST 2023



NORTH VICINITY MAP 1"=2500'

PROJECT BENCHMARKS:

PROJECT DATUM: NAVD88

BENCHMARKS:
City of Longmont Benchmark "NGS U410"
1.45 miles W. of Hwy 287 on Hwy 66, 585' E. of the CL of N. 95th, (Hover Rd.), 93.2' N. of the CL of Hwy 66, and 5.6' E. of a utility pole. (rod in range box)
Elevation = 5090.10

City of Longmont Benchmark "F-030"
North side of Hwy 66 at North quarter of Section 28 at fence corner. $\frac{1}{2}$ mile east of Hover Rd. 50' West of the S.W. corner house. +/- 6' East of P.P.
Elevation = 5063.93

Basis of Bearings
The South line of the Southwest Quarter of the Southwest Quarter of Section 21 as bearing North 89°43'25" West.

FIELD SURVEY BY:

Original Field Survey:
Northern Engineering
Project No. 911-016
Date: May 22nd, 2017

Additional Field Survey:
Northern Engineering
Project No. 911-016
Date: Dec 1st, 2017

SUBSURFACE EXPLORATION BY:

Soilogic, Inc.
Preliminary Geotechnical Subsurface Exploration Report
Proposed Zeek Annexation
Northeast Corner of N. 95th Street and Colorado State Highway 66
Boulder County, Colorado
Soilogic Project # 14-1083
Date: May 20, 2014

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

CONTACT INFORMATION

PROJECT TEAM:

OWNER/APPLICANT
The Landhuis Company
Jeff Mark, President
212 N Wahsatch Ave, Suite #301
Colorado Springs, CO 80903
(719) 635-3200

SITE ENGINEER
Northern Engineering Services, Inc.
Stephanie Thomas, PE
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521
(970) 221-4158

SITE SURVEYOR
Northern Engineering Services, Inc.
Steven A. Lund, PLS
820 8th Street
Greeley, CO 80631
(970) 395-9880

UTILITY CONTACT LIST: *

UTILITY COMPANY		CONTACT INFORMATION
GAS----------	Xcel Energy----------	Donna George---------- donna.l.george@xcelenergy.com
ELECTRIC--------	Longmont Power and Communications----	Rocco Supino---------- (303) 651-8706
CABLE----------	Comcast----------	Marcus Petty----------marcus_petty@comcast.com
TELECOM--------	Centurylink----------	Christopher Janoski---------- christopher.janoski@centurylink.com
WATER----------	City of Longmont----------	Wes Lowrie---------- (303) 651-8814
WASTEWATER-	City of Longmont----------	Doug Gossett---------- (303) 651-8922
STORMWATER-	City of Longmont----------	Tyler Dell---------- (303) 651-8399

* This list is provided as a courtesy reference only. Northern Engineering Services assumes no responsibility for the accuracy or completeness of this list. In no way shall this list relinquish the Contractor's responsibility for locating all utilities prior to commencing any construction activity. Please contact the Utility Notification Center of Colorado (UNCC) at 811 for additional information.

SHEET INDEX

1	SPC1	COVER SHEET & STORMWATER POLLUTION CONTROL GENERAL NOTES
2	SPC2	STORMWATER POLLUTION CONTROL PRE-CONSTRUCTION PLAN
3	SPC3	STORMWATER POLLUTION CONTROL DURING-CONSTRUCTION PLAN
4	SPC4	STORMWATER POLLUTION CONTROL FINAL STABILIZATION PLAN
5	SPC5	STORMWATER POLLUTION CONTROL DETAILS

APPROVAL BLOCK

ENGINEERING REVIEW
CITY OF LONGMONT

☐ No Exceptions Taken
☐ Make Corrections Noted
☐ Rejected – See Checklist

Review is for general compliance with City of Longmont standards and requirements. The City of Longmont is not responsible for the correctness of design, dimensions, details, quantities and design safety.

REVIEW ENGINEER _____ DATE _____

STORMWATER POLLUTION CONTROL GENERAL NOTES:

1. STORMWATER CONSTRUCTION ACTIVITY PERMIT (SCAP) DRAWINGS HAVE BEEN SUBMITTED AND APPROVED AS PART OF AN APPLICATION FOR A STORMWATER CONSTRUCTION ACTIVITY PERMIT FOR CONSTRUCTION ACTIVITIES FILED WITH THE CITY OF LONGMONT. ADDITIONAL STORMWATER POLLUTION CONTROL MEASURES (EROSION AND SEDIMENT CONTROL MEASURES, AND BEST MANAGEMENT PRACTICES) MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE STORMWATER POLLUTION CONTROLS OUTLINED IN THESE DRAWINGS DO NOT FUNCTION AS INTENDED. THE INSTALLATION AND MAINTENANCE OF ALL STORMWATER POLLUTION CONTROL MEASURES SHALL BE THE OBLIGATION OF THE PERMIT HOLDER UNTIL SUCH TIME AS THE PERMIT IS RELEASED.
2. THE CONTRACTOR SHALL LOCATE, INSTALL, AND MAINTAIN ALL STORMWATER POLLUTION CONTROL MEASURES FOR SEDIMENT AND EROSION CONTROL AND WATER QUALITY "BEST MANAGEMENT PRACTICES" AS INDICATED IN THE APPROVED SCAP DRAWINGS. ALL STORMWATER POLLUTION CONTROLS SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT AS INSTRUCTED IN THE CONTROL DETAILS INCLUDED IN THE APPROVED SCAP DRAWINGS.
3. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING A FIELD-SET OF THE SCAP DRAWINGS ON-SITE AT ALL TIMES. ANY CHANGES TO THESE PLANS THAT OCCUR IN THE FIELD MUST BE REDLINED, AND DISCUSSED WITH THE STORMWATER INSPECTOR DURING SUBSEQUENT INSPECTIONS.
4. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND ILLUSTRATING (ON THE SCAP DRAWINGS) STOCKPILES, STAGING AREAS, EQUIPMENT STORAGE, REFUELING/MAINTENANCE AREAS, AND DISPOSAL AREAS.
5. THE CONTRACTOR AND/OR AUTHORIZED AGENTS SHALL PREVENT SEDIMENT, MUD, CONSTRUCTION DEBRIS, SPILLED MATERIALS, AND ALL OTHER POLLUTANTS FROM ENTERING WATERWAYS, PUBLIC RIGHTS-OF-WAYS, OR THE STORM SEWER SYSTEM DURING CONSTRUCTION ACTIVITIES THAT ARE PART OF THIS PROJECT. THE PERMITTEE SHALL BE HELD RESPONSIBLE TO REMOVE ALL POLLUTANTS AND REMEDIATE ANY WATERWAYS, RIGHTS-OF-WAYS, OR STORM SEWERS, ADVERSELY IMPACTED BY WORK DONE AS PART OF THIS PROJECT IN A TIMELY MANNER, USING APPROPRIATE EQUIPMENT FOR THE POLLUTANT PRESENT.
6. EQUIPMENT AND MATERIALS NECESSARY FOR THE CONTROL OF SPILLS SHALL BE AVAILABLE ONSITE AT ALL TIMES. SPILLS AND LEAKS SHALL BE STOPPED AND THE MATERIAL CLEANED UP IMMEDIATELY AND DISPOSED OF PROPERLY. USE PROPER STORMWATER CONTROL MEASURES ('BEST MANAGEMENT PRACTICES') TO PREVENT OIL, GREASE, OR FUEL FROM LEAKING ON THE GROUND, INTO STORM INLETS, OR SURFACE WATERS.
7. WHEN WORKING IMMEDIATELY ADJACENT TO WATERWAYS, ADDITIONAL CARE SHOULD BE TAKEN TO AVOID THE DISCHARGE OF POLLUTANTS AS THERE IS LIMITED ABILITY TO INTERCEPT THE POLLUTANTS PRIOR TO DISCHARGING TO THE WATERWAYS. VIOLATIONS OF THE SCAP NEAR WATERWAYS MAY RESULTS IN ADDITIONAL SEDIMENT/EROSION CONTROL MEASURES BEING REQUIRED AND/OR ACCELERATED ENFORCEMENT ACTIONS.
8. EQUIPMENT CAPABLE OF MITIGATING FUGITIVE DUST FROM CONSTRUCTION ACTIVITY SHALL BE AVAILABLE AT ALL TIMES. DUST/WIND CONTROL PRACTICES (WATERING, VEGETATION, STRIPPED TOPSOIL, ANY PLASTIC COVERS, ETC.) SHALL BE IMPLEMENTED AS PART OF ROUTINE SITE MAINTENANCE, IMPLEMENTED AS NEEDED TO ELIMINATE ANY ADVERSE IMPACTS TO ADJACENT PROPERTY OWNERS OR CITY RIGHTS-OF-WAY. ADDITIONAL DUST CONTROL REQUIREMENTS CAN BE FOUND IN THE CITY OF LONGMONT MUNICIPAL CODE TITLE 15 CHAPTER 15.05.160.
9. HAULING ROUTES FOR THE SITE MUST BE IDENTIFIED ON THE STORMWATER POLLUTION CONTROL CONSTRUCTION DRAWINGS. OFFSITE HAULING ROUTES MUST BE IDENTIFIED - REFER MUNICIPAL CODE TITLE 11 CHAPTER 11.32 FOR HAULING GUIDELINES.
10. THE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL INSURE THAT ALL LOADS OF CUT AND FILL MATERIALS IMPORTED TO, OR EXPORTED FROM, THIS SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORT ON PUBLIC RIGHTS-OF-WAY. ANY SETTLEMENT OR SOIL ACCUMULATION FOUND BEYOND THE LIMITS OF DISTURBANCE (AS IDENTIFIED ON THE STORMWATER POLLUTION CONTROL CONSTRUCTION DRAWINGS), SHALL BE REMOVED AND/OR REPAIRED IMMEDIATELY BY THE PERMITTEE.
11. STOCKPILE REQUIREMENTS:
    - STOCKPILES SHALL BE IMMEDIATELY PROTECTED IF THEY ARE NOT SCHEDULED TO BE USED WITHIN 14 DAYS. STORMWATER CONTROL MEASURES, AS OUTLINED IN MILE HIGH FLOOD DISTRICT VOLUME 3 (OR CURRENT EDITION), FOR STOCKPILE MANAGEMENT SHALL BE INSTALLED AND MAINTAINED AT ALL TIMES.
    - STOCKPILE LOCATION SHALL BE SETBACK FROM PROPERTY LINES, DRAINAGE WAYS, AND FLOODPLAIN BOUNDARIES A MINIMUM OF 50 FEET, UNLESS WRITTEN APPROVAL IS GRANTED BY THE CITY. LOCATION OF STOCKPILES SHALL BE SELECTED TO PROVIDE ACCESS TO ALL EXISTING UTILITIES.
    - STOCKPILE HEIGHT ONSITE IS LIMITED TO EIGHT (8) FEET WITH FLAT TOPS AND MAXIMUM SIDE SLOPES OF 2:1 (H:V), UNLESS WRITTEN APPROVAL IS GRANTED BY THE CITY.
    - DUST/WIND CONTROL PRACTICES (WATERING, VEGETATION, STRIPPED TOPSOIL, ANY PLASTIC COVERS, ETC.) SHALL BE IMPLEMENTED AS PART OF THE STOCKPILE MANAGEMENT. COVERS SHALL BE INSTALLED SECURELY TO PROTECT FROM WIND AND RAIN - REFER TO THE MUNICIPAL CODE TITLE 15 CHAPTER 15.05.160.
12. ALL TEMPORARY GROUNDWATER DEWATERING DISCHARGES MUST BE TREATED TO REMOVE SEDIMENT BEFORE DISCHARGING FROM THE CONSTRUCTION SITE. DISCHARGING WATER INTO A SEDIMENT TRAP OR BASIN IS AN ACCEPTABLE TREATMENT OPTION. WATER MAY ALSO BE TREATED USING A DEWATERING FILTER BAG, AND A SERIES OF STRAW BALES OR SEDIMENT LOGS. IF THESE PREVIOUS OPTIONS ARE NOT FEASIBLE DUE TO SPACE OR THE ABILITY TO PASSIVELY TREAT THE DISCHARGE TO REMOVE SEDIMENT, THEN A SETTLING TANK OR AN ACTIVE TREATMENT SYSTEM MAY NEED TO BE UTILIZED. REFER TO MHFD CRITERIA MANUAL, VOL. 3, CHAPTER 7 (SM-9). THE CONTRACTOR MUST REDLINE DISCHARGE POINTS ON SCAP DRAWINGS TO REFLECT FIELD CONDITIONS.
13. IF NO CONSTRUCTION ACTIVITIES TAKE PLACE ON-SITE FOR 30 DAYS OR MORE, THE PERMITTEE IS RESPONSIBLE FOR SEEDING AND STABILIZING THE SITE WITH THE SEED MIX IDENTIFIED IN THE CITY DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS, PARKS AND OPEN SPACE APPROVED MATERIAL LIST, SECTION 604, OR CURRENT EQUIVALENT.
14. ANY KNOWN WILDLIFE IN THE PROPOSED AREA OF SOIL STOCKPILES (I.E. PRAIRIE DOGS, GROUND NESTING BIRDS AND CANOPY NESTING BIRDS - I.E. RAPTORS IN VICINITY) MUST BE IDENTIFIED AND SPECIFIED, IF PRESENT:
    - AN ALTERNATIVE LOCATION THAT DOES NOT NEGATIVELY IMPACT THE EXISTING WILDLIFE MUST BE FOUND, OR
    - PERMISSION IS REQUIRED TO RELOCATE, TRAP OR EUTHANIZE THE WILDLIFE FROM THE COLORADO DIVISION OF PARKS AND WILDLIFE.
15. IT IS THE PERMITTEE'S RESPONSIBILITY TO COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO THE PERMITTEE'S ACTIVITIES, WHETHER OR NOT THOSE REQUIREMENTS ARE INCLUDED IN THE STORMWATER CONSTRUCTION ACTIVITY PERMIT.

Revisions:

No.	Date:
For REVIEW SET NOT FOR CONSTRUCTION	08.15.2023

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NORTHERN ENGINEERING
970.221.4158
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FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631

DATE: 08.15.2023
SCALE: N/A
REVIEWED BY: S. Thomas
PROJECT: 911-016
DESIGNED BY: S. Hollauer
DRAWN BY: S. Hollauer

TERRY LAKE REGIONAL SANITARY SEWER
COVER SHEET & STORMWATER POLLUTION CONTROL GENERAL NOTES

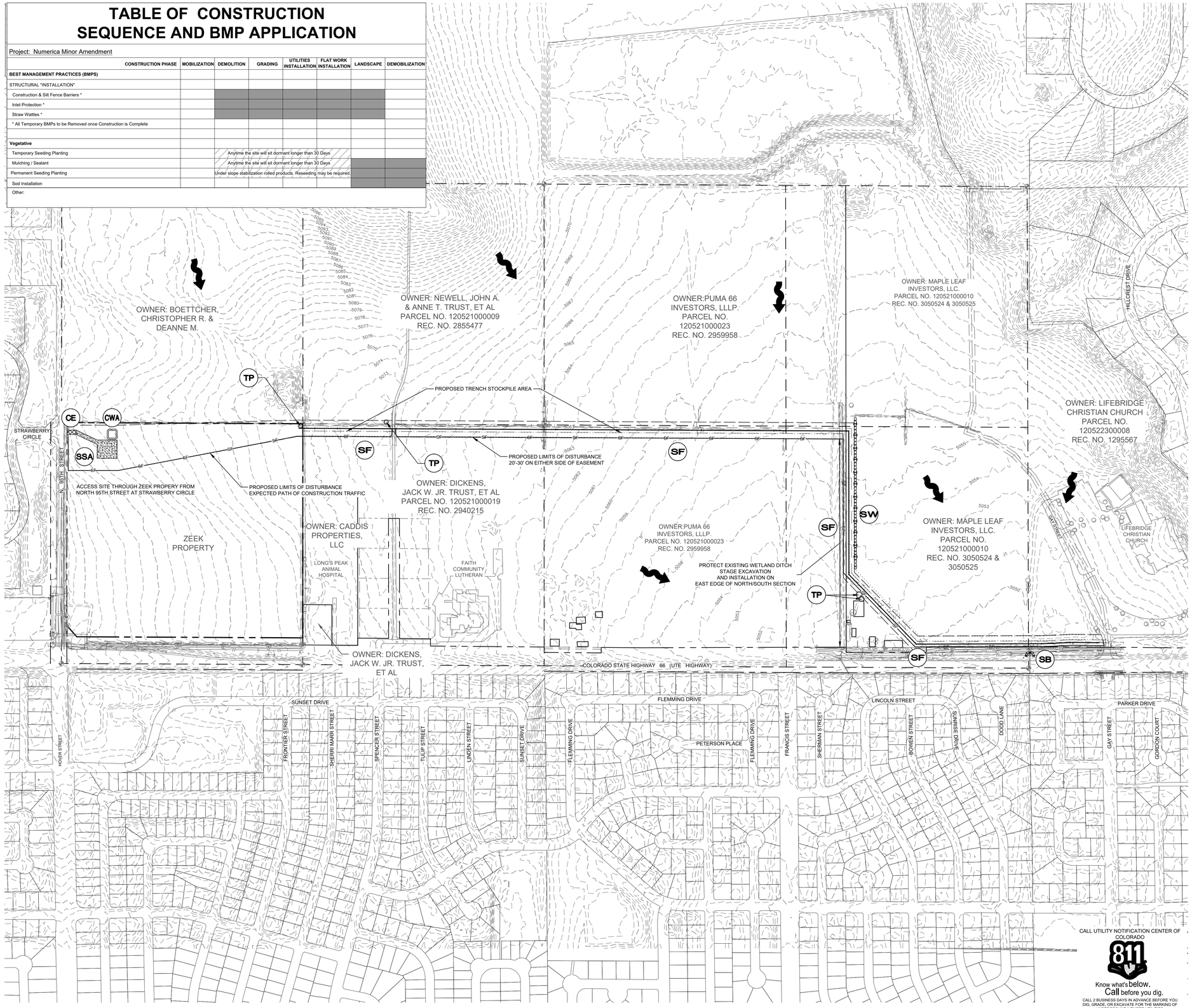
Sheet
SPC1
1 of 5

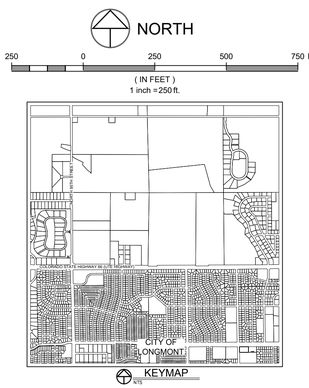
DRAWING FILENAME: D:\Projects\911-016\Dwg\911-016_SAN-OS_SPCP-COVR.dwg [LAYOUT NAME: SPC1] DATE: Sep 05, 2023 - 11:25am CAD OPERATOR: stephanie
LIST OF XREFS: [911-016_SPCP-ABS-xborder]

TABLE OF CONSTRUCTION SEQUENCE AND BMP APPLICATION

Project: Numerica Minor Amendment

CONSTRUCTION PHASE	MOBILIZATION	DEMOLITION	GRADING	UTILITIES INSTALLATION	FLAT WORK INSTALLATION	LANDSCAPE	DEMOBILIZATION
BEST MANAGEMENT PRACTICES (BMPS)							
STRUCTURAL "INSTALLATION"							
Construction & Silt Fence Barriers *							
Inlet Protection *							
Straw Wattles *							
* All Temporary BMPs to be Removed once Construction is Complete							
Vegetative							
Temporary Seeding Planting		Anytime the site will sit dormant longer than 30 Days					
Mulching / Sealant		Anytime the site will sit dormant longer than 30 Days					
Permanent Seeding Planting		Under slope stabilization rolled products. Reseeding may be required.					
Sod Installation							
Other:							





LEGEND:

- EXISTING CONTOUR — 4953 —
- PROPOSED STOCKPILE AREA
- PROPERTY BOUNDARY
- EXISTING FLOW PROFILE
- SILT FENCE — SF — SF
- STRAW WATTLE — SW
- CONSTRUCTION ENTRANCE — CE
- STABILIZED STAGING AREA — SSA
- STRAW BALE INLET PROTECTION — SB
- CONCRETE WASHOUT AREA — CWA
- SEEDING/MULCHING — SM
- TREE PROTECTION — TP

NOTE:
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2. ALL DISTURBED AREAS SHALL BE SEEDED, MULCHED AND TACKED PROMPTLY AFTER FINAL GRADE IS REACHED (WITHIN 14 DAYS OF REACHING FINAL GRADE) ON PORTIONS OF THE SITE NOT OTHERWISE PERMANENTLY STABILIZED.
3. TOTAL DISTURBED AREA = 11.6 ACRES
4. SWMP ADMINISTRATOR:
   Contact _____
   Company _____
   Address _____
   Phone _____
5. CONTRACTOR TO PROVIDE VEHICLE TRACKING CONTROL FOR CONCRETE WASHOUT AREA IF ACCESS IS OFF PAVEMENT.
6. CONSTRUCTION OF SANITARY SEWER MAY ENCOUNTER GROUNDWATER, CONTRACTOR TO OBTAIN DEWATERING PERMITS WHERE NECESSARY.
7. THE SIZE, TYPE AND LOCATION OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THESE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE OF ALL UNDERGROUND UTILITIES IN THE AREA OF THE WORK. BEFORE COMMENCING NEW CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR ALL UNKNOWN UNDERGROUND UTILITIES.
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CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
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APPROVAL BLOCK

ENGINEERING REVIEW
CITY OF LONGMONT

☐ No Exceptions Taken
☐ Make Corrections Noted
☐ Rejected – See Checklist

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REVIEW ENGINEER _____ DATE _____

Date:
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FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631

DATE: 08.15.2023
SCALE: 1" = 250'
REVIEWED BY: S. Thomas
PROJECT: 911-016
DESIGNED BY: S. Hallauer
DRAWN BY: S. Hallauer

TERRY LAKE REGIONAL SANITARY SEWER
STORMWATER POLLUTION CONTROL
PRE-CONSTRUCTION PLAN

Sheet
SPC2
2 of 5

DRAWING FILENAME: D:\Projects\911-016\Dwg\Civil\911-016_SWC-05_SPC2-OVERALL.dwg LAYOUT NAME: SPC2 DATE: Sep 05, 2023 - 11:55am CAD OPERATOR: Stephanie
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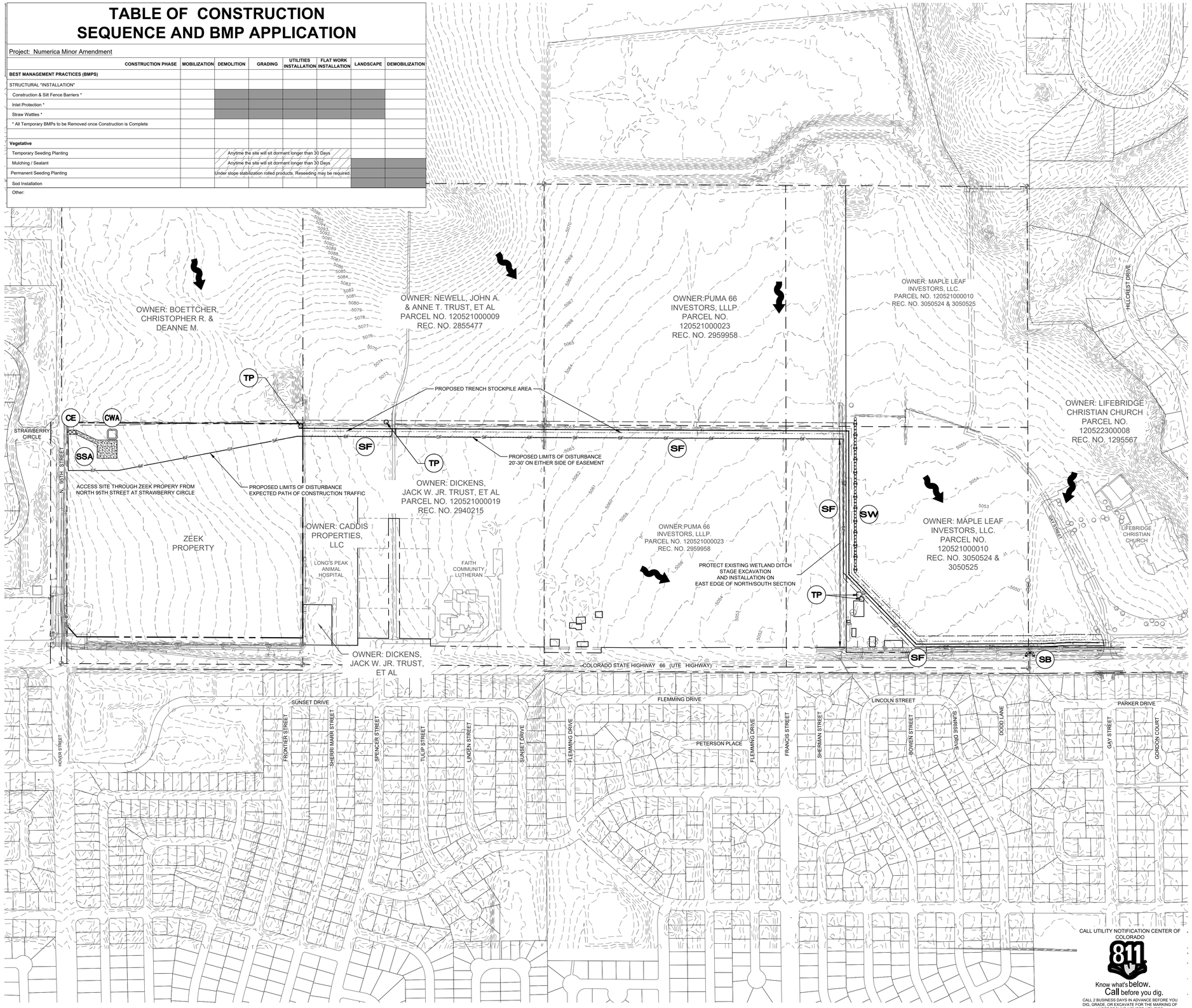

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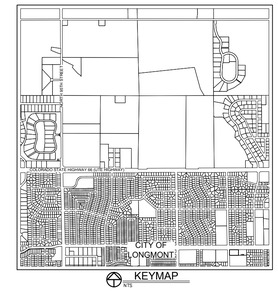
NORTH

250 0 250 500 750 Feet

(IN FEET)
1 inch = 250 ft.



KEYMAP

LEGEND:

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GREELEY: 820 8th Street, 80631

DATE: 08.15.2023
SCALE: 1" = 250'
DESIGNED BY: S. Hollauer
DRAWN BY: S. Hollauer
REVIEWED BY: S. Thomas
PROJECT: 911-016

TERRY LAKE REGIONAL SANITARY SEWER
STORMWATER POLLUTION CONTROL DURING-CONSTRUCTION PLAN

Sheet SPC3
3 of 5

DRAWING FILENAME: D:\Projects\911-016\Dwg\Dsn\911-016_Dsn-05_SPC0-OVERALL.dwg LAYOUT NAME: SPC3 DATE: Sep 05, 2023 - 11:55am CAD OPERATOR: Stephanie
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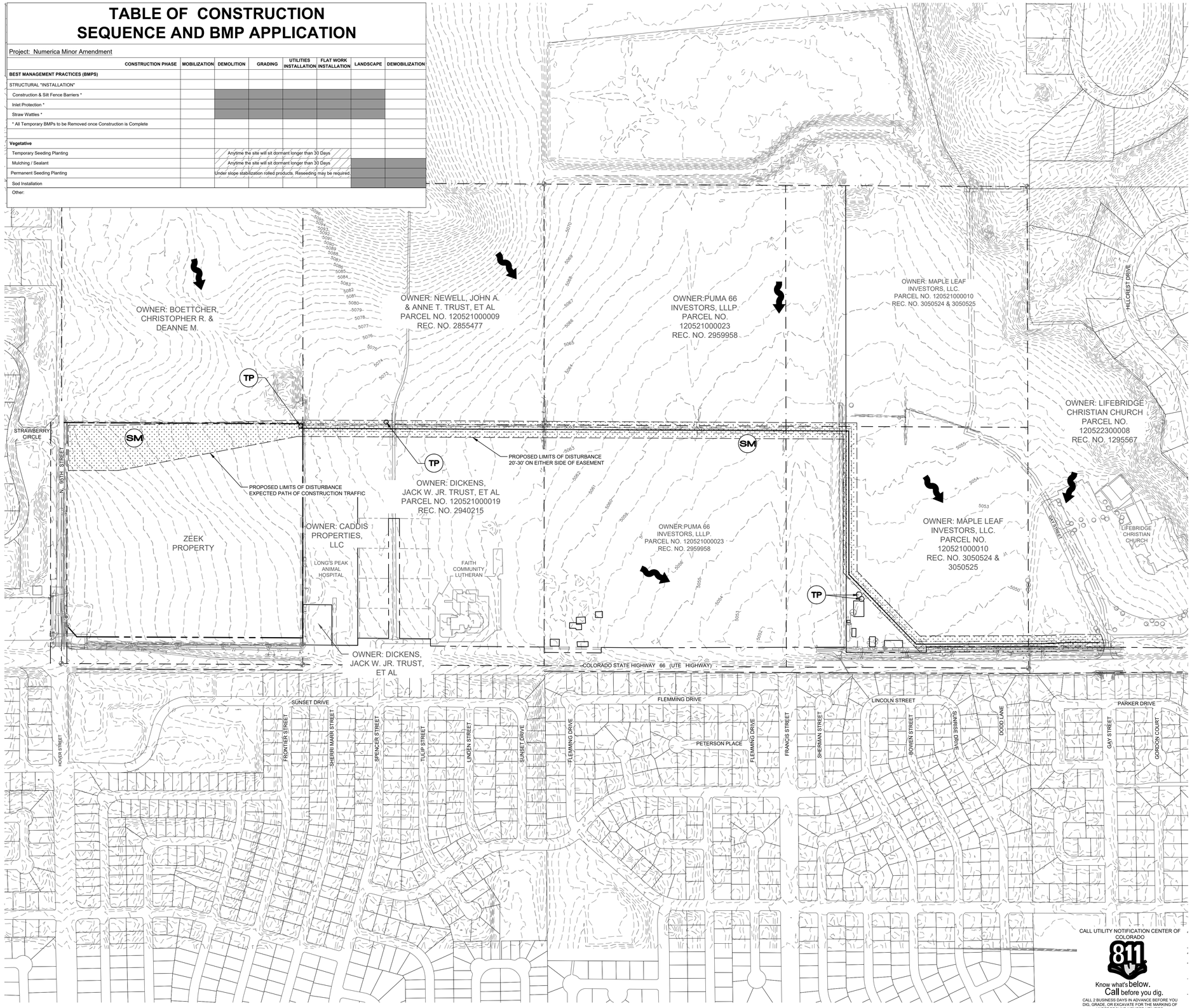

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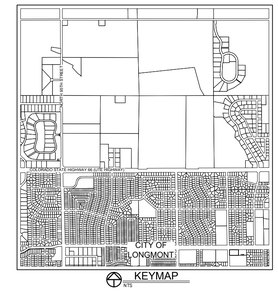

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PROJECT: 911-016	DESIGNED BY: S. Hallauer	DRAWN BY: S. Hallauer
DATE: 08.15.2023	SCALE: 1" = 250'	REVIEWED BY: S. Thomas

TERRY LAKE REGIONAL SANITARY SEWER

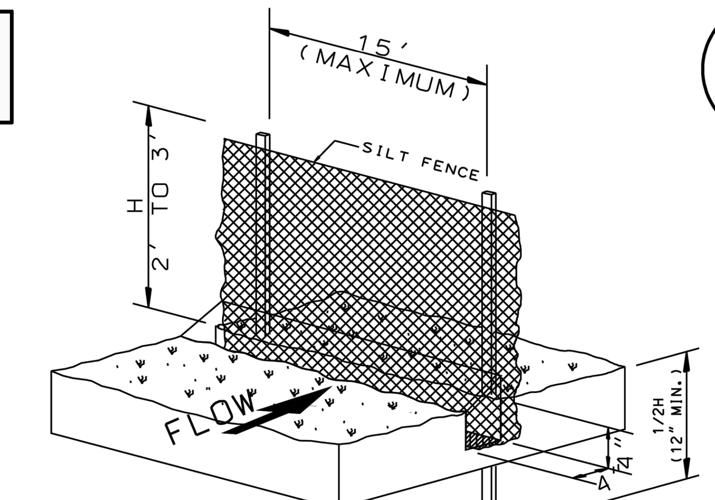
STORMWATER POLLUTION CONTROL FINAL STABILIZATION PLAN

Sheet
SPC4
4 of 5

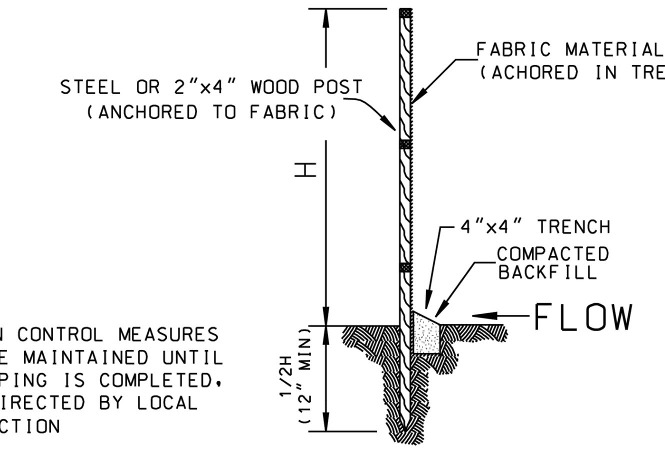
DRAWING FILENAME: D:\Projects\911-016\Dwg\Dsn\911-016_Dsn-05_SPC0-OVERALL.dwg LAYOUT NAME: SPC4 DATE: Sep 05, 2023 - 11:55am CAD OPERATOR: Stephanie
LIST OF XREFS: [911-016_ADD][911-016_ACAD][911-016_Xbase][911-016_Xsurvey][911-016_XSITE][911-016_XUTE][911-016_SPCP-ADDS-Border]

Attachment B - Revised Application Materials

SF



SILT FENCE INSTALLATION
-NTS-



NOTE: EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL LANDSCAPING IS COMPLETED, OR AS DIRECTED BY LOCAL JURISDICTION

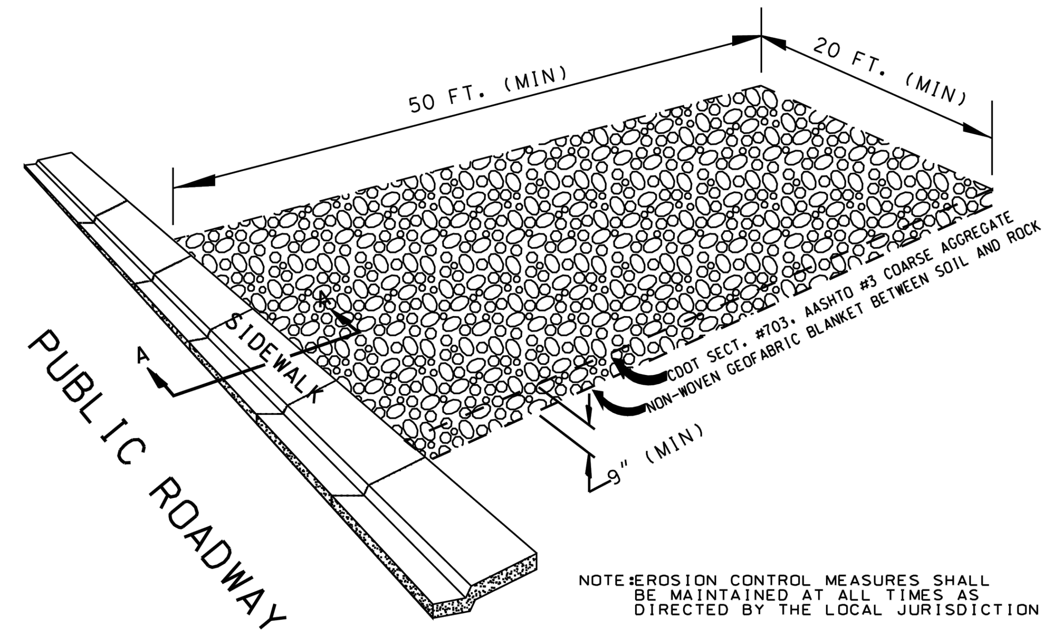
SECTION
-NTS-

Urban Drainage and Flood Control District
Drainage Criteria Manual (V.3)

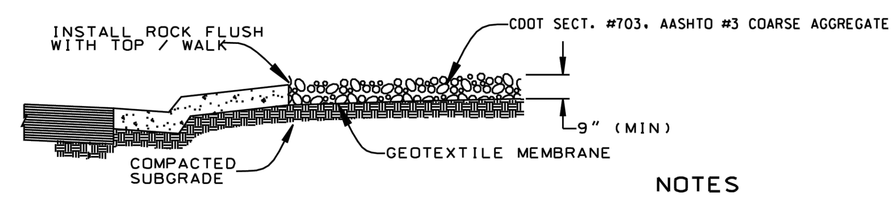
PUBLIC WORKS DIVISION | STORM DRAINAGE SILT FENCE EROSION BARRIER DETAIL 100-09 REB
DATE: SEPTEMBER 2005 SCALE: NOT TO SCALE

200 SPC5 TYPICAL SILT FENCE NOT TO SCALE

CE



NOTE: EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES AS DIRECTED BY THE LOCAL JURISDICTION



SECTION A-A
-NTS-

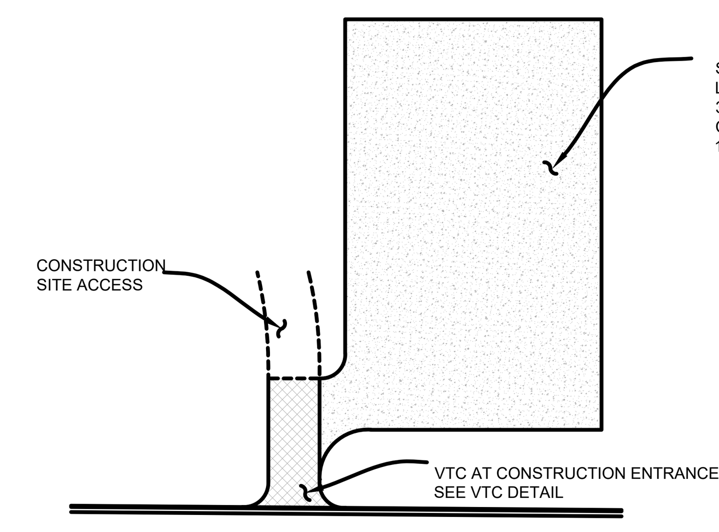
NOTES
1. ALL ROCK TO BE REMOVED UPON COMPLETION OF CONSTRUCTION.
2. PUBLIC ROADWAY TO BE KEPT CLEAN AND FREE OF MUD, DIRT AND DEBRI AT ALL TIMES.

Urban Drainage and Flood Control District
Drainage Criteria Manual (V.3)

PUBLIC WORKS DIVISION | STORM DRAINAGE CONSTRUCTION STAGING PAD DETAIL 100-11 REB
DATE: SEPTEMBER, 2005 SCALE: NOT TO SCALE

201 SPC5 VEHICLE TRACKING PAD NOT TO SCALE

SSA



PLAN

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR GENERAL LOCATION OF STAGING AREA. CONTRACTOR MAY MODIFY LOCATION AND SIZE OF STABILIZED STAGING AREA WITH APPROVAL FROM LOCAL JURISDICTION.
2. STABILIZED STAGING AREA SHALL BE LARGE ENOUGH TO FULLY CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
3. IF REQUIRED BY THE LOCAL JURISDICTION, SITE ACCESS ROADS SHALL BE STABILIZED IN THE SAME MANNER AS THE STAGING AREA.
4. STAGING AREA SHALL BE STABILIZED PRIOR TO ANY OTHER OPERATIONS ON THE SITE.
5. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM OF 3" OF GRANULAR MATERIAL (GRAVEL OR CLEAN RECYCLED CONCRETE).

STABILIZED STAGING AREA MAINTENANCE NOTES

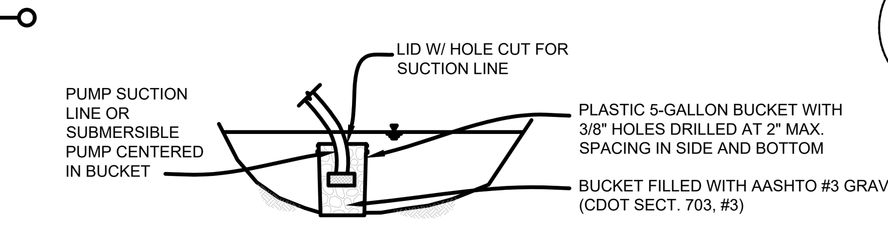
1. THE SWMP MANAGER SHALL INSPECT THE STABILIZED STAGING AREA WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
2. SWMP MANAGER SHALL PROVIDE ADDITIONAL THICKNESS OF GRANULAR MATERIAL IF ANY RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.
3. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
4. ANY ACCUMULATED DIRT OR MUD SHALL BE REMOVED FROM THE SURFACE OF THE STABILIZED STAGING AREA.
5. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.

DETAIL BASED ON DETAILS PROVIDED BY DOUGLAS COUNTY

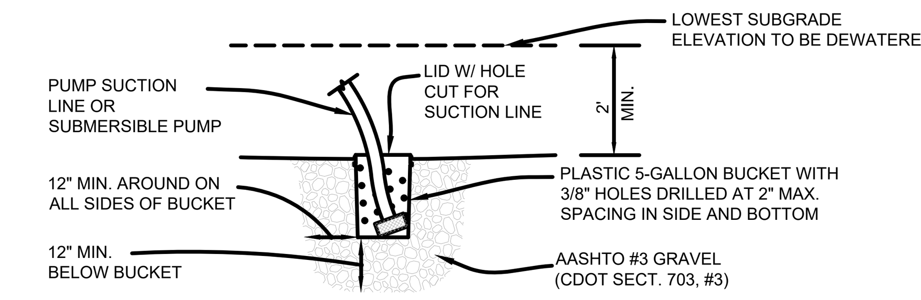
Urban Drainage and Flood Control District Drainage Criteria Manual (V.3) | Figure C3-1 STABILIZED STAGING AREA

202 SPC5 STABILIZED STAGING AREA NOT TO SCALE

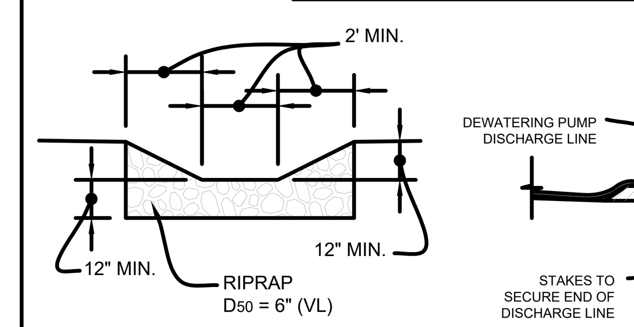
DW



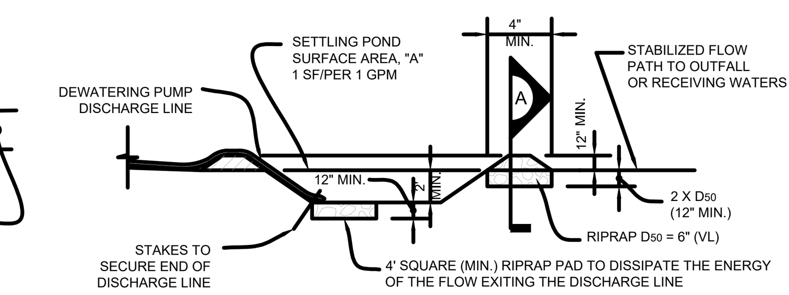
ALTERNATE FOR DRAINING POND ALREADY FILLED WITH WATER



DEWATERING SUMP FOR SUBMERSED PUMP



SETTLING BASIN - DETAIL A



SUMP DISCHARGE SETTLING BASIN

DEWATERING INSTALLATION NOTES

1. THE SWMP MANAGER SHALL OBTAIN A CONSTRUCTION DISCHARGE (DEWATERING) PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT PRIOR TO ANY DEWATERING OPERATIONS. ALL DEWATERING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PERMITS.
2. THE SWMP MANAGER SHALL PROVIDE, OPERATE, AND MAINTAIN DEWATERING SYSTEMS OF SUFFICIENT SIZE AND CAPACITY TO PERMIT EXCAVATION AND SUBSEQUENT CONSTRUCTION IN DRY CONDITIONS AND TO LOWER AND MAINTAIN THE GROUNDWATER LEVEL A MINIMUM OF 2-FEET BELOW THE LOWEST POINT OF EXCAVATION AND CONTINUOUSLY MAINTAIN EXCAVATIONS FREE OF WATER UNTIL BACK-FILLED TO FINAL GRADE.
3. DEWATERING OPERATIONS SHALL USE ONE OR MORE OF THE DEWATERING SUMPS SHOWN ABOVE, WELL POINTS, OR OTHER MEANS APPROVED BY THE LOCAL JURISDICTION TO REDUCE THE PUMPING OF SEDIMENT, AND SHALL PROVIDE A TEMPORARY BASIN FOR SETTLING PUMPED DISCHARGES PRIOR TO RELEASE OFF SITE OR TO A RECEIVING WATER. A SEDIMENT BASIN MAY BE USED IN LIEU OF SUMP DISCHARGE SETTLING BASIN SHOWN ABOVE.
4. A 4' SQUARE RIPRAP PAD SHALL BE PLACED AT DISCHARGE POINT.
5. THE DISCHARGE END OF THE LINE SHALL BE STAKED IN PLACES TO PREVENT MOVEMENT OF RIPRAP PAD.

DEWATERING MAINTENANCE NOTES

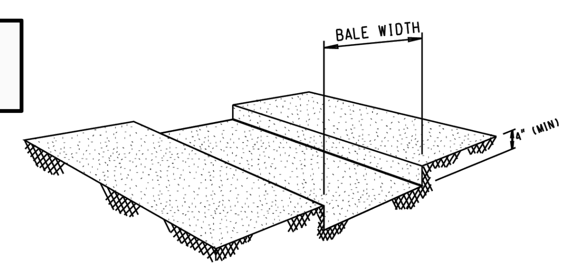
1. THE SWMP MANAGER SHALL INSPECT DEWATERING SYSTEMS AND PERFORM ANY NECESSARY REPAIRS OR MAINTENANCE AT LEAST TWICE A DAY.
2. TEMPORARY SETTLING BASINS SHALL BE REMOVED WHEN NO LONGER NEEDED FOR DEWATERING OPERATIONS. ANY DISTURBED AREA SHALL BE COVERED WITH TOP SOIL,DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

DETAIL BASED ON DETAILS PROVIDED BY DOUGLAS COUNTY, COLORADO

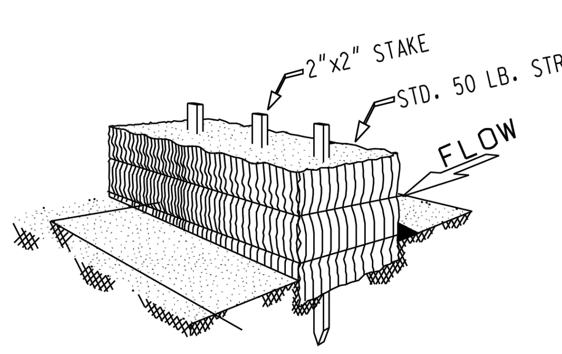
URBAN DRAINAGE AND FLOOD CONTROL DISTRICT DRAINAGE CRITERIA MANUAL (V.3) | Figure C3-3 CONCRETE WASHOUT AREA DEWATERING DETAIL

203 SPC5 TYPICAL DEWATERING NOT TO SCALE

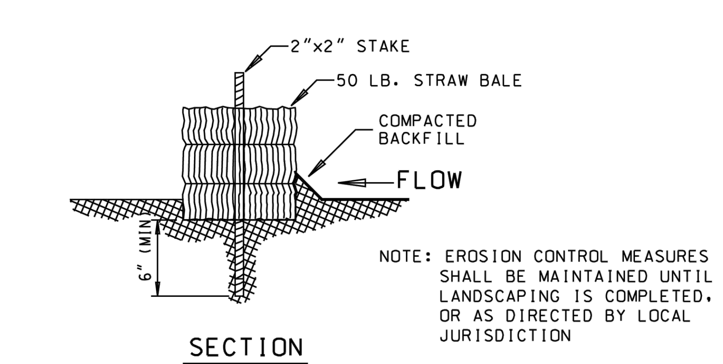
SW



TRENCH EXCAVATION
-NTS-



STRAW BALE INSTALLATION
-NTS-



NOTE: EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL LANDSCAPING IS COMPLETED, OR AS DIRECTED BY LOCAL JURISDICTION

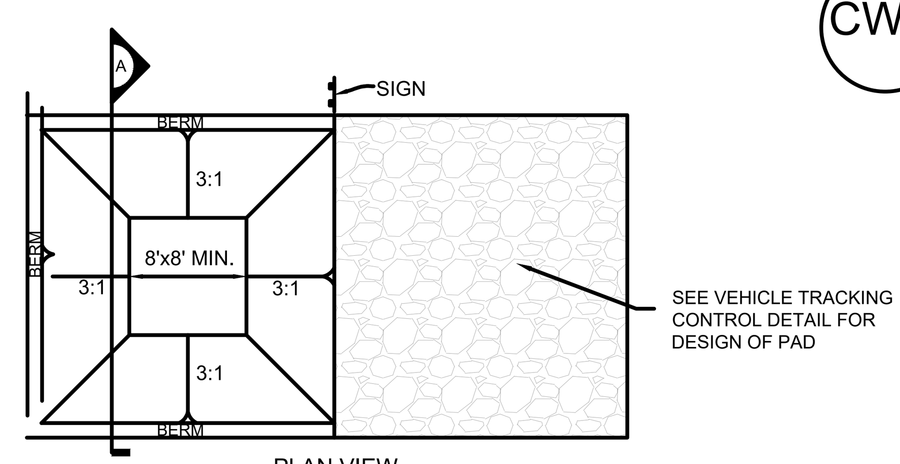
SECTION
-NTS-

Urban Drainage and Flood Control District
Drainage Criteria Manual (V.3)

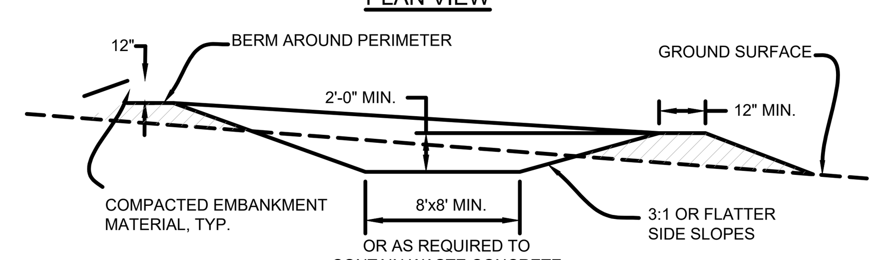
PUBLIC WORKS DIVISION | STRAW BALE EROSION BARRIER DETAIL 300-08 REB
DATE: SEPTEMBER, 2005 SCALE: NOT TO SCALE

204 SPC5 STRAW WATTLE NOT TO SCALE

CWA



PLAN VIEW



SECTION A

CONCRETE WASHOUT AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATIONS OF CONCRETE WASHOUT AREA
2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
3. VEHICLE TRACKING CONTROL IS REQUIRED AT THE ACCESS POINT.
4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
5. EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION

CONCRETE WASHOUT AREA MAINTENANCE NOTES

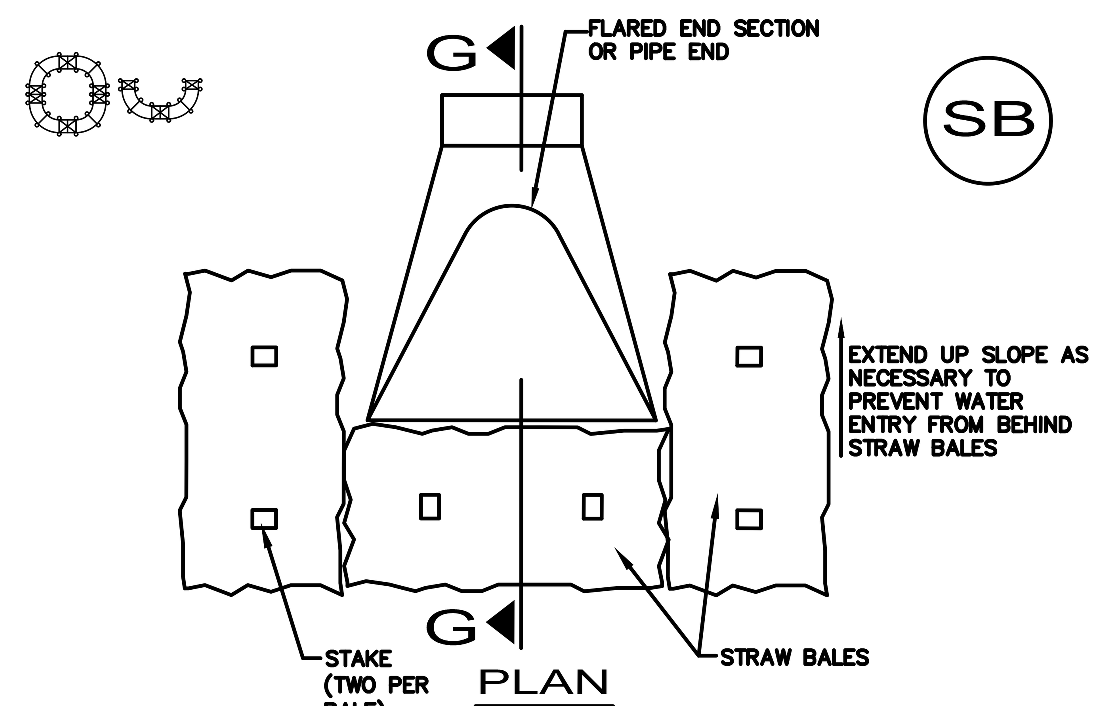
1. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
2. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
3. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, DRILL SEED AND CRIMP MULCH OR OTHERWISE STABILIZE IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
4. INSPECT WEEKLY, DURING AND AFTER ANY STORM EVENT.

DETAIL BASED ON DETAILS PROVIDED BY DOUGLAS COUNTY

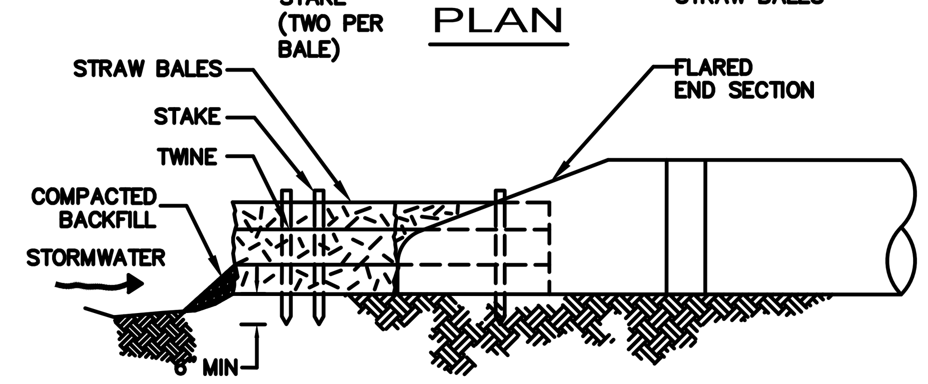
Urban Drainage and Flood Control District Drainage Criteria Manual (V.3) | Figure C3-2 CONCRETE WASHOUT AREA

205 SPC5 CONCRETE WASHOUT AREA NOT TO SCALE

SB



PLAN



SECTION G-G

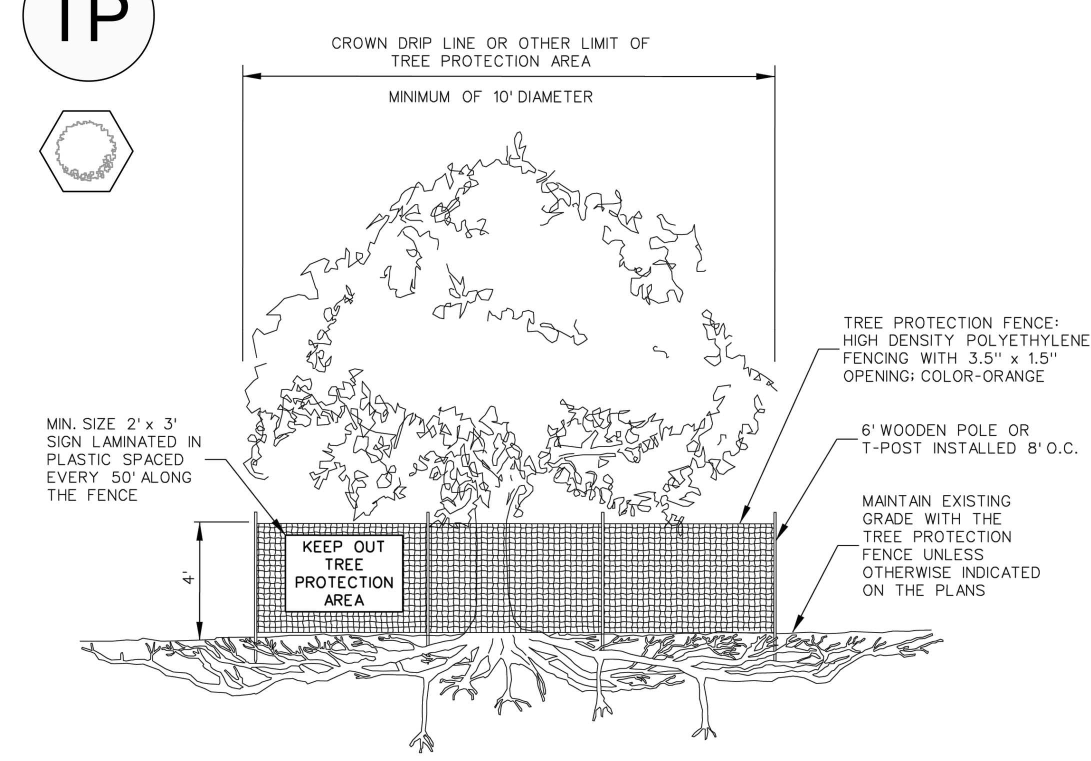
GENERAL NOTES:
1. INSPECT, REPAIR, AND REPLACE, (IF NECESSARY) THE FILTERS AFTER EACH STORM EVENT.
2. ALL BALES MUST BE REPLACED AFTER 12 MONTHS UNLESS APPROVAL IS GRANTED BY THE ENGINEERING DIVISION FOR LONGER USE.

STRAW BALE INLET PROTECTION

206 SPC5 STRAW BALE INLET PROTECTION NOT TO SCALE

TP

600-27



NOTES:
1. NO PRUNING SHALL BE PERFORMED EXCEPT BY CITY LICENSED TREE CONTRACTOR.
2. NO STORAGE OF MATERIALS ALLOWED INSIDE TREE PROTECTION AREA.
3. NO EQUIPMENT SHALL OPERATE INSIDE TREE PROTECTION AREA INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
4. SUPPLEMENTAL TREE WATERING SHALL BE REQUIRED IF THERE IS NO EXISTING IRRIGATION. CONSULT FORESTRY SERVICE.
5. SEE SECTION 600 OF CITY STANDARDS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.

TREE PROTECTION
N.T.S.

REVISIONS
8-2019 JMR

Print Date: 4/17/2020
File: Section 600.dgnlib
SCALE: NOT TO SCALE

CITY of LONGMONT
385 Kimbark Street Longmont, CO 80501 Phone: 303-651-8304 FAX: 303-651-8352

DETAIL 600-27

207 SPC5 TREE PROTECTION PERIMETER NOT TO SCALE

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811 Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

APPROVAL BLOCK
ENGINEERING REVIEW
CITY OF LONGMONT
Review is for general compliance with City of Longmont standards and requirements. The City of Longmont is not responsible for the correctness of design, dimensions, details, quantities and design safety.
☐ No Exceptions Taken
☐ Make Corrections Noted
☐ Rejected - See Checklist
REVIEW ENGINEER
DATE

Revisions: No. By: Date:

REVIEW SET
NOT FOR CONSTRUCTION
08.15.2023

These drawings are instruments of service provided by Northern Engineering Services, Inc. and are not to be used for any type of construction unless signed and sealed by a Professional Engineer in the employ of Northern Engineering Services, Inc.

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

PROJECT: 911-016
DATE: 08.15.2023
DESIGNED BY: S. Hallauer
SCALE: N/A
DRAWN BY: S. Hallauer
REVIEWED BY: S. Thomas

TERRY LAKE REGIONAL SANITARY SEWER
STORMWATER POLLUTION CONTROL DETAILS

Sheet SPC5
5 of 5

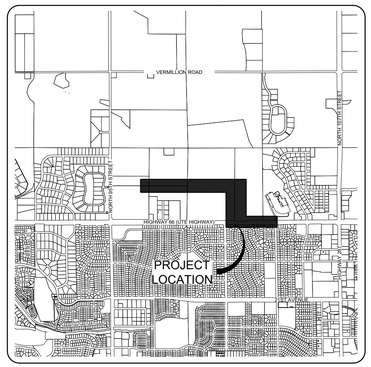
DRAWING FILENAME: D:\Projects\911-016\Dwg\Drng\911-016_SAN-OS_SPCP-OVERALL.dwg LAYOUT NAME: SPC5 DATE: Sep 05, 2023 - 11:25am CAD OPERATOR: stephanie
LIST OF XREFS: [911-016_xADJ] [911-016_xExist] [911-016_xSurveyText] [911-016_xSITE] [911-016_xUtil] [911-016_Keymap] [911-016_xEROS_leg] [911-016_SPCP-NES-xborder]

PUBLIC IMPROVEMENT PLANS

TERRY LAKE REGIONAL SANITARY SEWER

A TRACT OF LAND LOCATED IN THE SOUTHERN HALF OF SECTIONS 21 & 22, TOWNSHIP 3 NORTH,
RANGE 69 WEST OF THE 6TH P.M., CITY OF LONGMONT,
COUNTY OF BOULDER, COLORADO

AUGUST 2023



NORTH

VICINITY MAP
1"=2500'

PROJECT BENCHMARKS:

PROJECT DATUM: NAVD88

BENCHMARKS:
City of Longmont Benchmark "NGS U410"
1.45 miles W. of Hwy 287 on Hwy 66, 585' E. of the CL of N. 95th, (Hover Rd.), 93.2' N. of the CL of Hwy 66, and 5.6' E. of a utility pole. (rod in range box)
Elevation = 5090.10

City of Longmont Benchmark "F-030"
North side of Hwy 66 at North quarter of Section 28 at fence corner. ½ mile east of Hover Rd. 50' West of the S.W. corner house. +/- 6' East of P.P.
Elevation = 5063.93

Basis of Bearings
The South line of the Southwest Quarter of the Southwest Quarter of Section 21 as bearing North 89°43'25" West.

FIELD SURVEY BY:

Original Field Survey:
Northern Engineering
Project No. 911-016
Date: May 22nd, 2017

Additional Field Survey:
Northern Engineering
Project No. 911-016
Date: Dec 1st, 2017

SUBSURFACE EXPLORATION BY:

Soilogic, Inc.
Preliminary Geotechnical Subsurface Exploration Report
Proposed Zeek Annexation
Northeast Corner of N. 95th Street and Colorado State Highway 66
Boulder County, Colorado
Soilogic Project # 14-1083
Date: May 20, 2014

CONTACT INFORMATION

PROJECT TEAM:

OWNER/APPLICANT
The Landhuis Company
Jeff Mark, President
212 N Wahsatch Ave, Suite #301
Colorado Springs, CO 80903
(719) 635-3200

SITE ENGINEER
Northern Engineering Services, Inc.
Stephanie Thomas, PE
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521
(970) 221-4158

SITE SURVEYOR
Northern Engineering Services, Inc.
Steven A. Lund, PLS
820 8th Street
Greeley, CO 80631
(970) 395-9880

UTILITY CONTACT LIST: *

UTILITY COMPANY	CONTACT INFORMATION
GAS---------- Xcel Energy----------	Donna George---------- donna.l.george@xcelenergy.com
ELECTRIC-------- Longmont Power and Communications----	Rocco Supino---------- (303) 651-8706
CABLE---------- Comcast----------	Marcus Petty----------marcus_petty@comcast.com
TELECOM-------- Centurylink----------	Christopher Janoski---------- christopher.janoski@centurylink.com
WATER---------- City of Longmont----------	Wes Lowrie---------- (303) 651-8814
WASTEWATER- City of Longmont----------	Doug Gossett---------- (303) 651-8922
STORMWATER- City of Longmont----------	Tyler Dell---------- (303) 651-8399

* This list is provided as a courtesy reference only. Northern Engineering Services assumes no responsibility for the accuracy or completeness of this list. In no way shall this list relinquish the Contractor's responsibility for locating all utilities prior to commencing any construction activity. Please contact the Utility Notification Center of Colorado (UNCC) at 811 for additional information.

SHEET INDEX

1	CS1	COVER SHEET & GENERAL CONSTRUCTION NOTES
SANITARY SHEETS		
2	SS1	DEMOLITION & OVERALL SANITARY PLAN
3-7	SS2-SS6	SANITARY LINE A PLAN & PROFILE
DETAIL SHEETS		
8	D1	SITE & SANITARY DETAILS

APPROVAL BLOCK

ENGINEERING REVIEW
CITY OF LONGMONT

☐ No Exceptions Taken
☐ Make Corrections Noted
☐ Rejected – See Checklist

Review is for general compliance with City of Longmont standards and requirements. The City of Longmont is not responsible for the correctness of design, dimensions, details, quantities and design safety.

REVIEW ENGINEER _____ DATE _____

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
Know what's below.
Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

GENERAL NOTES:

1. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY, OR EASEMENT SHALL CONFORM TO THE CITY OF LONGMONT CONSTRUCTION SPECIFICATIONS AND DESIGN STANDARDS.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS PRIOR TO COMMENCEMENT OF ANY WORK ON THE PROJECT.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER/DEVELOPER, AND THE CITY, OF ANY PROBLEMS IN CONFORMING TO THE APPROVED PLANS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO ITS CONSTRUCTION.
4. IT IS THE RESPONSIBILITY IF THE DEVELOPER DURING CONSTRUCTION ACTIVITIES TO RESOLVE CONSTRUCTION PROBLEMS DUE TO CHANGED CONDITIONS, OR DESIGN ERRORS ENCOUNTERED BY THE CONTRACTOR DURING THE PROGRESS OF ANY PORTION OF THE PROJECT. IF, IN THE OPINION OF THE CITY, THE MODIFICATIONS PROPOSED BY THE DEVELOPER, TO THE APPROVED PLANS, INVOLVE SIGNIFICANT CHANGES TO THE CHARACTER OF THE WORK, OR TO THE FUTURE CONTIGUOUS PUBLIC OR PRIVATE IMPROVEMENTS, THE DEVELOPER SHALL BE RESPONSIBLE FOR RESUBMITTING THE REVISED PLANS TO THE CITY OF LONGMONT FOR APPROVAL PRIOR TO ANY FURTHER ACCORDANCE WITH THE APPROVED PLANS, OR THE APPROVED REVISED PLANS, SHALL BE REMOVED AND RECONSTRUCTED ACCORDING TO THE APPROVED PLAN.
5. THE GRADING PLAN IS FOR ROUGH GRADING ONLY. CHANGES MAY BE NECESSARY TO BRING PLANS INTO CONFORMANCE WITH APPROVED FINAL DRAINAGE PLAN AND SITE PLAN.
6. A WATER TRUCK, IF CALLED FOR BY THE INSPECTOR, WILL BE PROVIDED, BY THE CONTRACTOR, TO KEEP DUST IN CHECK.
7. ANY SETTLEMENT OR SOIL ACCUMULATION, BEYOND THE PROPERTY LIMITS, DUE TO GRADING OR EROSION SHALL BE REPAIRED, BY THE CONTRACTOR, IMMEDIATELY.
8. NO GRADING SHALL TAKE PLACE IN DELINEATED FLOOD HAZARD AREAS UNTIL THE FINAL DRAINAGE PLAN HAS BEEN APPROVED AND ALL APPROPRIATE PERMITS HAVE BEEN OBTAINED.
9. ANY CONSTRUCTION DEBRIS, MUD TRACKING, SEDIMENT OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO OR, ACCUMULATE IN, THE FLOWLINES AND PUBLIC RIGHTS OF WAY OF THE CITY,, RESULTING FROM THE PROJECT, SHALL BE REMOVED IMMEDIATELY, BY THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY FIX ANY EXCAVATION, OR EXCESSIVE PAVEMENT FAILURE CAUSED BY THE PROJECT, AND SHALL PROPERLY BARRICADE THE SITE UNTIL CONSTRUCTION IS COMPLETE, FAILURE, BY THE CONTRACTOR, TO CORRECT ANY OF THE ABOVE WITHIN 48 HOURS OF WRITTEN NOTICE, BY THE CITY, SHALL CAUSE THE CITY TO ISSUE A STOP WORK ORDER (RED TAG) AND/OR DO THE WORK AND MAKE A CLAIM AGAINST THE PROJECT'S LETTER OF CREDIT FOR ANY COSTS INCURRED BY THE CITY.
10. THE CONTRACTOR SHALL BE SOLELY, AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS AT, AND ADJACENT TO THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, DURING THE PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE CITY TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON,, OR NEAR THE CONSTRUCTION SITE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION. APPENDIX - 11 - EFFECTIVE JULY 1, 2007
12. ALL UTILITY POLES SHALL BE RELOCATED PRIOR TO PLACEMENT OF ANY CONCRETE.
13. THE CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS PRIOR TO ADJUSTING ALL CLEANOUTS, MANHOLES, VALVES, BOXES, SURVEY MONUMENTS, AND ANY OTHER FIXTURES TO FINISHED GRADE PRIOR TO FINAL PAVING.
14. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGPERSONS, OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY IN ACCORDANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND THE LONGMONT SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
15. THE CONTRACTOR SHALL PROVIDE INGRESS AND EGRESS TO PRIVATE PROPERTY ADJACENT TO THE PROJECT THROUGHOUT THE PERIOD OF CONSTRUCTION. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL OBTAIN A WRITTEN AGREEMENT FROM THE PROPERTY OWNERS IMPACTED BY THIS ACCESS. UPON REQUEST, THE CONTRACTOR SHALL PROVIDE A COPY OF THESE WRITTEN AGREEMENTS TO THE CITY.
16. PRIOR TO FINAL PLACEMENT OF SURFACE PAVEMENT, ALL UNDERGROUND UTILITY MAINS SHALL BE INSTALLED AND SERVICE CONNECTIONS STUBBED OUT BEYOND CURB LINE, WHEN ALLOWED BY THE UTILITY. SERVICE FROM PUBLIC UTILITIES AND FROM SANITARY SEWERS SHALL BE MADE AVAILABLE FOR EACH LOT IN SUCH A MANNER THAT WILL NOT BE NECESSARY TO DISTURB THE STREET PAVEMENT, CURB, GUTTER, AND SIDEWALK WHEN CONNECTIONS ARE MADE.
17. REPRODUCIBLE COPIES OF "AS BUILT" PLANS SHALL BE SUBMITTED TO THE CITY OF LONGMONT PRIOR TO CONSTRUCTION ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.
18. THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR AT LEAST 24 HOURS PRIOR TO DESIRED INSPECTION.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE OF EROSION CONTROL DEVICES.
20. CONSTRUCTION STAGING AREAS WILL BE REQUIRED TO STAY WITHIN THE LIMITS OF CONSTRUCTION AND AS APPROVED IN THE STORMWATER MANAGEMENT PLAN.
21. THE APPROVED STORMWATER MANAGEMENT PLAN WILL BE REQUIRED ON SITE AT ALL TIMES.
22. THE CONTRACTOR SHALL OBTAIN A GROUNDWATER DISCHARGE PERMIT FROM THE STATE OF COLORADO PRIOR TO STARTING CONSTRUCTION.
23. DUE TO PORTIONS OF THE PROPOSED DEVELOPMENT EXISTING IN BOTH THE CITY OF LONGMONT AND UNINCORPORATED BOULDER COUNTY, CONTRACTOR SHALL OBTAIN NECESSARY APPROVALS AND PERMITTING FROM BOULDER COUNTY.

STORMWATER MANAGEMENT NOTES:

1. THE CONTRACTOR AND/OR AUTHORIZED AGENTS SHALL REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO OR, ACCUMULATE IN, THE FLOW LINES AND PUBLIC RIGHTS OF WAYS OF THE CITY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SAID REMOVAL SHALL BE CONDUCTED IN A TIMELY MANNER.
2. THIS CONSTRUCTION ACTIVITIES STORMWATER MANAGEMENT PLAN HAS BEEN SUBMITTED AND APPROVED AS PART OF AN APPLICATION FOR A STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES FILED WITH THE CITY OF LONGMONT. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS PLAN SHALL BE THE OBLIGATION OF THE PERMIT HOLDER UNTIL SUCH TIME AS THE PLAN IS PROPERLY COMPLETED AND THE PERMIT IS RELEASED.
3. THE CONTRACTOR SHALL PREVENT SEDIMENT, DEBRIS AND ALL OTHER POLLUTANTS FROM ENTERING THE STORM SEWER SYSTEM DURING ALL DEMOLITION, EXCAVATION, TRENCHING, BORING, GRADING OR OTHER CONSTRUCTION OPERATIONS THAT ARE PART OF THIS PROJECT. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, WETLANDS, ETC., RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
4. THE CONTRACTOR SHALL LOCATE, INSTALL, AND MAINTAIN ALL EROSION CONTROL AND WATER QUALITY "BEST MANAGEMENT PRACTICES" AS INDICATED IN THE APPROVED STORMWATER MANAGEMENT PLAN.
5. THE DEVELOPER, GENERAL CONTRACTOR, GRADING CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL INSURE THAT ALL LOADS OF CUT AND FILL MATERIAL IMPORTED TO OR EXPORTED FROM THIS SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORT ON PUBLIC RIGHTS OF WAY.
6. SOILS THAT WILL BE STOCKPILED FOR MORE THAN 30 DAYS SHALL BE PROTECTED FROM WIND AND WATER EROSION WITHIN 14 DAYS OF STOCKPILE CONSTRUCTION. IF STOCKPILES ARE LOCATED WITHIN 100 FEET OF A DRAINAGEWAY, ADDITIONAL SEDIMENT CONTROLS SUCH AS TEMPORARY DIKES OR SILT FENCE SHALL BE REQUIRED.
7. APPROVED EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR OF THE DURATION OF THIS PROJECT. ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED FROM A BMP WHEN THE SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTIONING OF THE BMP.
8. MODIFICATION/TERMINATION OF A STORMWATER DISCHARGE PERMIT FOR CONSTRUCTION ACTIVITY BY THE DEVELOPER, CONTRACTOR OR THEIR AUTHORIZED AGENTS SHALL REQUIRE TIMELY NOTIFICATION OF AND APPROVAL FROM THE CITY OF LONGMONT.

POWER & COMMUNICATIONS NOTES:

1. WHERE CITY OF LONGMONT POWER & COMMUNICATIONS (LPC) OVERHEAD ELECTRIC FACILITIES EXIST IN THE DEVELOPMENT AREA, THE CONTRACTOR MUST KEEP ALL EQUIPMENT OPERATION A MINIMUM OF TEN FEET FROM EXISTING OVERHEAD ELECTRIC LINES. IF THIS IS NOT FEASIBLE, OR CONDITIONS WARRANT ADDITIONAL PROTECTION OR POLE STABILIZATION, THE CONTRACTOR MUST CONTACT THE LPC OPERATIONS CONSTRUCTION COORDINATOR AT 303-651-8386. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE PROTECTIVE COVERING AND/OR POLE STABILIZATION, 48 HOURS IN ADVANCE. SHOULD THE ELECTRIC FACILITIES BE DAMAGED, THE CONTRACTOR MUST CONTACT LPC AT 303-651-8386. ADDITIONALLY, ALL COSTS ASSOCIATED WITH REPAIRS WILL BE THE RESPONSIBILITY OF THE DEVELOPER.
2. WHERE EXISTING UNDERGROUND ELECTRIC CABLE EXISTS NEAR THE PROJECT WORK AREA, THEY CANNOT BE DE-ENERGIZED FOR CROSSING PURPOSES. THE CONTRACTOR MUST TAKE ALL PRECAUTION NECESSARY TO PROTECT THE CONSTRUCTION CREW. SHOULD THE CONTRACTOR DAMAGE THESE FACILITIES, CONTACT LONGMONT POWER & COMMUNICATIONS (LPC) IMMEDIATELY AT 303-651- 8386. LPC WILL REPAIR THE FACILITIES AND BILL THE DEVELOPER FOR COSTS ASSOCIATED WITH THE REPAIR OR REPLACEMENT OF THE CABLE.
3. STREETS, PARKING SURFACES AND SIDEWALKS CANNOT BE PAVED OR CONCRETE PLACED UNTIL THE CONDUIT CROSSING FOR USE BY LONGMONT POWER & COMMUNICATIONS (LPC) HAS BEEN INSTALLED. THE CONTRACTOR/DEVELOPER IS RESPONSIBLE FOR INSTALLING SLEEVES UNDER ROADWAYS, CULVERTS, DITCHES, SIDEWALKS AND EXISTING UTILITY FACILITIES FOR THE USE OF LPC'S FACILITIES. NOTIFICATION AND COORDINATION OF ANY DITCH CROSSING IS A DEVELOPER RESPONSIBILITY. GENERALLY, THESE INSTALLATIONS ARE TO HAVE A MINIMUM OF THIRTY-SIX INCHES OF COVER AND MUST CONFORM TO LPC STANDARDS.
4. THE CONTRACTOR SHOULD ORGANIZE THE UTILITY CONSTRUCTION FROM DEEPEST TO SHALLOWEST; THIS INCLUDES PRIVATE LIGHTING AND IRRIGATION. SHOULD LPC MOBILIZE FOR CONSTRUCTION EFFORTS AND FIND CONFLICTS WITH SHALLOW INSTALLATIONS, THE SCOPE OF THE PROJECT MAY REQUIRE EXTRA CHARGES.

SANITARY SEWER NOTES:

1. SEWER PIPE SHALL BE GREEN RIGID POLYVINYL CHLORIDE (PVC) ASTM D3034 (< 15") OR ASTM 679 (> 15") WITH WALL THICKNESS SDR 35. ALL SANITARY SEWER PIPES SHALL BE GREEN.
2. ALL LENGTHS OF SEWER LINE SHOWN ON THE MASTER UTILITY PLAN ARE FROM THE CENTER OF MANHOLE TO THE CENTER OF MANHOLE.
3. ALL SANITARY SEWER MANHOLES SHALL RECEIVE A WATERPROOF COATING.
4. ALL SANITARY SEWER MANHOLES ARE 4 FEET IN DIAMETER UNLESS OTHERWISE NOTED.
5. THE CONTRACTOR SHALL INSTALL TEMPORARY PLUGS IN THE MANHOLES AT THE POINTS OF CONNECTION TO THE EXISTING SEWER SYSTEMS. PLUGS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION ACCEPTANCE IS ISSUED, AT WHICH TIME THE CONTRACTOR SHALL REMOVE THEM.
6. SEWER SERVICES ARE TO BE EXTENDED 15 FEET INTO THE LOT AND MARKED WITH A 2X4. SERVICE LOCATIONS ARE TO BE CHISELED INTO THE CONCRETE WALK.
7. THE CONTRACTOR NEXT TO MANHOLES IN OPEN FIELDS OR UNPAVED AREAS SHALL INSTALL UTILITY MARKER SIGNS. THE SIGNS SHALL BE SPACED NO MORE THAN 400 FEET APART.
8. ALL SANITARY SEWER MANHOLES NOT WITHIN 2 FEET OF PAVEMENT SHALL HAVE AN ACCESS PATH. PATH SHALL SUPPORT THE IMPOSED LOAD OF 60,000 LB VEHICLES IN ALL WEATHER.

NATURAL RESOURCE PROTECTION NOTES:

1. IF CONSTRUCTION ACTIVITIES BEGIN DURING BIRD NESTING SEASON (MARCH 1 - AUGUST 31), THE DEVELOPER SHALL PROVIDE A NEST SURVEY NO SOONER THAN ONE WEEK (7 DAYS) BEFORE ANY STORMWATER CONSTRUCTION ACTIVITY PERMIT (SCAP) IS ISSUED FOR THE PROPERTY.
2. THE DEVELOPER SHALL FOLLOW ALL NESTING BIRD MITIGATION MEASURES RECOMMENDED BY COLORADO PARKS AND WILDLIFE SHOULD NESTING BIDS BE DISCOVERED DURING ANY NEST SURVEY.
3. THE DEVELOPER SHALL INSTALL ALL TREE PROTECTION FENCING SHOWN ON THE PUBLIC IMPROVEMENT PLAN AND CALL TO HAVE IT INSPECTED BEFORE ANY STORMWATER CONSTRUCTION ACTIVITY PERMIT (SCAP) IS ISSUED FOR THE PROPERTY.

Revisions:

No.	Date:
For REVIEW SET NOT FOR CONSTRUCTION	08.15.2023

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FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631

DATE: 08.15.2023
SCALE: N/A
REVIEWED BY: S. Thomas
PROJECT: 911-016
DESIGNED BY: S. Hollauer
DRAWN BY: S. Hollauer

TERRY LAKE REGIONAL SANITARY SEWER

COVER SHEET & GENERAL CONSTRUCTION NOTES

Sheet
CS1
1 of 8

DRAWING FILENAME: D:\Projects\911-016\Dwg\Util\911-016_SAN-05_COVR.dwg LAYOUT NAME: CS1 DATE: Sep 05, 2023 - 11:31am CAD OPERATOR: stephanie
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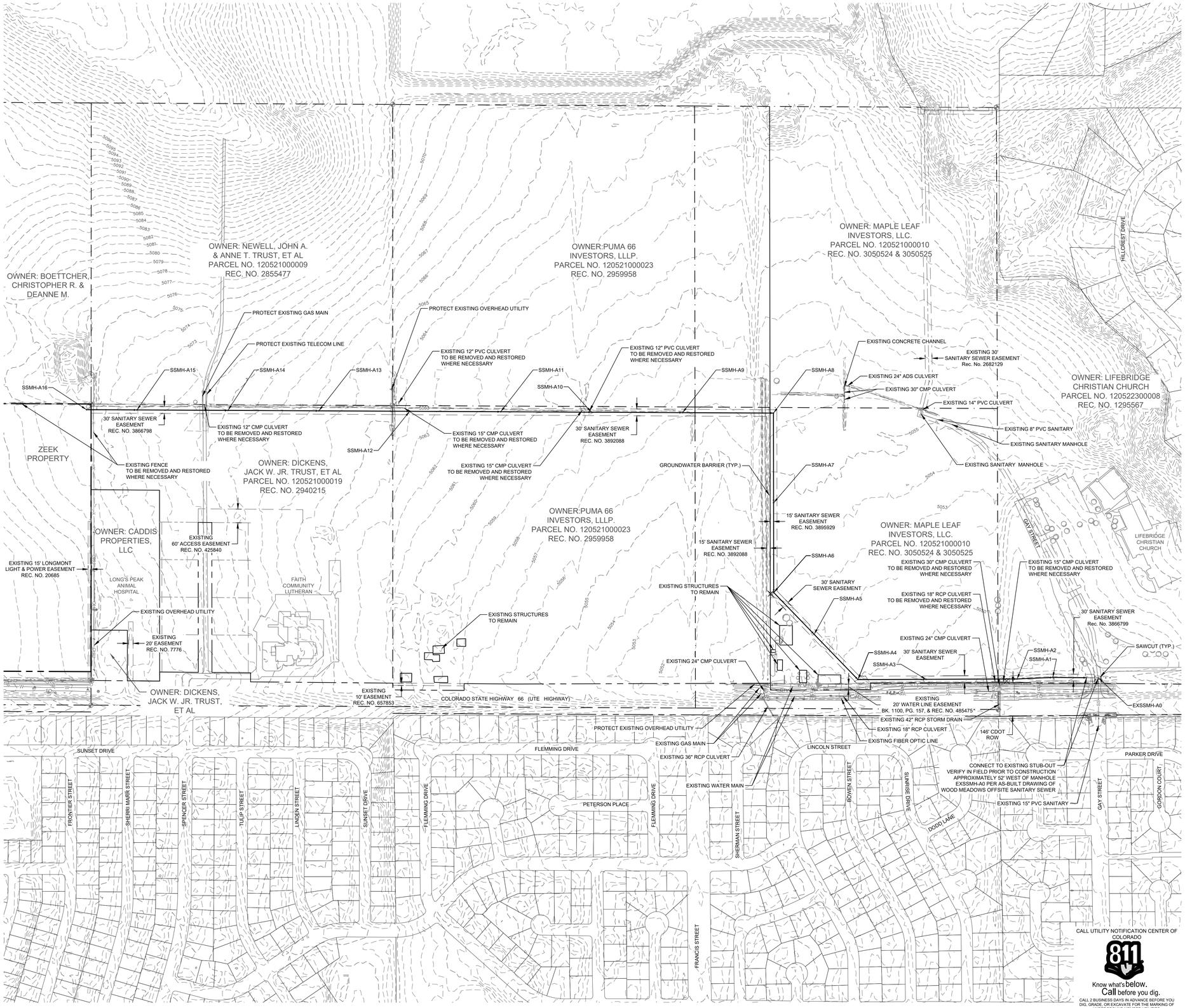
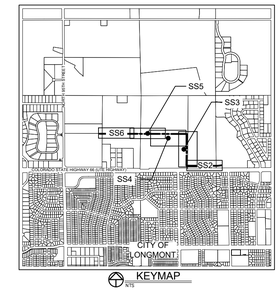


NORTH

200 0 200 400 600 Feet

(IN FEET)
1 inch =200 ft.



LEGEND:

- EXISTING CONTOUR — 4953
- PROPOSED SANITARY SEWER — SSMH-A1
- PROPOSED GROUNDWATER BARRIER
- EXISTING WATER MAIN — W
- EXISTING STORM DRAIN
- EXISTING ELECTRIC — E
- EXISTING TELEPHONE — T
- EXISTING GAS — G
- EXISTING OVERHEAD UTILITY — OHU
- EXISTING LOT LINE
- EASEMENT LINE
- EXISTING TREES (TO REMAIN)
- EXISTING TREES (TO BE REMOVED)

EXISTING WATER VALVE	WV	EXISTING SANITARY MANHOLE	S
EXISTING FIRE HYDRANT		EXISTING SANITARY CLEANOUT	SO
EXISTING WATER METER	W	EXISTING STORM MANHOLE	D
EXISTING WATER MANHOLE		EXISTING FLARED END SECTION	
EXISTING WATER VAULT		EXISTING POWER POLE	
EXISTING WATER SPIGOT		EXISTING UTILITY MARKER	WM GM TM

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11. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING DEMOLITION, REMOVAL, REPLACEMENT, AND DISPOSAL OF ALL FACILITIES AND MATERIAL.
12. CONTRACTOR IS ENCOURAGED TO PERFORM DEMOLITION IN A MANNER THAT MAXIMIZES SALVAGE, RE-USE, AND RECYCLING OF MATERIALS. THIS INCLUDES APPROPRIATE SORTING AND STORING. IN PARTICULAR, DEMOLISHED CONCRETE, ASPHALT, AND BASE COURSE SHOULD BE RECYCLED IF POSSIBLE.
13. ALL SYMBOLS ARE ONLY GRAPHICALLY REPRESENTED AND ARE NOT TO SCALE.
14. CONTACT THE PROJECT SURVEYOR FOR ANY INQUIRIES RELATED TO THE EXISTING SITE SURVEY.
15. CONTRACTOR SHALL PROTECT EXISTING OVERHEAD UTILITY POLES IN PLACE DURING CONSTRUCTION.
16. CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE PATTERNS DURING CONSTRUCTION.

APPROVAL BLOCK

ENGINEERING REVIEW
CITY OF LONGMONT

☐ No Exceptions Taken
☐ Make Corrections Noted
☐ Rejected – See Checklist

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Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

Revisions:

No.	Date:
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FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631

PROJECT: 911-016	DATE: 08.15.2023
DESIGNED BY: S. Hallauer	SCALE: 1" = 200'
DRAWN BY: S. Hallauer	REVIEWED BY: S. Thomas

TERRY LAKE REGIONAL SANITARY SEWER

DEMOLITION & OVERALL SANITARY PLAN

Sheet
SS1
2 of 8

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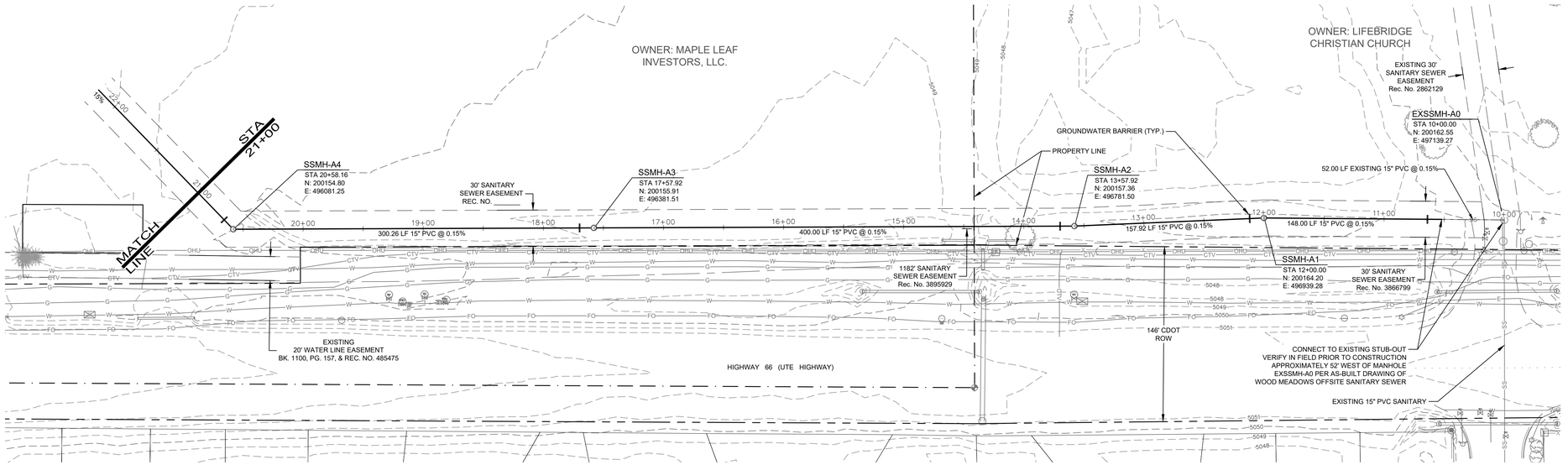

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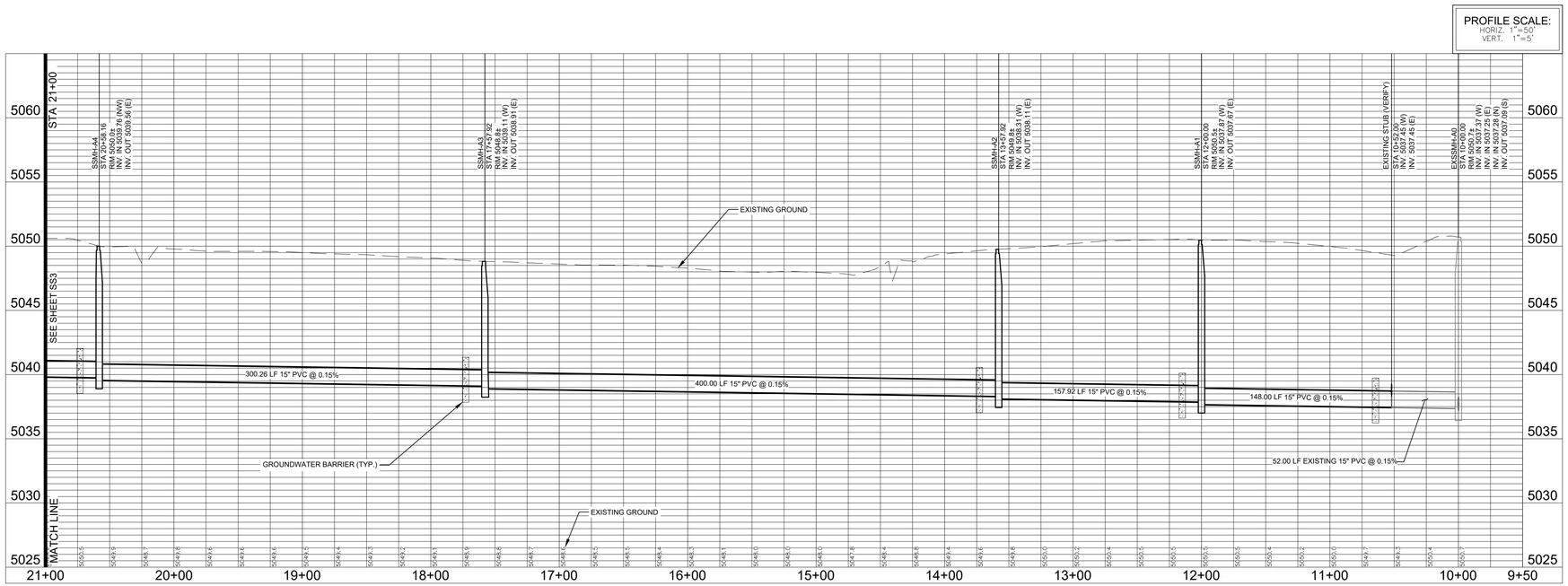
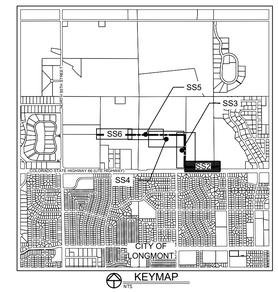


NORTH

50 0 50 100 150 Feet

(IN FEET)
1 inch = 50 ft.



LEGEND:

EXISTING CONTOUR	4953		
PROPOSED SANITARY SEWER			
PROPOSED GROUNDWATER BARRIER			
EXISTING WATER MAIN	W		
EXISTING STORM DRAIN			
EXISTING ELECTRIC	E		
EXISTING TELEPHONE	T		
EXISTING GAS	G		
EXISTING OVERHEAD UTILITY	OHU		
EXISTING FENCE	X		
EXISTING LOT LINE			
EASEMENT LINE			
EXISTING WATER VALVE	WV	EXISTING SANITARY MANHOLE	S
EXISTING FIRE HYDRANT		EXISTING SANITARY CLEANOUT	CO
EXISTING WATER METER	W	EXISTING STORM MANHOLE	D
EXISTING WATER MANHOLE	W	EXISTING FLARED END SECTION	
EXISTING WATER VAULT		EXISTING POWER POLE	
EXISTING WATER SPIGOT		EXISTING UTILITY MARKER	W G T

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APPROVAL BLOCK

ENGINEERING REVIEW
CITY OF LONGMONT

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FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631

DATE: 08.15.2023
SCALE: 1" = 50'
REVIEWED BY: S. Thomas
PROJECT: 911-016
DESIGNED BY: S. Hallauer
DRAWN BY: S. Hallauer

TERRY LAKE REGIONAL SANITARY SEWER

SANITARY LINE A PLAN & PROFILE

Sheet
SS2
3 of 8

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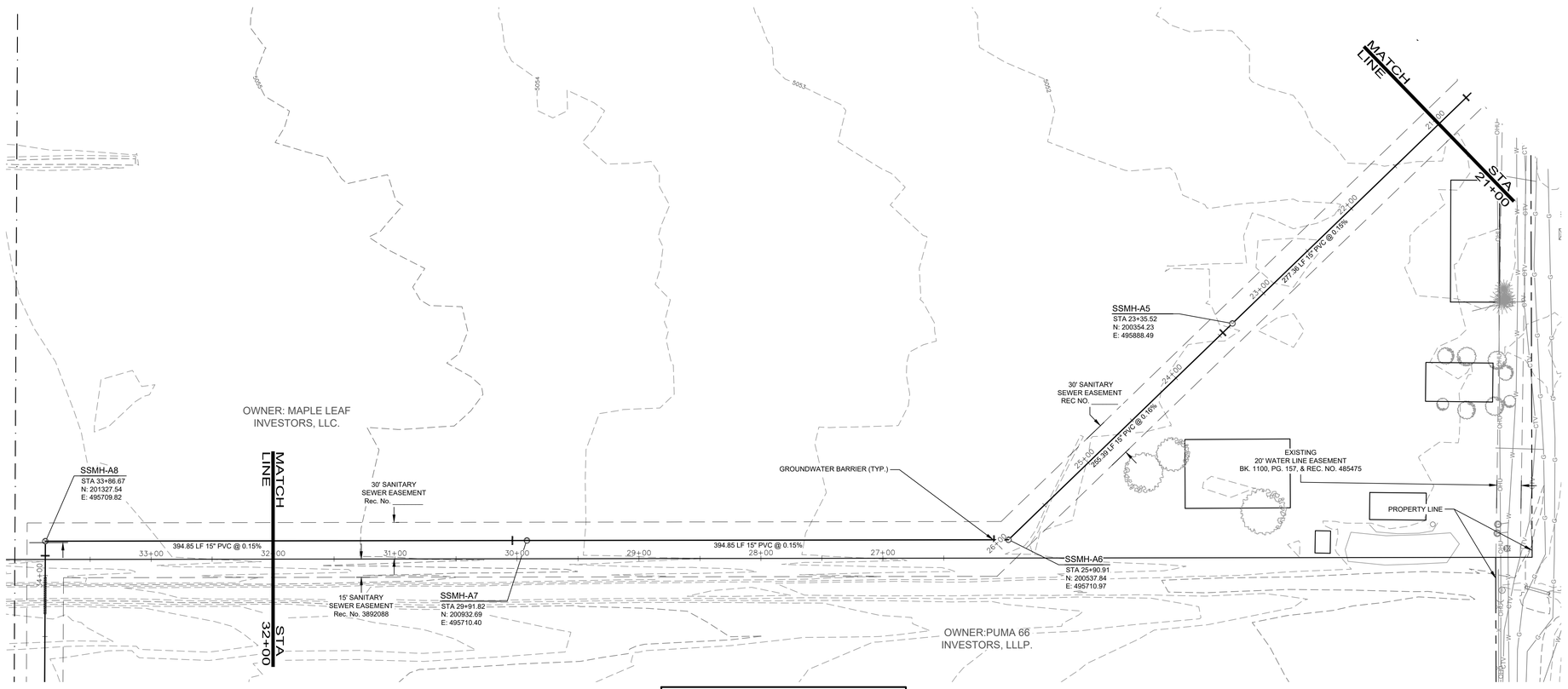

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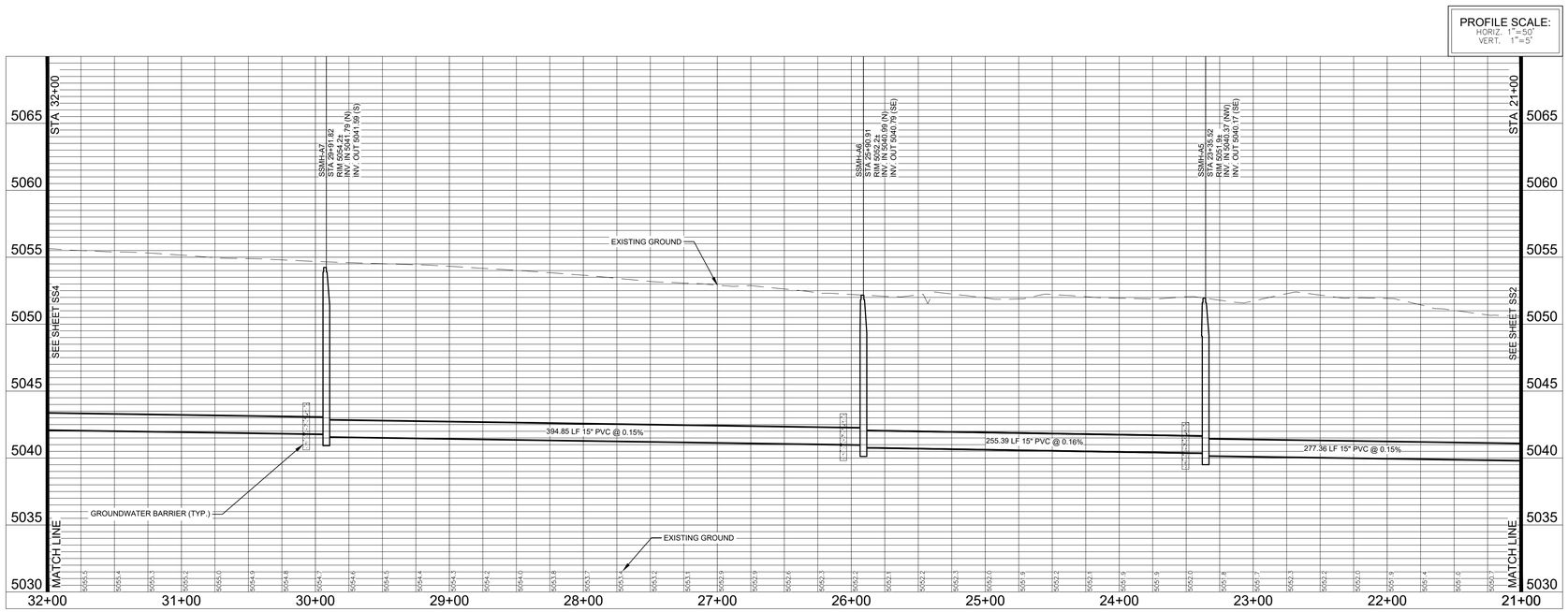

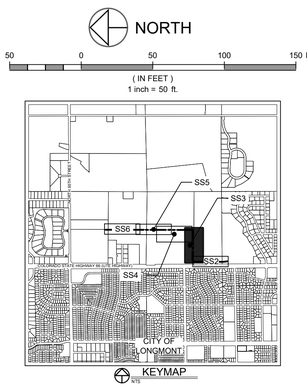

LEGEND:

- EXISTING CONTOUR
- PROPOSED SANITARY SEWER
- PROPOSED GROUNDWATER BARRIER
- EXISTING WATER MAIN
- EXISTING STORM DRAIN
- EXISTING ELECTRIC
- EXISTING TELEPHONE
- EXISTING GAS
- EXISTING OVERHEAD UTILITY
- EXISTING FENCE
- EXISTING LOT LINE
- EASEMENT LINE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING WATER MANHOLE
- EXISTING WATER VAULT
- EXISTING WATER SPIGOT
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY CLEANOUT
- EXISTING STORM MANHOLE
- EXISTING FLARED END SECTION
- EXISTING POWER POLE
- EXISTING UTILITY MARKER

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CITY OF LONGMONT

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PROJECT: 911-016
DESIGNED BY: S. Hallauer
DRAWN BY: S. Hallauer

TERRY LAKE REGIONAL SANITARY SEWER

SANITARY LINE A PLAN & PROFILE

Sheet
SS3
4 of 8

DRAWING FILENAME: D:\Projects\911-016\Dwg\Util\911-016_SAN-05.dwg LAYOUT NAME: SS3 DATE: Sep 05, 2023 - 11:32am CAD OPERATOR: stephanie
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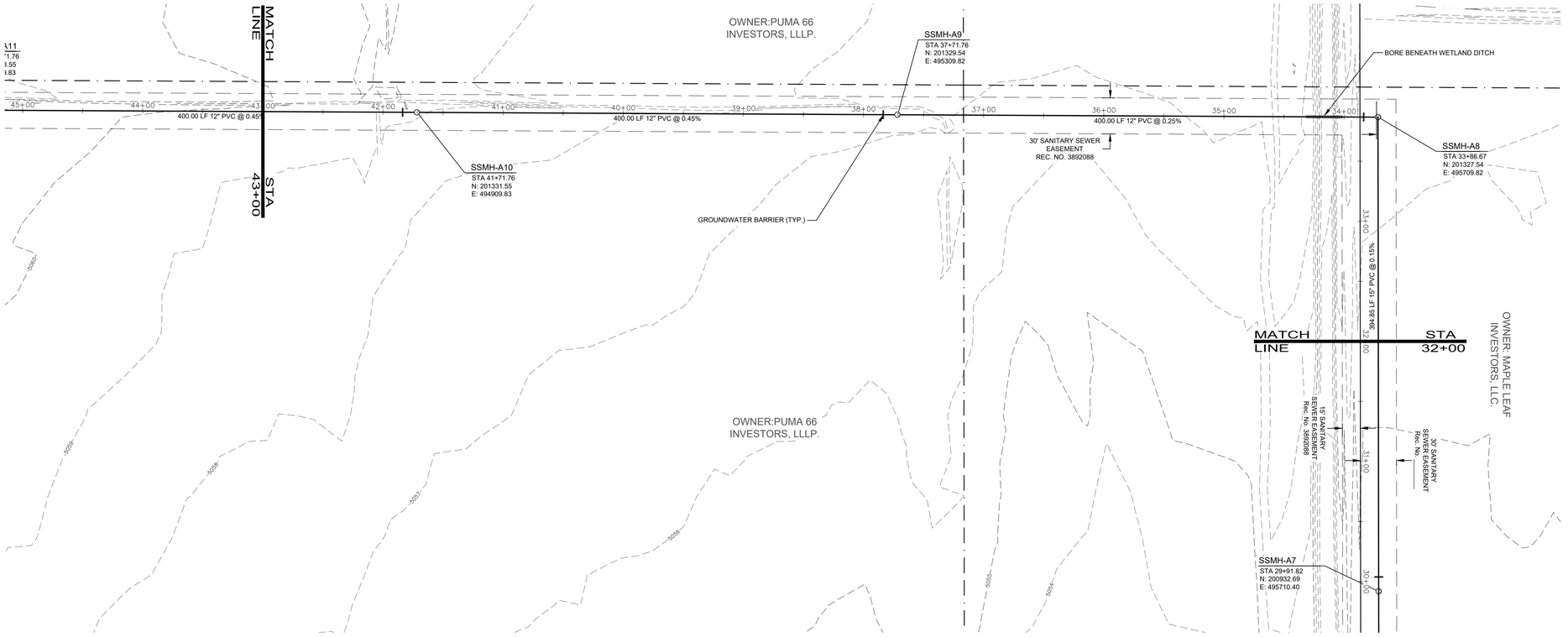
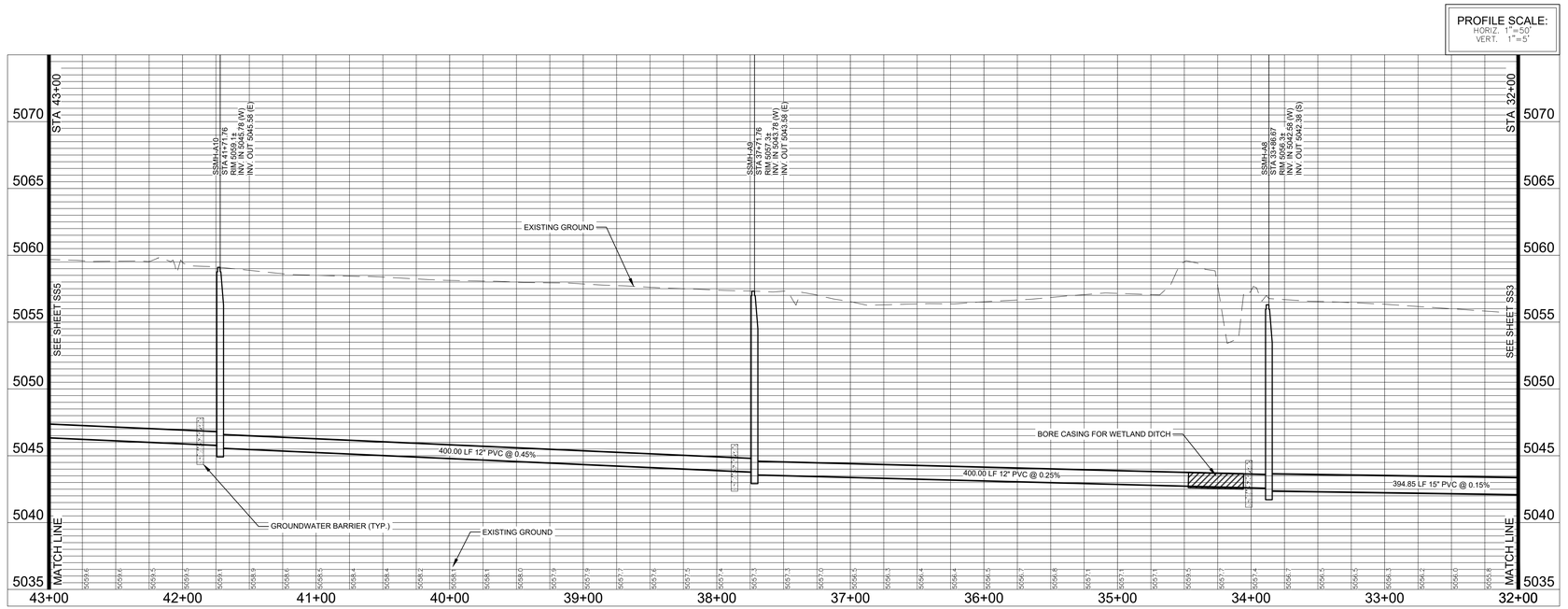
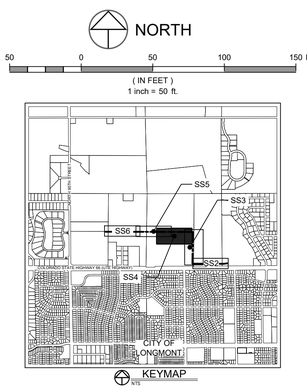


SANITARY LINE A





LEGEND:

EXISTING CONTOUR			
PROPOSED SANITARY SEWER			
PROPOSED GROUNDWATER BARRIER			
EXISTING WATER MAIN			
EXISTING STORM DRAIN			
EXISTING ELECTRIC			
EXISTING TELEPHONE			
EXISTING GAS			
EXISTING OVERHEAD UTILITY			
EXISTING FENCE			
EXISTING LOT LINE			
EASEMENT LINE			
EXISTING WATER VALVE		EXISTING SANITARY MANHOLE	
EXISTING FIRE HYDRANT		EXISTING SANITARY CLEANOUT	
EXISTING WATER METER		EXISTING STORM MANHOLE	
EXISTING WATER MANHOLE		EXISTING FLARED END SECTION	
EXISTING WATER VAULT		EXISTING POWER POLE	
EXISTING WATER SPIGOT		EXISTING UTILITY MARKER	

NOTES:

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2. SANITARY MANHOLES FOR 8"-15" MAINS SHALL BE 4' DIAMETER, USE 5' DIAMETER FOR MAINS GREATER THAN 15".
3. ALL SANITARY MAINS, SERVICES AND UNDERDRAIN SHALL BE PIPE CLASS SDR 35.
4. ALL SANITARY SEWER CONSTRUCTION SHALL BE PER THE CITY OF LONGMONT STANDARDS, LATEST EDITION.
5. MAINTAIN 10' HORIZONTAL AND 18" VERTICAL MINIMUM SEPARATION BETWEEN ALL SANITARY SEWER MAINS, WATER MAINS & SERVICES.
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10. CONTRACTOR SHALL ADJUST EXISTING FRAME AND GRATES TO FINISHED GRADE PER TOWN STANDARDS.
11. CONTRACTOR SHALL INSTALL GROUNDWATER BARRIERS 10' UPSTREAM FROM ALL MANHOLES.

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APPROVAL BLOCK

ENGINEERING REVIEW
CITY OF LONGMONT

☐ No Exceptions Taken
☐ Make Corrections Noted
☐ Rejected – See Checklist

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REVIEW ENGINEER _____ DATE _____

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GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

DATE: 08.15.2023
SCALE: 1" = 50'
REVIEWED BY: S. Thomas
PROJECT: 911-016
DESIGNED BY: S. Hallauer
DRAWN BY: S. Hallauer

TERRY LAKE REGIONAL SANITARY SEWER

SANITARY LINE A PLAN & PROFILE

Sheet
SS4
5 of 8

DRAWING FILENAME: D:\Projects\911-016\Dwg\Util\911-016_SAN-05.dwg LAYOUT NAME: SS4 DATE: Sep 05, 2023 - 11:32am CAD OPERATOR: stephanie
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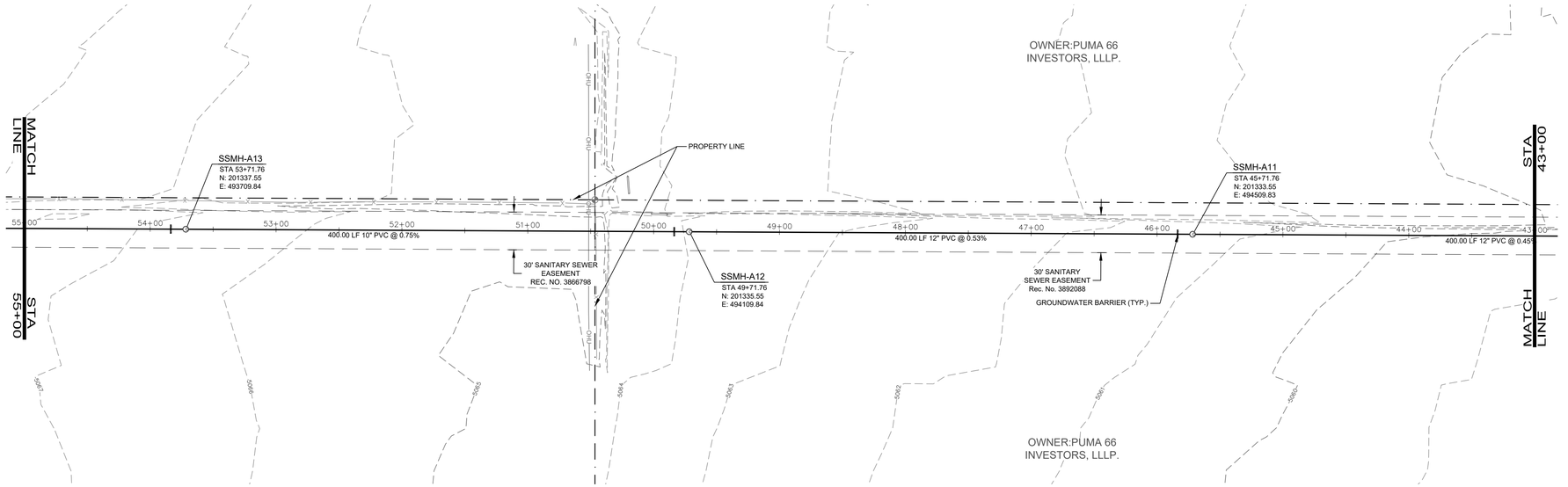
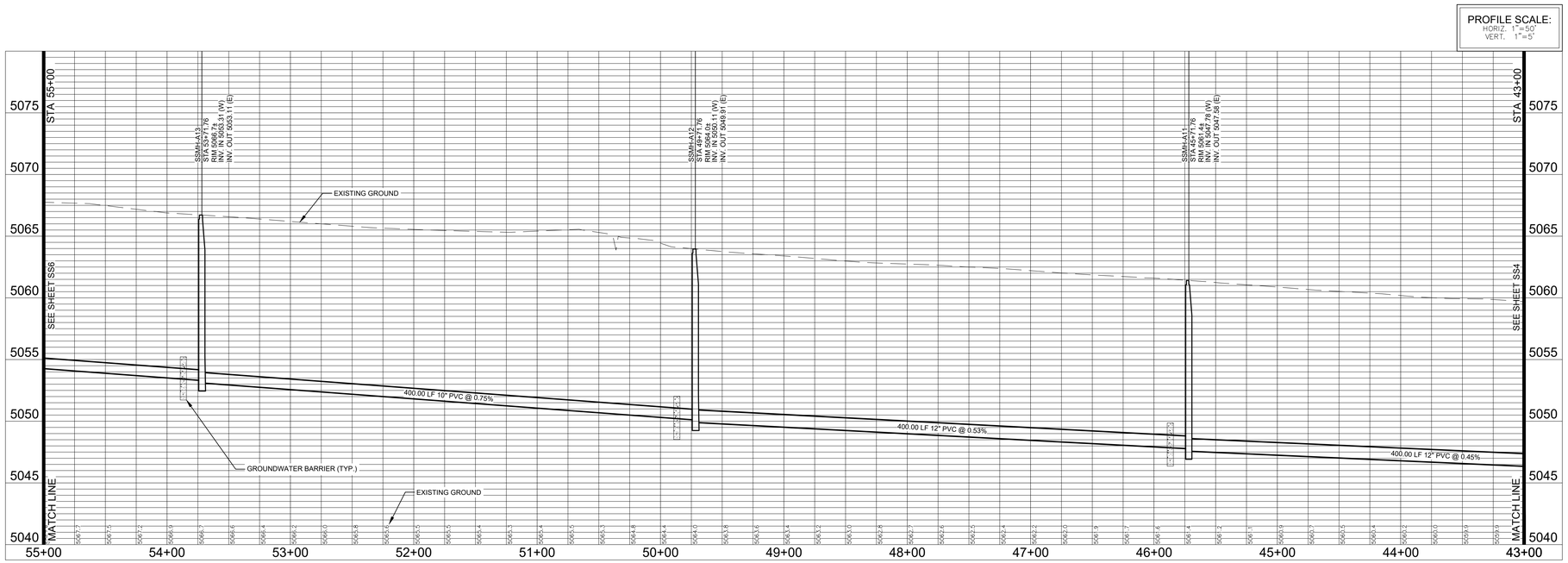
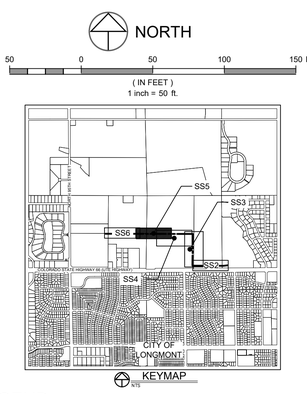
Attachment B - Revised Application Materials



SANITARY LINE A





LEGEND:

EXISTING CONTOUR	4953		
PROPOSED SANITARY SEWER			
PROPOSED GROUNDWATER BARRIER			
EXISTING WATER MAIN	W		
EXISTING STORM DRAIN			
EXISTING ELECTRIC	E		
EXISTING TELEPHONE	T		
EXISTING GAS	G		
EXISTING OVERHEAD UTILITY	OHU		
EXISTING FENCE	X		
EXISTING LOT LINE			
EASEMENT LINE			
EXISTING WATER VALVE	WV	EXISTING SANITARY MANHOLE	S
EXISTING FIRE HYDRANT		EXISTING SANITARY CLEANOUT	CO
EXISTING WATER METER	W	EXISTING STORM MANHOLE	D
EXISTING WATER MANHOLE	MH	EXISTING FLARED END SECTION	
EXISTING WATER VAULT		EXISTING POWER POLE	
EXISTING WATER SPIGOT		EXISTING UTILITY MARKER	

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PROJECT: 911-016	DATE: 08.15.2023
DESIGNED BY: S. Hallauer	SCALE: 1" = 50'
DRAWN BY: S. Hallauer	REVIEWED BY: S. Thomas

TERRY LAKE REGIONAL SANITARY SEWER

SANITARY LINE A
PLAN & PROFILE

Sheet
SS5
6 of 8

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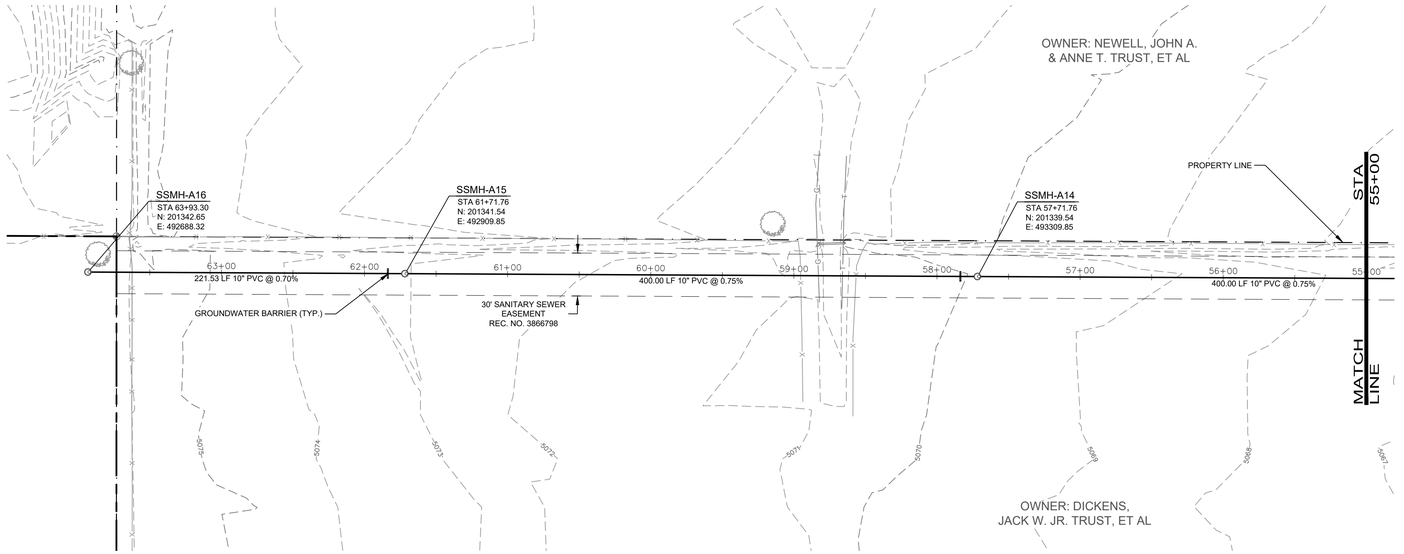
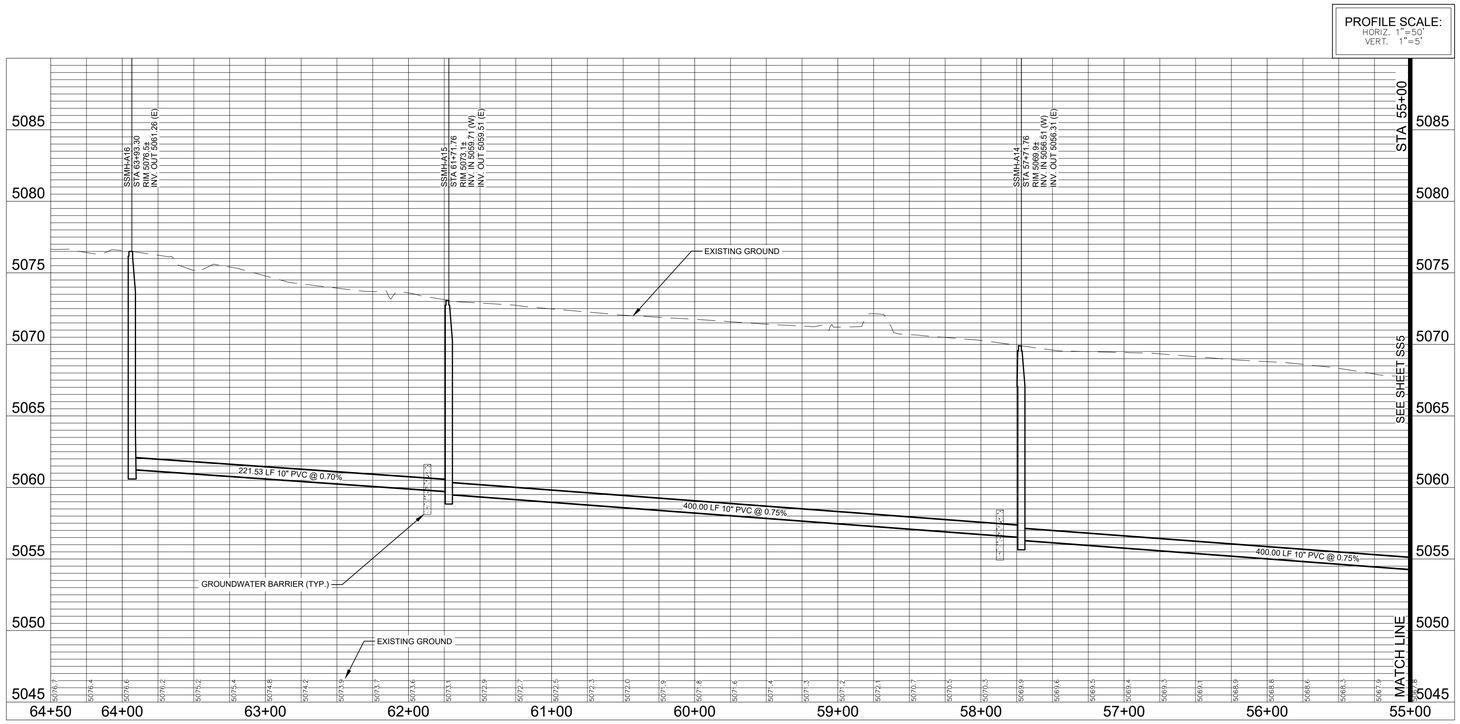
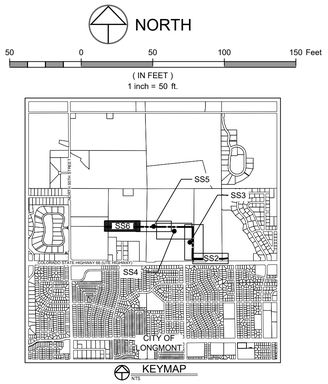


SANITARY LINE A





LEGEND:

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PROPOSED SANITARY SEWER	
PROPOSED GROUNDWATER BARRIER	
EXISTING WATER MAIN	W
EXISTING STORM DRAIN	
EXISTING ELECTRIC	E
EXISTING TELEPHONE	T
EXISTING GAS	G
EXISTING OVERHEAD UTILITY	OHU
EXISTING FENCE	X
EXISTING LOT LINE	
EASEMENT LINE	
EXISTING WATER VALVE	EXISTING SANITARY MANHOLE
EXISTING FIRE HYDRANT	EXISTING SANITARY CLEANOUT
EXISTING WATER METER	EXISTING STORM MANHOLE
EXISTING WATER MANHOLE	EXISTING FLARED END SECTION
EXISTING WATER VAULT	EXISTING POWER POLE
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CITY OF LONGMONT

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GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

PROJECT: 911-016
DESIGNED BY: S. Hallauer
DRAWN BY: S. Hallauer
DATE: 08.15.2023
SCALE: 1" = 50'
REVIEWED BY: S. Thomas

TERRY LAKE REGIONAL SANITARY SEWER

SANITARY LINE A
PLAN & PROFILE

Sheet
SS6
7 of 8

DRAWING FILENAME: D:\Projects\911-016\Dwg\Util\911-016_SAN-05.dwg LAYOUT NAME: SS6 DATE: Sep 05, 2023 - 11:33am CAD OPERATOR: stephanie
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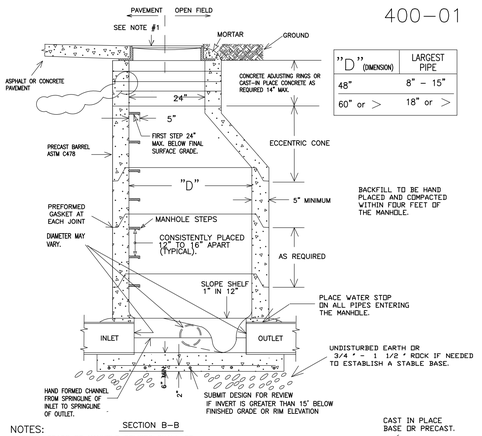
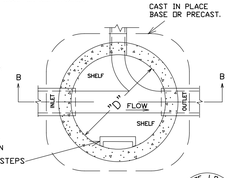
400-01



"D" (DIMENSION)	LARGEST PIPE
48"	8" – 15"
60" or >	18" or >

SECTION B–B



NOTES:

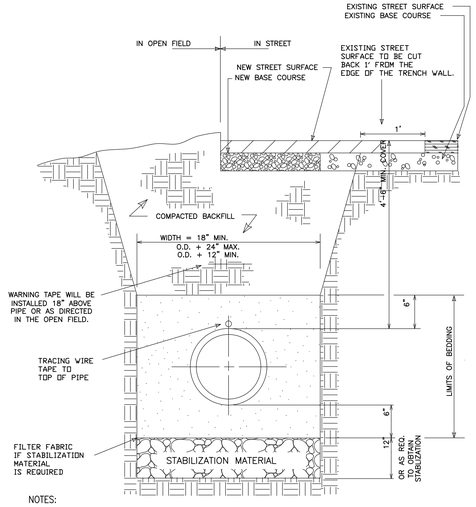
1. FINAL GRADE OF MANHOLE COVERS SHALL BE FLUSH TO 1/4 " BELOW FINAL STREET GRADE.
2. ALL CHANNELS FLOWING INTO THE MAIN STREAM OF THE SEWER SHALL BE HAND FORMED INTO THE FLOW.
3. STEPS SHOULD BE PLACED OVER THE SHELF NOT OVER THE FLOW. NO STEPS ALLOWED IN THE ADJUSTING RING AREA.
4. MH COVER & FRAME SHALL BE DEETER #1258 OR APPROVED EQUAL, WITH LETTERING DEPICTING "WATER", "SANITARY" OR "STORM".
5. NO 4" SERVICE LINES MAY ENTER MANHOLE.
6. THE PHYSICAL CONNECTION TO THE EXISTING SANITARY SEWER SYSTEM SHALL BE PLUGGED UNTIL CONSTRUCTION ACCEPTANCE HAS BEEN ISSUED FOR THE PROJECT.

REV 4-12-96 JR
REV 1-14-02 JR

STANDARD MANHOLE DETAIL
N.T.S.

100
D1
STANDARD MANHOLE
NOT TO SCALE

100-01



NOTES:

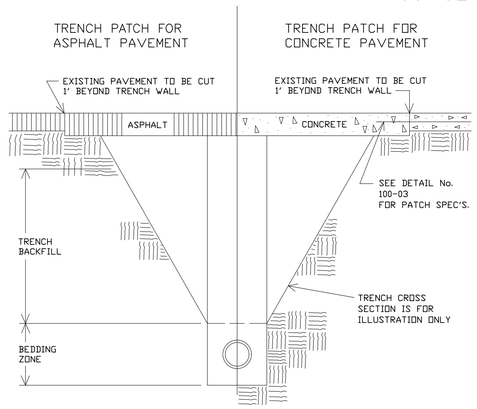
1. BACKFILL TO BE COMPACTED TO 95% OF A.S.T.M. D-698 DENSITY IN ALL AREAS, UNLESS OTHERWISE NOTED.
2. 14 AWG. SOLID COPPER WIRE SHALL BE INSTALLED AS TRACING WIRE ABOVE ALL NON METALIC POTABLE WATER PIPES. THE WIRE SHALL BE CONNECTED AND COME TO THE SURFACE AS DIRECTED.
3. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.

3-19-93 BM
6-24-97 JR

TRENCH DETAIL
N.T.S.

101
D1
TRENCH BEDDING REQUIREMENTS
NOT TO SCALE

100-02



STREET CLASSIFICATION PER L.A.C.P.			
	LOCAL	COLLECTOR	ARTERIAL
CONCRETE	10"	10"	10"
FULL DEPTH ASPHALT	6"	8"	11"

MIN. REQ'D. THICKNESS OR MATCH EXIST. THICKNESS IF GREATER.

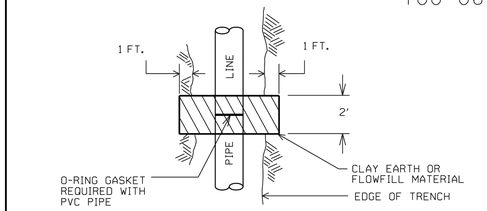
NOTES: ASPHALT SHALL BE USE TO PATCH ASPHALT
6" CONCRETE SHALL BE USED TO PATCH CONCRETE.

TYPICAL ASPHALT & CONCRETE TRENCH PATCH
N.T.S.

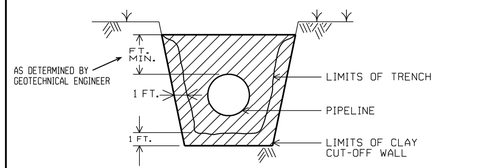
REVISED 11/5/2003
3-19-93 BM

102
D1
ASHPALT/CONCRETE PATCH
NOT TO SCALE

100-06



PLAN



SECTION

NOTES:

1: CLAY WALL EXTENDS A MINIMUM OF 12" INTO UNDISTURBED SOIL ON EACH SIDE AND ON BOTTOM OF TRENCH.

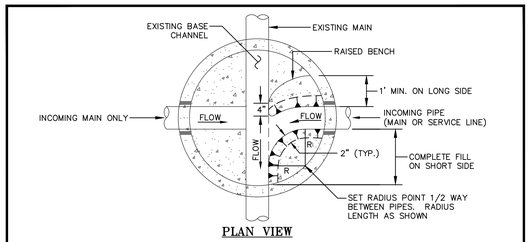
2: CLAY MATERIAL TO BE CLASSIFIED AS CL, CH, OR OH.

3: APPROVED FLOW-FILL MATERIAL MAY BE USED INSTEAD OF CLAY MATERIAL.

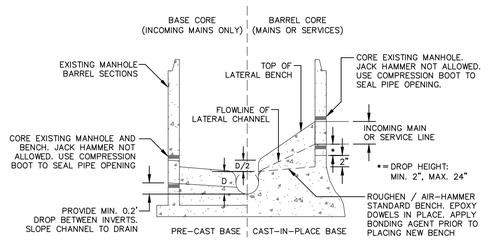
CUT-OFF WALL
N.T.S.

3-19-93 BM
6-25-97 JR

103
D1
GROUNDWATER BARRIER
NOT TO SCALE



PLAN VIEW



SECTION VIEW

NOTES:

1. CHANNELS SHALL BE CONCRETE, SHAPED TO FULLY CONTAIN THE FULL HEIGHT OF THE INCOMING PIPE AT THE MANHOLE WALL, SLOPING TO HALF THE PIPE DIAMETER AT THE MAIN CHANNEL.
2. INVERT SHAPING SHALL DIRECT FLOW TOWARD THE DOWNSTREAM END OF THE MANHOLE.
3. DROP MANHOLES SHALL BE USED FOR INVERT DROPS GREATER THAN 24" ABOVE THE MAIN CHANNEL BENCH.
4. CONCRETE SHALL BE READY-MIXED MIN. 3000 PSI. SLUMP AS REQUIRED.
5. **PROJECT SPECIFIC NOTE: CONTRACTOR TO VERIFY EXISTING STUB AT MANHOLE EXSSMH-A6 FOR EXISTING SIZE AND SLOPE. IF IT IS FOUND THAT THE EXISTING STUB DOES NOT CONFORM TO DESIGN SPECIFICATIONS WITHIN THIS PLAN SET, CONTRACTOR SHALL REPLACE EXISTING STUB AND UTILIZE THIS DETAIL FOR THE TIE-IN TO THE EXISTING MANHOLE.**

CONNECTION TO EXISTING MANHOLE

104
D1
CONNECTION TO EXISTING MANHOLE
NOT TO SCALE

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TERRY LAKE REGIONAL SANITARY SEWER

SITE & SANITARY DETAILS

Sheet
D1
8 of 8

DRAWING FILENAME: D:\Projects\911-016\Dwg\Util\911-016_SAN-05.dwg LAYOUT NAME: D1 DATE: Sep 05, 2023 - 11:33am CAD OPERATOR: stephanie
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NORTHERN ENGINEERING

July 24, 2023

SANITARY SEWER UTILITY REPORT FOR

Terry Lake Regional Sanitary Sewer Chosen Alternative

Longmont, Colorado

Prepared for:
The Landhuis Company
212 N. Wahsatch Ave, Suite 301
Colorado Springs, CO 80903

Prepared by:

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This Drainage Report is consciously provided as a PDF.
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When a hard copy is absolutely necessary, we recommend double-sided printing.

Project Number: 911-016

NORTHERN ENGINEERING

July 24, 2024

Mr. Chris Huffer
City of Longmont
Public Works and Natural Resources

RE: Sanitary Sewer Utility Report for
Terry Lake Regional Sanitary Sewer

Dear Chris:

Northern Engineering is pleased to submit this Sanitary Sewer Utility Report for your review. This report will document the calculations completed for a regional sewer planned for the Terry Lake neighborhood.

This report has been prepared in accordance with the guidelines set forth by the City of Longmont. We understand that review by the agencies is to assure general compliance.

I understand the City's acceptance does not relieve the Design Engineer's responsibility for errors, omissions, or design deficiencies for which the City is held harmless.

If you should have any questions as you review this report, please feel free to contact us.

Sincerely,
NORTHERN ENGINEERING SERVICES, INC.

Stephanie Thomas, PE
Project Engineer

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I. PROJECT DESCRIPTION AND LOCATION

A. Project Description

1. The Terry Lake Neighborhood is located north of Highway 66, south of Vermillion Road, west of N. 107th Street, and east of N. 95th Street (Hover Street).

2. The "Envision Longmont Multimodel and Comprehensive Plans" adopted June 28, 2016 shows zoning for the Terry Lake Neighborhood as Parks, Greenways and Openspace, Public/Quasi-Public, Mixed-Use Corridor, and Single Family Neighborhood, and Rural Neighborhood.

3. This area will also conform to the requirements set forth in the Highway 66 Framework Master Plan adopted in 2006 as indicated in Envision Longmont. This report allows for development of this area with densities up to 25 units/acre.

4. The Terry Lake Neighborhood Master Drainage Plan has been completed and anticipates between 40 and 55 acres of regional detention ponds within the developable area. Ultimate developed densities will be modified accordingly.

5. At the time of this report, the Terry Lake Neighborhood currently includes the following developments:
    a. Willis Heights (currently served by individual septic)
    b. Wood Meadows (currently served by the NCNUPUD 8" sewer)
    c. Life Bridge Church ((currently served by the NCNUPUD 8" sewer)
    d. Longs Peak Animal Hospital (currently served by an existing 8" sewer extended from Spencer Street)
    e. Faith Community Lutheran Church (currently served by an existing 8" sewer extended from Spencer Street)

B. Location

1. The Terry Lake Neighborhood is located north of Highway 66, south of Vermillion Road, west of N. 107th Street, and east of N. 95th Street (Hover Street).

2. Land Use/Vicinity Map

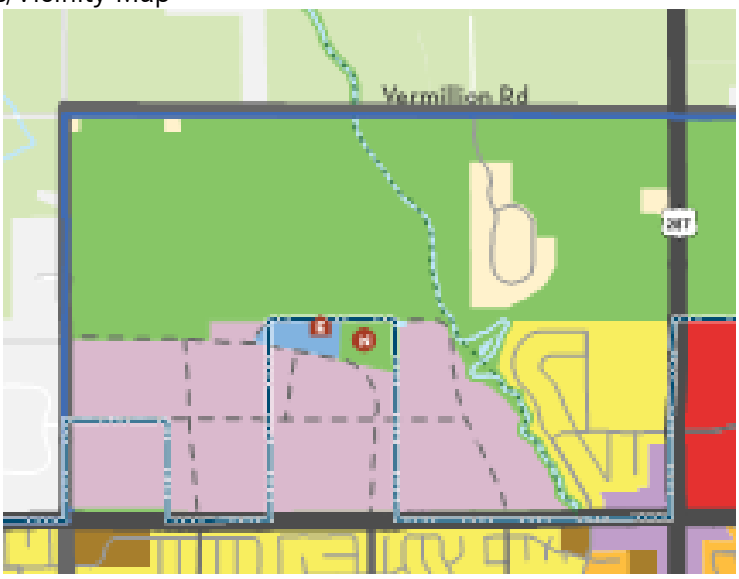

Figure 1 – Land Use/Vicinity Map

II. SANITARY SEWER COLLECTION SYSTEM

NORTH

A. Regulations

The sanitary sewer collection system was designed and analyzed based on guidance from the City of Longmont, and the regulations and design criteria set forth in the City of Longmont 2007 Design Standards and Construction Specifications and Title 15 of the Longmont Municipal Code.

B. Design Criteria

- Manning's Roughness Coefficient: 0.013
- Maximum d/D: 0.8
- Sewer Infiltration: 15% of average daily flow.
- Medium Density Residential Design Flow:

Sanitary Sewer Design Flow

Land Use	Occupancy	Average Day Wastewater Flows
Residential	2.2 persons	75 gpcd

- Non-Residential Design Flow:

Commercial/Office/Congregational Flow Factors

Type of Establishment	Flow Factor
Office	200 gal /1000 SF of Building / day
Commercial	1833 gal / acre / day
Congregation	75 gal /1000 SF of Building / day

- Peak Factor:

$$\frac{18+\sqrt{P}}{4+\sqrt{P}}$$

P = Population in thousands

C. Existing Infrastructure and Proposed Network

1. The existing sanitary sewer connection planned to serve the majority of undeveloped area is located at the intersection of Gay Street and Highway 66. The existing manhole was built with a 15" stub to the west and east for future sanitary flows and an 8" sewer to the north to serve the existing Life Bridge Church and the Wood Meadows Neighborhood. The available capacity at this manhole is the constraint for the total buildout of the area.

2. An existing 8-inch sewerline is stubbed north of Highway 66 from Spencer Street. This extension is planned to serve the Longs Peak Animal Hospital, the Faith Community Lutheran Church and 6 undeveloped lots. The City of Longmont has indicated that there is very little additional capacity available in this sewerline based on downstream constraints.

3. This report details the two routing options that were considered for the regional sewer that would serve the majority of the undeveloped Terry Lake Neighborhood from the existing Gay Street sewer extension. Both alignments are generally oriented flowing from west to east and connecting at the existing sanitary sewer manhole at Highway 66 and Gay Street.

4. The Option 1 alignment traverses along the northern boundary of the Dickens property, crosses the Puma 66 property from west to east, traverses south along the Puma 66 eastern property line, crosses the Highway 119 Holdings property from

east to west and connects to the existing sanitary sewer manhole on the Life Bridge Church Property. This alignment is constrained by 3 existing buildings on the Highway 119 Holdings property. These existing buildings would likely be removed with development of the property. In this option, a separate local branch would need to be built as a part of the Puma 66 property development to serve the southern portion of the Puma 66 property. The exact alignment of this option will be further refined with design, easement acquisition, and coordination with landowners. As such, the design may allow the sewer to run straight along Highway 119 without any jogs around existing buildings. **This option was chosen by the existing property owner and future developers.**

5. The Option 2 alignment traverses east along the northern boundary of the Dickens property, turns south along the Puma 66 western property line, turns east along the Puma 66 southern boundary, jogs north at the Highway 119 western property line to avoid the existing buildings on the Highway 119 property, continues east across the Highway 119 Holdings property and connects to the existing sanitary sewer manhole on the Life Bridge Church Property. This alignment is constrained by 3 existing buildings on the Highway 119 Holdings property and existing buildings on the Puma 66 Investments property. These existing buildings would likely be removed with development of the property. In this option, all properties will have direct access to the regional sewer. The exact alignment of this option will be further refined with design, easement acquisition, and coordination with landowners. As such, the design may allow the sewer to run straight along Highway 119 without any jogs around existing buildings. **This option was not chosen by the existing property owners and future developers.**

D. Basin Demand Analysis

The Terry Lake Neighborhood Area was split into 11 sanitary sewer basins to aid in demand calculations and sewer capacity calculations. The basin boundaries were determined by property ownership and point of connection to the sewer system. Each basin was assigned sewer demand for the existing development and/or future development planned for the basin.

The existing 15" sewer at Highway 66 and Gay Street was designated as the Design Point 1. This existing sewer will max at a 0.8 d/D. This equates to a 2.44 cfs allowable peak flow in this sewer. This existing sewer capacity was utilized to calculate the total future development demand allowable.

A calculation was done to determine the available capacity of the sewer at Design Point 1 to serve the existing developments of the existing Wood Meadows neighborhood and the Life Bridge Church property and future developments planned for the rest of the basins. Based on this design point, the future residential development properties would be allowed a density of 9.74 SFE/acre and a future office development of 30,000 square feet would be allowed on the Life Bridge property. The combination of these planned developments and the existing developments would create a sewer peak demand of 2.44 cfs (which matches the allowable peak flow).

Each undeveloped property, except the Life Bridge property, is shown with a total SFE (single-family equivalent) based on the total property area and an approximate density. Any future development on the Life Bridge property was given an office designation based on guidance from the City.

The designation of single-family equivalent (SFE) measurement allows for residential and non-residential development as long as the total flow equates to no more than the single-family equivalent (SFE) peak flow.

This report assumes a uniform application of sewer capacity but higher density may be allowed if lower basins develop at a less intensive manner. Please see Appendix A for a detailed calculation of planned demand per sewer basin.

Basin Area Designation	Ownership	Area	Existing Residential Units	Future Residential Units	Existing Congregation Area	Future Office Area
		Acre	Single Family Equivalent (SFE)	Single Family Equivalent (SFE)	SF of Building	SF of Building
Basin 1	Dirks and Boettcher	40		390		
Basin 2	Zeek	35		341		
Basin 3	Newell	41		399		
Basin 4	Dickens	15		146		
Basin 5	Dickens	4		39		
Basin 6	Puma 66 Investments	50		487		
Basin 7	Puma 66 Investments	45		438		
Basin 8	Wood Meadows	35	20			
Basin 9	Highway 119 Holdings	30		292		
Basin 10	Highway 119 Holdings	27		263		
Basin 11	Life Bridge Church	35			90,000	30,000

E. Network Analysis

The sanitary sewer capacities were calculated at six design points for both alignment options. The results of the analyses are shown below. Exhibits and detailed calculations are provided in the appendix.

Table 1 – Option 1 Sanitary Sewer Analysis Results

Design Point	Contributing Basins	Pipe Size (inches)	Total Peak Flow (cfs)	d/D
1	1-11	15	2.44	0.80
2	1-7	15	1.94	0.66
3	1-6	15	1.60	0.58
4	1-4	12	1.18	0.62
5	1-2	10	0.71	0.42
6	8-9	8	0.32	0.38

Table 2 – Option 2 Sanitary Sewer Analysis Results

Design Point	Contributing Basins	Pipe Size (inches)	Total Peak Flow (cfs)	d/D
1	1-11	15	2.44	0.80
2	1-7	15	1.94	0.66
3	1-5	15	1.21	0.49
4	1-4	12	1.18	0.62
5	1-2	10	0.71	0.57
6	8-9	8	0.32	0.45

F. Network Analysis for Pre-Buildout

As with all regional infrastructure, this regional sewer line will not be operating at full capacity until buildout of the Terry Lake neighborhood is complete. During the time prior to full buildout, portions of the regional sanitary sewer are expected to see flow velocities below 2 ft/s. 2 ft/s is the standard at which the sewer is expected to self-scour.

The portions of the proposed regional sewer that would be of concern prior to buildout are the 12" and 15" stretches of proposed sewer due to their flatter slopes and larger pipe size.

A calculation was completed to determine the velocity of the flow in the 15" proposed sewer if only the Zeek property were developed. In this case, the 15" sewer would see flow velocities in the realm of 1.43 ft/s.

Another calculation was completed to determine the number of residential units that will provide scour velocity in the 15" sewer. This sewer would need approximately 1,260 residential units to provide scour velocity of 2 ft/s.

As this is a typical situation for regional infrastructure, it is recommended that a more frequent maintenance schedule be developed for these lines until the flow velocity reaches the self-scouring 2 ft/s.

III. CONCLUSIONS

The proposed Terry Lake Regional Sewer will serve the undeveloped Terry Lake Neighborhood sufficiently.

Basins 1-7 and Basins 9-10 will average a density of 9.74 SFE/acre at buildout. Basin 11 is shown with a potential future office development of 30,000 square feet. These development figures are based on the capacity of the existing 15" sewer crossing Highway 66 at Gay Street.

The preferable alignment option was determined with discussion between the property owners and the City, refined design, and easement acquisition. Option 1 was the chosen route for the sewer.

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APPENDIX A

TERRY LAKE REGIONAL SEWER BASIN DEMAND CALCULATIONS

Sanitary Sewer Basin Demand Calculations										
Basin Area Designation	Ownership	Area	Existing Residential Units	Future Residential Units	Residential Average Flow	Existing Congregation Area	Congregation Average Flow	Future Office Area	Office Average Flow	Total Average Flow, per Basin
		Acre	Single Family Equivalent (SFE)	Single Family Equivalent (SFE)	GPD (2.2 cap/unit, 75 GPD/unit)	SF of Building	GPD (75 gpd/1000 sf)	SF of Building	GPD (200 gpd/1000 sf)	GPD
Basin 1	Dirks and Boettcher	40	0	390	64,350	0	0	0	0	64,350
Basin 2	Zeek	35	0	341	56,265	0	0	0	0	56,265
Basin 3	Newell	41	0	399	65,835	0	0	0	0	65,835
Basin 4	Dickens	15	0	146	24,090	0	0	0	0	24,090
Basin 5	Dickens	4	0	39	6,435	0	0	0	0	6,435
Basin 6	Puma 66 Investments	50	0	487	80,355	0	0	0	0	80,355
Basin 7	Puma 66 Investments	45	0	438	72,270	0	0	0	0	72,270
Basin 8	Wood Meadows	35	20	0	3,300	0	0	0	0	3,300
Basin 9	Highway 119 Holdings	30	0	292	48,180	0	0	0	0	48,180
Basin 10	Highway 119 Holdings	27	0	263	43,395	0	0	0	0	43,395
Basin 11	Life Bridge Church	35	0	0	0	90,000	6,750	30,000	6,000	12,750

Total Future Residential Units	2,795
Total Future Residential Acreage (acre)	287
Future Residential Units/Acre	9.74

Total Average Flow (GPD)	477,225
Infiltration (15%)	71,584
Peaking Factor	3.16
Total Peak Flow (GPD)	1,578,488
Total Peak Flow (cfs)	2.44
Maximum Allowable Flow in 15" Sewer, 0.15%, 0.8 d/D (cfs)	2.44

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APPENDIX B

TERRY LAKE REGIONAL SEWER OPTION #1 EXHIBIT
CHOSEN ALTERNATIVE

NORTHERN ENGINEERING

07.04.2023

500 0 500

(IN FEET)
1 INCH = 500 FEET

TERRY LAKE REGIONAL SEWER
LONGMONT, CO
OPTION #1

Basin Area Designation	Ownership	Area	Existing Residential Units	Future Residential Units	Existing Congregation Area	Future Office Area
		Acre	Single Family Equivalent (SFE)	Single Family Equivalent (SFE)	SF of Building	SF of Building
Basin 1	Dirks and Boettcher	40		390		
Basin 2	Zeek	35		341		
Basin 3	Newell	41		399		
Basin 4	Dickens	15		146		
Basin 5	Dickens	4		39		
Basin 6	Puma 66 Investments	50		487		
Basin 7	Puma 66 Investments	45		438		
Basin 8	Wood Meadows	35	20			
Basin 9	Highway 119 Holdings	30		292		
Basin 10	Highway 119 Holdings	27		263		
Basin 11	Life Bridge Church	35			90,000	30,000

BASIN 1
DIRKS AND BOETTCHER PROPERTY
TOTAL AREA (AC): 40
ZONING: MIXED USE CORRIDOR

BASIN 2
ZEEK PROPERTY
TOTAL AREA (AC): 35
ZONING: MIXED USE CORRIDOR

BASIN 3
NEWELL PROPERTY
TOTAL AREA (AC): 41
ZONING: MIXED USE CORRIDOR

BASIN 4
DICKENS PROPERTY
TOTAL AREA (AC): 15
ZONING: MIXED USE CORRIDOR

BASIN 5
DICKENS PROPERTY
TOTAL AREA (AC): 4
ZONING: MIXED USE CORRIDOR

BASIN 6
PUMA 66 INVESTMENTS
TOTAL AREA (AC): 50
ZONING: MIXED USE CORRIDOR

BASIN 7
PUMA 66 INVESTMENTS
TOTAL AREA (AC): 45
ZONING: MIXED USE CORRIDOR

BASIN 8
WOOD MEADOWS
AREA (AC): 35
ZONING: RURAL NEIGHBORHOOD

BASIN 9
HIGHWAY 119 HOLDINGS
TOTAL AREA (AC): 30
ZONING: MIXED USE CORRIDOR

BASIN 10
HIGHWAY 119 HOLDINGS
TOTAL AREA (AC): 27
ZONING: MIXED USE CORRIDOR

BASIN 11
LIFE BRIDGE CHURCH
TOTAL AREA (AC): 35
ZONING: MIXED USE CORRIDOR
LAND USE: OFFICE AND CONGREGATION

HOVER STREET
SPENCER STREET
FRANCIS STREET
GAY STREET
HIGHWAY 66

LONG PEAK ANIMAL HOSPITAL
FAITH COMMUNITY LUTHERAN

EXISTING SEWER
EXISTING BUILDINGS

DEPTH: 16.5'
PROPOSED SEWER
10R SS
10" SS
DP#5
DP#4
DEPTH: 14.8'
PROPOSED SEWER
12" SS
12" SS
DP#3
DEPTH: 14.1'
DP#6
8" SS
PORTION OF PROPOSED SEWER TO BE LOCATED ON LOT LINE.
15" SS
DEPTH: 11.4'
DP#2
EXISTING BUILDINGS
EXISTING SEWER
DEPTH: 11.0'
DP#1
DEPTH: 13.3'
15" SS
PORTION OF PROPOSED SEWER TO BE LOCATED ON LOT LINE.
DEPTH: 10.8'
8" SS
EXISTING SEWER
HIGHWAY 66

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APPENDIX C

TERRY LAKE REGIONAL SEWER OPTION #1 CAPACITY CALCULATIONS CHOSEN ALTERNATIVE

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 1-11	Calcs By:	S. Thomas
Design Point:	DP#1 - Existing Manhole at Gay Street		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	2815 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	90000.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	30000.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	477,225 gal/day
Infilltration	15%
Approx. Population	6193
Peaking Factor	3.16

Daily Peak Flow	1,578,488 gal/day
Peak Flow	2.44 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	2.44 cfs

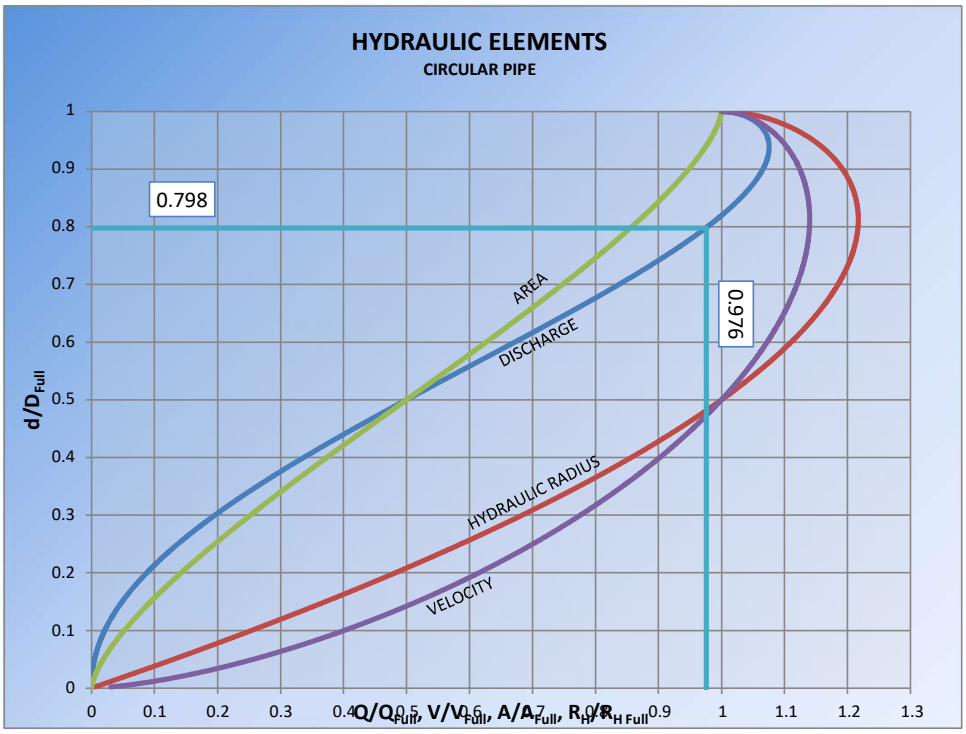
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.9762	V/V_{full}	1.1396	A/A_{full}	0.8556



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.798
Depth	11.970 in
Velocity	2.323 ft/s
Area	151.194 sq. in.

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 1-7	Calcs By:	S. Thomas
Design Point:	DP#2		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	2240 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	369,600 gal/day
Infilltration	15%
Approx. Population	4928
Peaking Factor	3.25

Daily Peak Flow	1,256,949 gal/day
Peak Flow	1.94 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	1.94 cfs

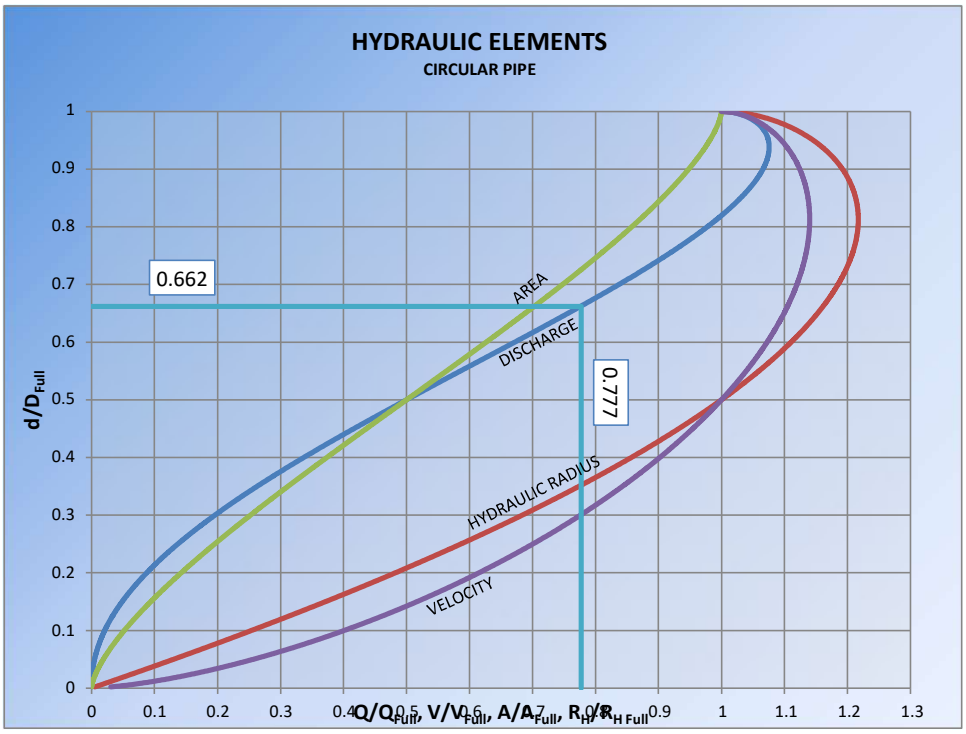
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.7773	V/V_{full}	1.1048	A/A_{full}	0.7026



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.662
Depth	9.930 in
Velocity	2.252 ft/s
Area	124.159 sq. in.

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 1-6	Calcs By:	S. Thomas
Design Point:	DP#3		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	1802 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	297,330 gal/day
Infilltration	15%
Approx. Population	3964
Peaking Factor	3.34

Daily Peak Flow	1,036,732 gal/day
Peak Flow	1.60 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	1.60 cfs

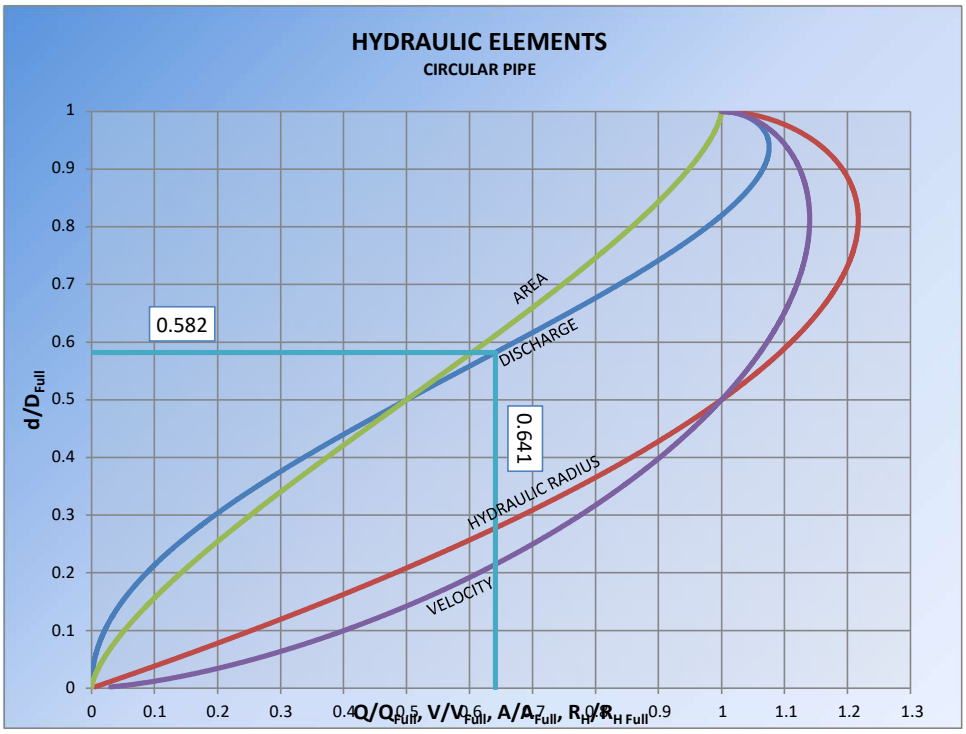
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.6411	V/V_{full}	1.0612	A/A_{full}	0.6039



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.582
Depth	8.730 in
Velocity	2.164 ft/s
Area	106.724 sq. in.

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 1-4	Calcs By:	S. Thomas
Design Point:	DP#4		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	1276 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	210,540 gal/day
Infilltration	15%
Approx. Population	2807
Peaking Factor	3.47

Daily Peak Flow	761,472 gal/day
Peak Flow	1.18 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	1.18 cfs

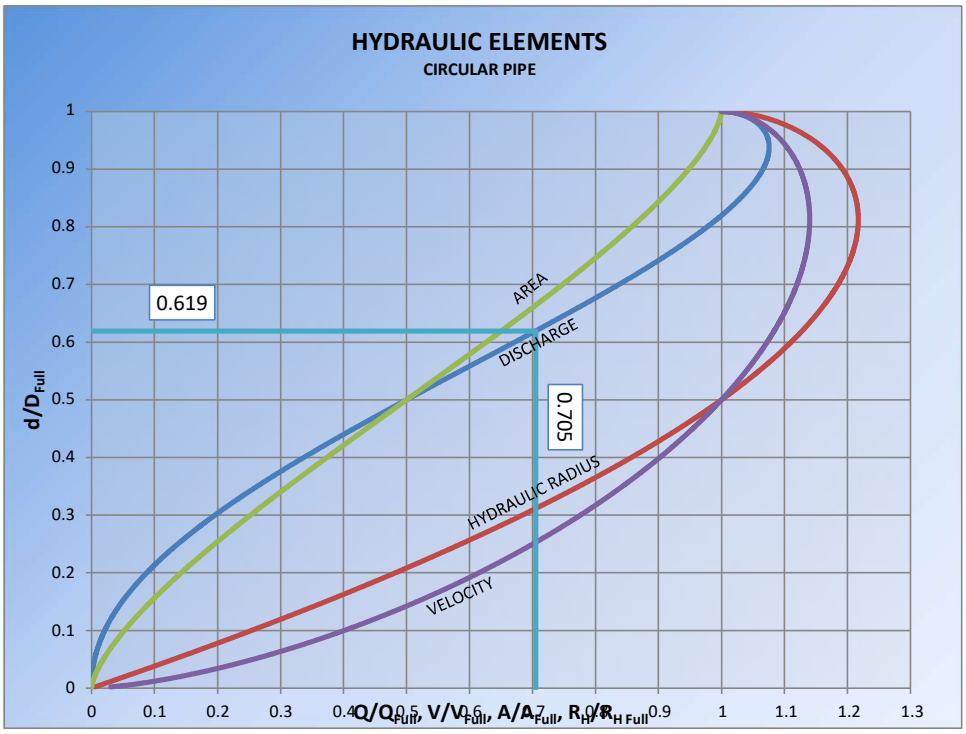
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	12 in
Slope of Pipe	0.0022 ft/ft
n	0.013

Q_{full}	1.671 cfs	V_{full}	2.128 ft/s	A_{full}	0.785 sq. ft.
Q/Q_{full}	0.7050	V/V_{full}	1.0834	A/A_{full}	0.6501



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.619
Depth	7.428 in
Velocity	2.305 ft/s
Area	73.521 sq. in.

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 1-2	Calcs By:	S. Thomas
Design Point:	DP#5		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	731 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	120,615 gal/day
Infilltration	15%
Approx. Population	1608
Peaking Factor	3.66

Daily Peak Flow	459,239 gal/day
Peak Flow	0.71 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	0.71 cfs

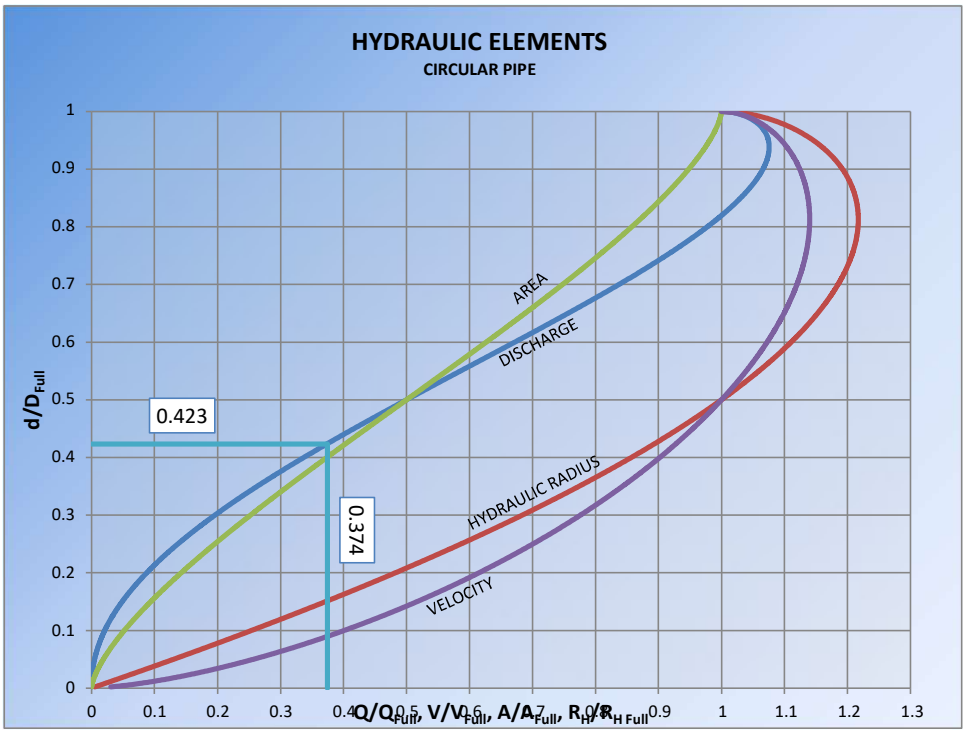
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	10 in
Slope of Pipe	0.0075 ft/ft
n	0.013

Q_{full}	1.897 cfs	V_{full}	3.479 ft/s	A_{full}	0.545 sq. ft.
Q/Q_{full}	0.3745	V/V_{full}	0.9270	A/A_{full}	0.4023



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.423
Depth	4.230 in
Velocity	3.225 ft/s
Area	31.600 sq. in.

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 8-9	Calcs By:	S. Thomas
Design Point:	DP#6		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	312 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	51,480 gal/day
Infilltration	15%
Approx. Population	686
Peaking Factor	3.90

Daily Peak Flow	208,466 gal/day
Peak Flow	0.32 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	0.32 cfs

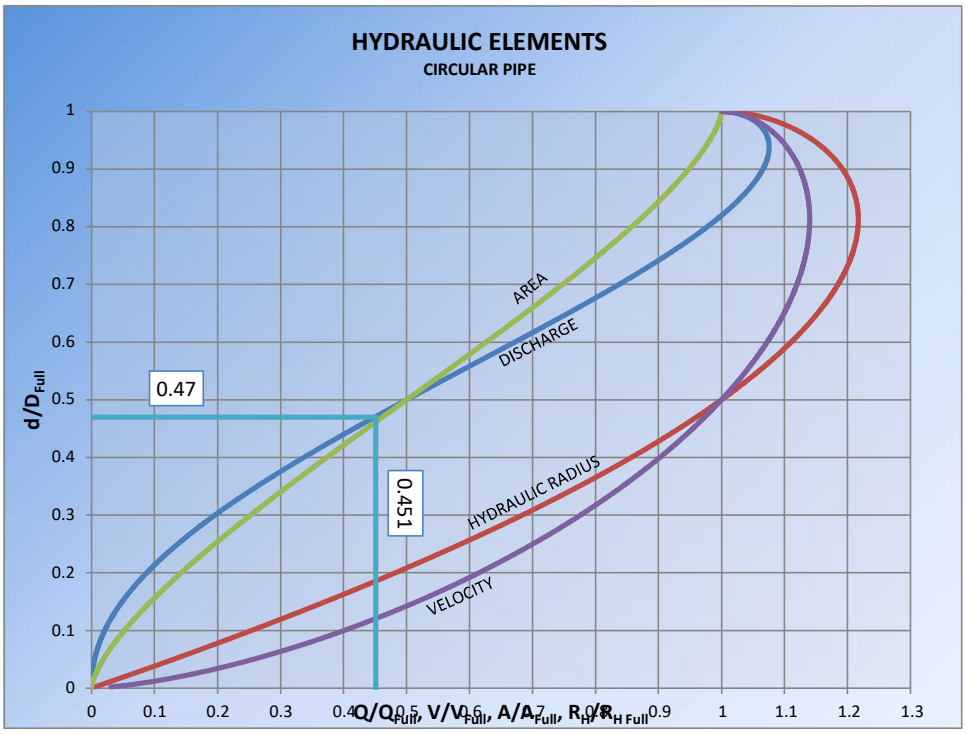
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	8 in
Slope of Pipe	0.0035 ft/ft
n	0.013

Q_{full}	0.715 cfs	V_{full}	2.048 ft/s	A_{full}	0.349 sq. ft.
Q/Q_{full}	0.4512	V/V_{full}	0.9734	A/A_{full}	0.4618



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.47
Depth	3.760 in
Velocity	1.994 ft/s
Area	23.214 sq. in.

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 1-7 Pre-Buildout	Calcs By:	S. Thomas
Design Point:	DP#2		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	341 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	56,265 gal/day
Infilltration	15%
Approx. Population	750
Peaking Factor	3.88

Daily Peak Flow	226,580 gal/day
Peak Flow	0.35 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	0.35 cfs

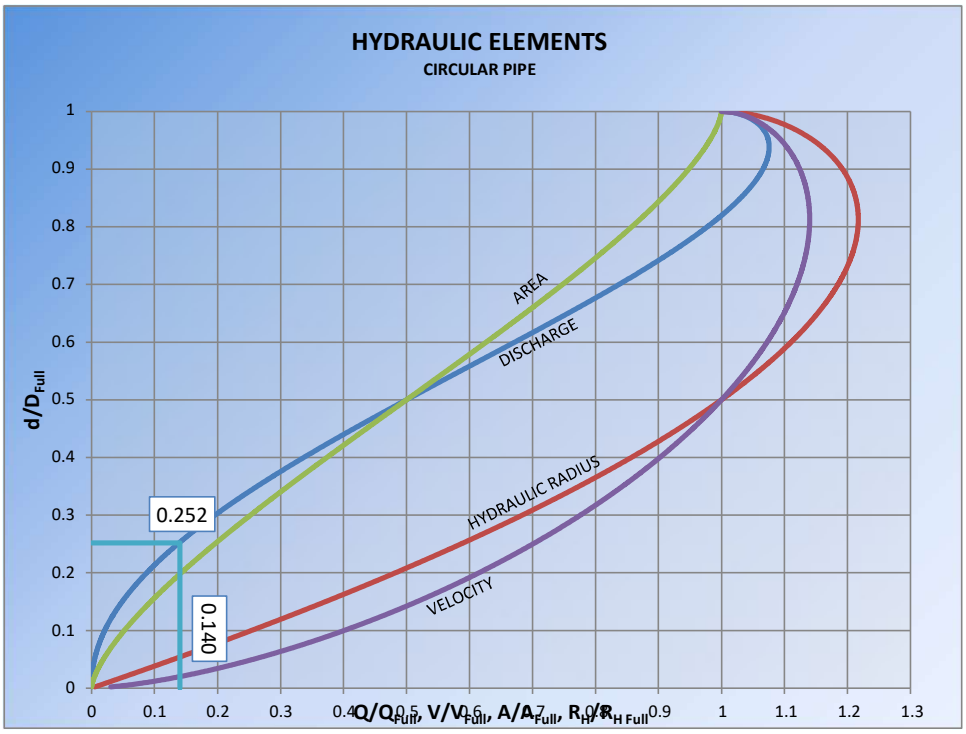
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.1401	V/V_{full}	0.7039	A/A_{full}	0.1977



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.252
Depth	3.780 in
Velocity	1.435 ft/s
Area	34.938 sq. in.

Project Title:	Zeek Property	Date:	December 15, 2021
Project Number:	911-016	Client:	Landhuis
Region:	Option 1: Basins 1-7 at 2 ft/s	Calcs By:	S. Thomas
Design Point:	DP#2		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	1260 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	207,900 gal/day
Infilltration	15%
Approx. Population	2772
Peaking Factor	3.47

Daily Peak Flow	752,878 gal/day
Peak Flow	1.16 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	1.16 cfs

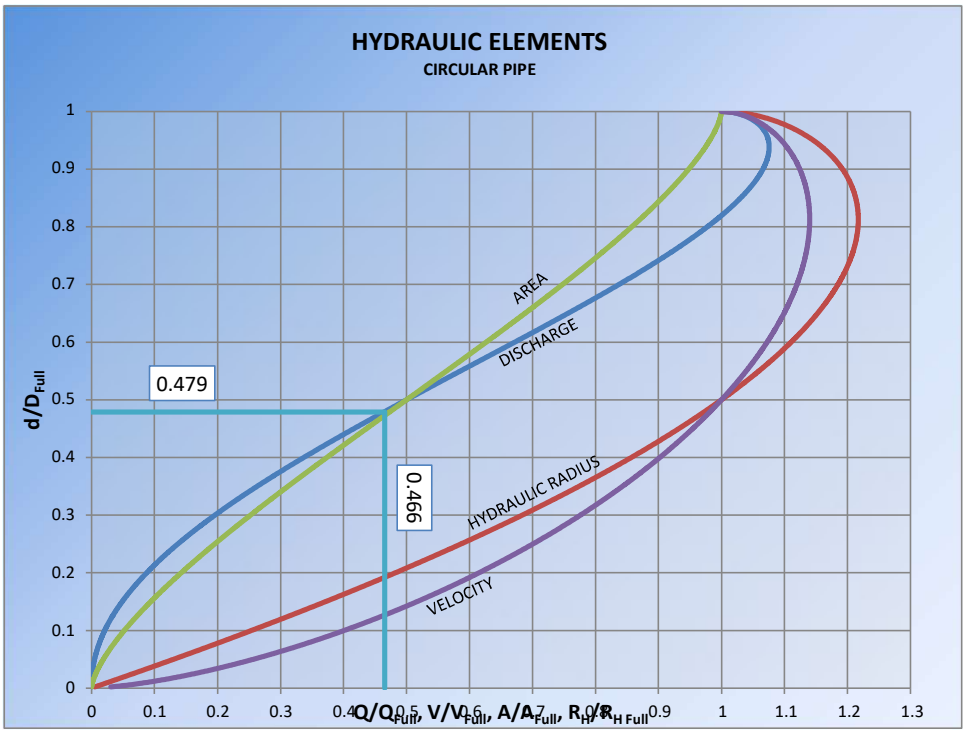
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.4656	V/V_{full}	0.9816	A/A_{full}	0.4733



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.479
Depth	7.185 in
Velocity	2.001 ft/s
Area	83.634 sq. in.

NORTHERN ENGINEERING

APPENDIX D

TERRY LAKE REGIONAL SEWER OPTION #2 EXHIBIT

NORTHERN ENGINEERING

08.16.2018

500 0 500

(IN FEET)
1 INCH = 500 FEET

TERRY LAKE REGIONAL SEWER
LONGMONT, CO
OPTION #2

Basin Area Designation	Ownership	Area	Existing Residential Units	Future Residential Units	Existing Congregation Area	Future Office Area
		Acre	Single Family Equivalent (SFE)	Single Family Equivalent (SFE)	SF of Building	SF of Building
Basin 1	Dirks and Boettcher	40		390		
Basin 2	Zeek	35		341		
Basin 3	Newell	41		399		
Basin 4	Dickens	15		146		
Basin 5	Dickens	4		39		
Basin 6	Puma 66 Investments	50		487		
Basin 7	Puma 66 Investments	45		438		
Basin 8	Wood Meadows	35	20			
Basin 9	Highway 119 Holdings	30		292		
Basin 10	Highway 119 Holdings	27		263		
Basin 11	Life Bridge Church	35			90,000	30,000

BASIN 1
DIRKS AND BOETTCHER PROPERTY
TOTAL AREA (AC): 40
ZONING: MIXED USE CORRIDOR

BASIN 2
ZEEK PROPERTY
TOTAL AREA (AC): 35
ZONING: MIXED USE CORRIDOR

BASIN 3
NEWELL PROPERTY
TOTAL AREA (AC): 41
ZONING: MIXED USE CORRIDOR

BASIN 4
DICKENS PROPERTY
TOTAL AREA (AC): 15
ZONING: MIXED USE CORRIDOR

BASIN 5
DICKENS PROPERTY
TOTAL AREA (AC): 4
ZONING: MIXED USE CORRIDOR

BASIN 6
PUMA 66 INVESTMENTS
TOTAL AREA (AC): 50
ZONING: MIXED USE CORRIDOR

BASIN 7
PUMA 66 INVESTMENTS
TOTAL AREA (AC): 45
ZONING: MIXED USE CORRIDOR

BASIN 8
WOOD MEADOWS
AREA (AC): 35
ZONING: RURAL NEIGHBORHOOD

BASIN 9
HIGHWAY 119 HOLDINGS
TOTAL AREA (AC): 30
ZONING: MIXED USE CORRIDOR

BASIN 10
HIGHWAY 119 HOLDINGS
TOTAL AREA (AC): 27
ZONING: MIXED USE CORRIDOR

BASIN 11
LIFE BRIDGE CHURCH
TOTAL AREA (AC): 35
ZONING: MIXED USE CORRIDOR
LAND USE: OFFICE AND CONGREGATION

HOVER STREET
SPENCER STREET
FRANCIS STREET
GAY STREET
HIGHWAY 66

DP#1 DEPTH: 13.3'
DP#2 DEPTH: 11.4'
DP#3 DEPTH: 14.7'
DP#4 DEPTH: 14.8'
DP#5 DEPTH: 16.5'
DP#6 DEPTH: 11.0'
DEPTH: 10.8'

PROPOSED SEWER
EXISTING SEWER
10" SS
12" SS
15" SS
8" SS

PORTION OF PROPOSED SEWER TO BE LOCATED ON LOT LINE.

EXISTING BUILDINGS

LONG PEAK ANIMAL HOSPITAL

FAITH COMMUNITY LUTHERAN

D:\PROJECTS\911-016\UTILITY\SANITARY SEWER ANALYSIS\911-016_REGIONAL SANITARY SEWER ANALYSIS-OPTION 2.DWG

NORTHERN ENGINEERING

APPENDIX E

TERRY LAKE REGIONAL SEWER OPTION #2 CAPACITY CALCULATIONS

Project Title:	Zeek Property	Date:	August 16, 2018
Project Number:	911-016	Client:	Landhuis
Region:	Option 2: Basins 1-11	Calcs By:	S. Thomas
Design Point:	DP#1 - Existing Manhole at Gay Street		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	2815 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	90000.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	30000.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	477,225 gal/day
Infilltration	15%
Approx. Population	6193
Peaking Factor	3.16

Daily Peak Flow	1,578,488 gal/day
Peak Flow	2.44 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	2.44 cfs

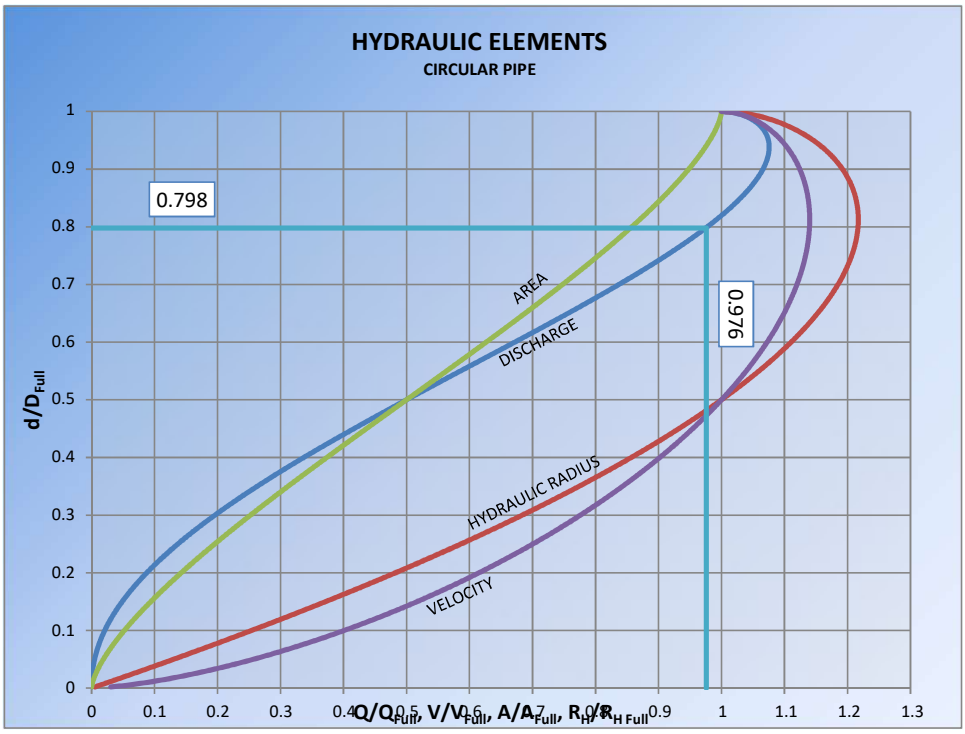
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.9762	V/V_{full}	1.1396	A/A_{full}	0.8556



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.798
Depth	11.970 in
Velocity	2.323 ft/s
Area	151.194 sq. in.

Project Title:	Zeek Property	Date:	August 16, 2018
Project Number:	911-016	Client:	Landhuis
Region:	Option 2: Basins 1-7	Calcs By:	S. Thomas
Design Point:	DP#2		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	2240 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	369,600 gal/day
Infilltration	15%
Approx. Population	4928
Peaking Factor	3.25

Daily Peak Flow	1,256,949 gal/day
Peak Flow	1.94 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	1.94 cfs

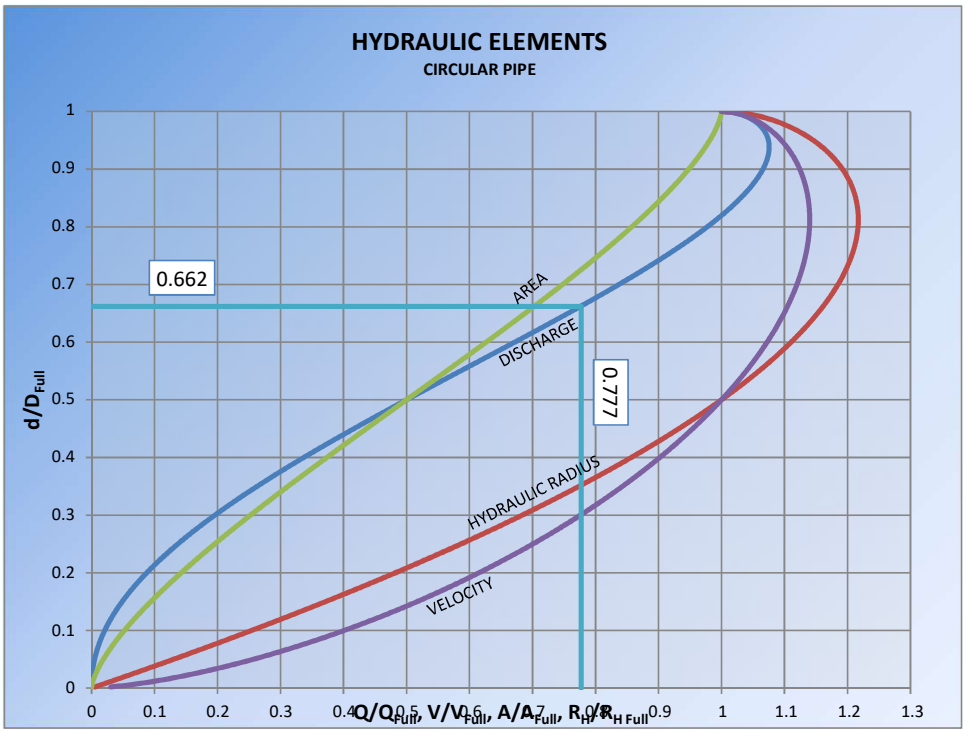
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.7773	V/V_{full}	1.1048	A/A_{full}	0.7026



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.662
Depth	9.930 in
Velocity	2.252 ft/s
Area	124.159 sq. in.

Project Title:	Zeek Property	Date:	August 16, 2018
Project Number:	911-016	Client:	Landhuis
Region:	Option 2: Basins 1-5	Calcs By:	S. Thomas
Design Point:	DP#3		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	1315 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	216,975 gal/day
Infilltration	15%
Approx. Population	2893
Peaking Factor	3.46

Daily Peak Flow	782,360 gal/day
Peak Flow	1.21 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	1.21 cfs

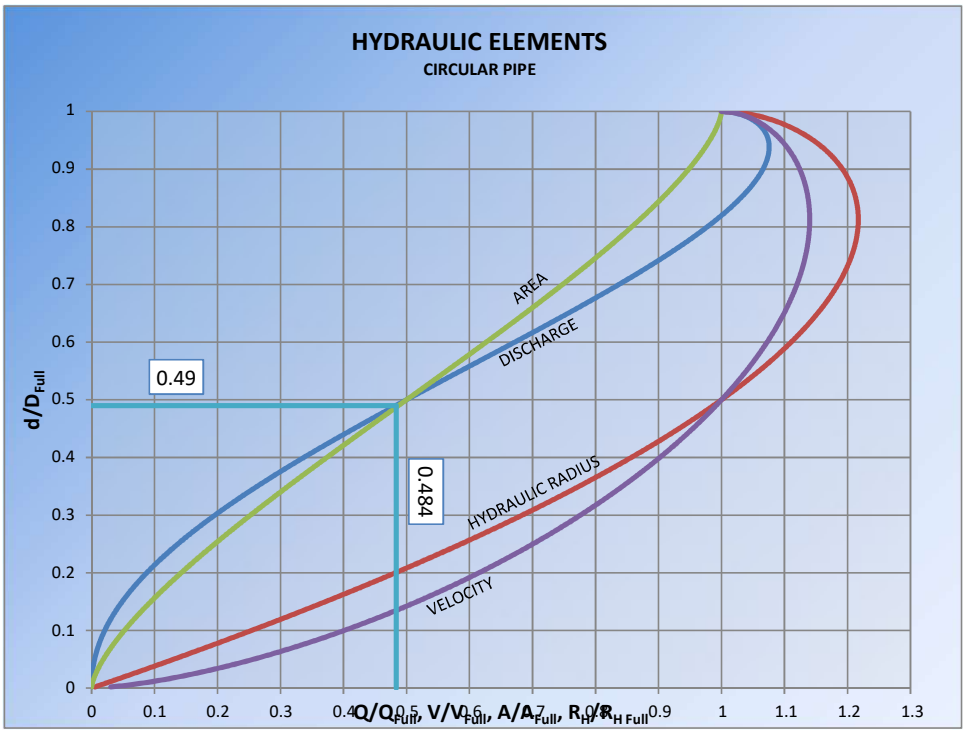
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	15 in
Slope of Pipe	0.0015 ft/ft
n	0.013

Q_{full}	2.502 cfs	V_{full}	2.039 ft/s	A_{full}	1.227 sq. ft.
Q/Q_{full}	0.4838	V/V_{full}	0.9914	A/A_{full}	0.4873



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.49
Depth	7.350 in
Velocity	2.021 ft/s
Area	86.107 sq. in.

Project Title:	Zeek Property	Date:	August 16, 2018
Project Number:	911-016	Client:	Landhuis
Region:	Option 2: Basins 1-4	Calcs By:	S. Thomas
Design Point:	DP#4		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	1276 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	210,540 gal/day
Infilltration	15%
Approx. Population	2807
Peaking Factor	3.47

Daily Peak Flow	761,472 gal/day
Peak Flow	1.18 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	1.18 cfs

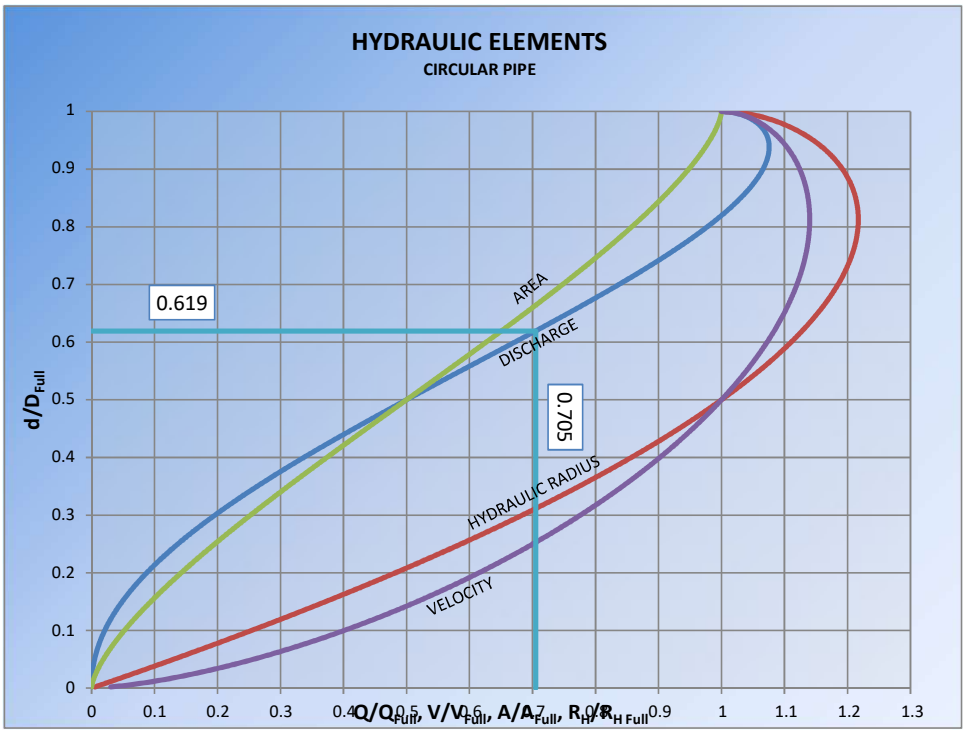
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	12 in
Slope of Pipe	0.0022 ft/ft
n	0.013

Q_{full}	1.671 cfs	V_{full}	2.128 ft/s	A_{full}	0.785 sq. ft.
Q/Q_{full}	0.7050	V/V_{full}	1.0834	A/A_{full}	0.6501



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.619
Depth	7.428 in
Velocity	2.305 ft/s
Area	73.521 sq. in.

Project Title:	Zeek Property	Date:	August 16, 2018
Project Number:	911-016	Client:	Landhuis
Region:	Option 2: Basins 1-2	Calcs By:	S. Thomas
Design Point:	DP#5		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	731 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	120,615 gal/day
Infilltration	15%
Approx. Population	1608
Peaking Factor	3.66

Daily Peak Flow	459,239 gal/day
Peak Flow	0.71 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	0.71 cfs

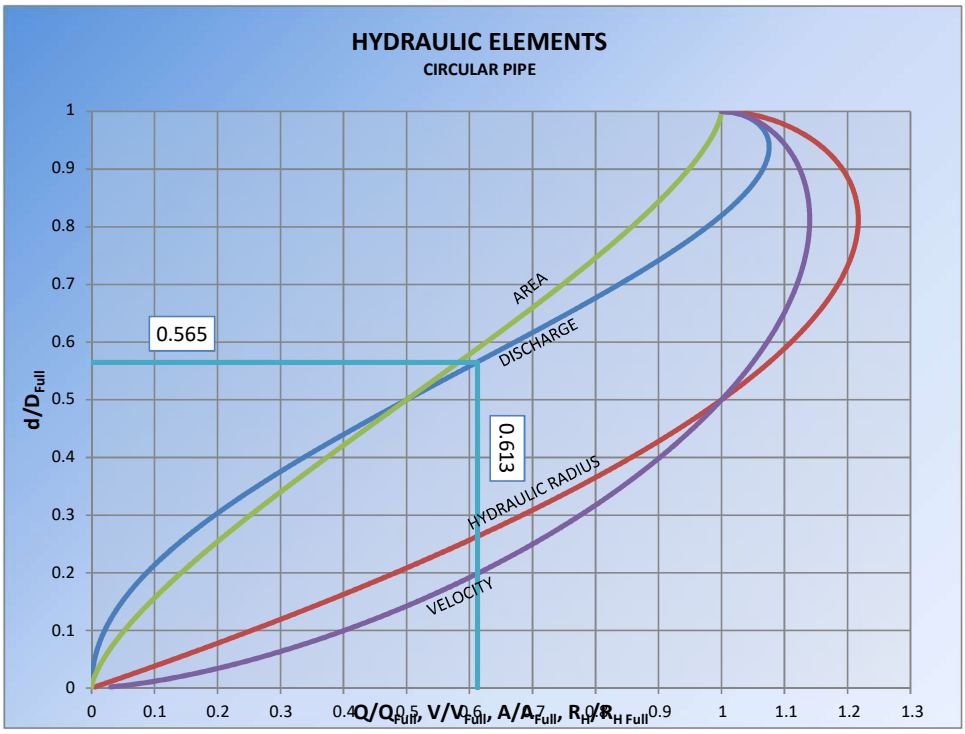
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	10 in
Slope of Pipe	0.0028 ft/ft
n	0.013

Q_{full}	1.159 cfs	V_{full}	2.126 ft/s	A_{full}	0.545 sq. ft.
Q/Q_{full}	0.6129	V/V_{full}	1.0499	A/A_{full}	0.5825



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.565
Depth	5.650 in
Velocity	2.232 ft/s
Area	45.752 sq. in.

Project Title:	Zeek Property	Date:	August 16, 2018
Project Number:	911-016	Client:	Landhuis
Region:	Option 2: Basins 8-9	Calcs By:	S. Thomas
Design Point:	DP#6		

Flow Intensity	75 gal/cap/day
Single Family cap/unit	2.20 cap/unit
Multi Family cap/unit	2.20 cap/unit
Single Family Units	312 units
Multi Famiily Units	0 units
Congregation Flow Intensity	75.00 gal/1000 sf/day
Congregation Area	0.00 square feet
Office Flow Intensity	200.00 gal/1000 sf/day
Office Area	0.00 square feet
Commercial Flow Intensity	1833.00 gal/ac/day
Commercial Acreage	0.00 ac.
Total Daily Average Flow	51,480 gal/day
Infilltration	15%
Approx. Population	686
Peaking Factor	3.90

Daily Peak Flow	208,466 gal/day
Peak Flow	0.32 cfs
Upstream Region	NA
Upstream Flow	0.00 cfs
Total Peak Flow	0.32 cfs

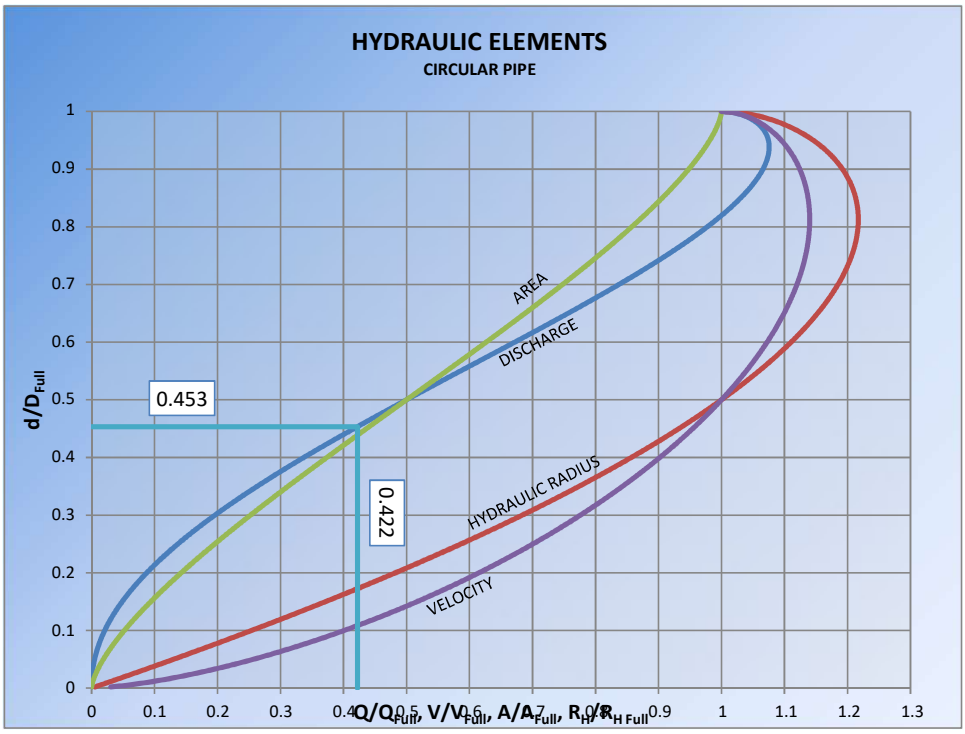
$$Peaking\ Factor = \frac{18 + \sqrt{(P)}}{4 + \sqrt{(P)}}$$

P= Population in thousands

Pipe Design

Diameter of Pipe	8 in
Slope of Pipe	0.0040 ft/ft
n	0.013

Q_{full}	0.764 cfs	V_{full}	2.189 ft/s	A_{full}	0.349 sq. ft.
Q/Q_{full}	0.4220	V/V_{full}	0.9573	A/A_{full}	0.4402



$$Q_{Full} = \frac{k}{n}\left(\pi \frac{D^{8/3}}{4^{5/3}}\right) S^{1/2}$$

$$Q = \frac{k}{n} A R_H^{2/3} S^{1/2}$$

$$k = 1.486$$

d/D_{full}	0.453
Depth	3.624 in
Velocity	2.096 ft/s
Area	22.129 sq. in.

NORTHERN ENGINEERING

Date: 8/15/2023
Worksheet Prepared by: S. Thomas

THIS IS AN ENGINEER'S COST ESTIMATE ONLY. THIS IS NOT A BID.

Terry Lake Regional Sanitary Sewer

Public Improvement Agreement - Budgeting Worksheet

Northern No. 911-016

Item No.	Item Description	Unit	Quantity	Unit Cost	Extended Cost
Removals/Demolition					
	Strip and Respread Topsoil	SY	18025	$0.50	$9,012.50
	Sawcut Roadway - Gay Street	LF	65	$10.00	$646.00
	Remove and Replace Fence	LF	30	$10.00	$300.00
	Demolish Existing Asphalt Roadway - Gay Street	SY	38	$5.00	$189.86
	Remove Tree	EA	2	$650.00	$1,300.00
	SUBTOTAL				**$11,448.36**
Sanitary Sewer					
	10" Sewer, 8-12' Depth	LF	1422	$55.00	$78,210.00
	12" Sewer, 8-12' Depth	LF	1600	$85.00	$136,000.00
	15" Sewer, 8-12' Depth	LF	1934	$139.00	$268,826.00
	Manhole, 48"	EA	16	$4,000.00	$64,000.00
	Boring Under Wetland Area	LF	30	$1,200.00	$36,000.00
	Wetland Bore 24" Casing	LF	30	$2,000.00	$60,000.00
	Dewatering/Trench Stabilization	LF	1687	$125.00	$210,875.00
	Tie into Existing Sanitary Stub	EA	1	$1,000.00	$1,000.00
	SUBTOTAL				**$854,911.00**
Drainage Infrastructure					
	Remove and Replace 12" CMP Culvert	EA	1	$950.00	$950.00
	Remove and Replace 15" CMP Culvert	EA	3	$1,100.00	$3,300.00
	Remove and Replace 18" CMP Culvert	EA	1	$1,200.00	$1,200.00
	Remove and Replace 30" CMP Culvert	EA	1	$2,500.00	$2,500.00
	SUBTOTAL				**$7,950.00**
General Conditions					
	Contingency			10.00%	$87,430.94
	Traffic Control	LS	1	$22,000.00	$22,000.00
	Mobilization	LS	1	$54,000.00	$54,000.00
	Surveying	LS	1	$16,000.00	$16,000.00
	Erosion Control	LS	1	$55,000.00	$55,000.00
	Pothole Existing Utilties	LS	1	$8,000.00	$8,000.00
	SUBTOTAL				**$242,430.94**
	TOTAL - Terry Lake Regional Sanitary Sewer				**$1,116,740.29**

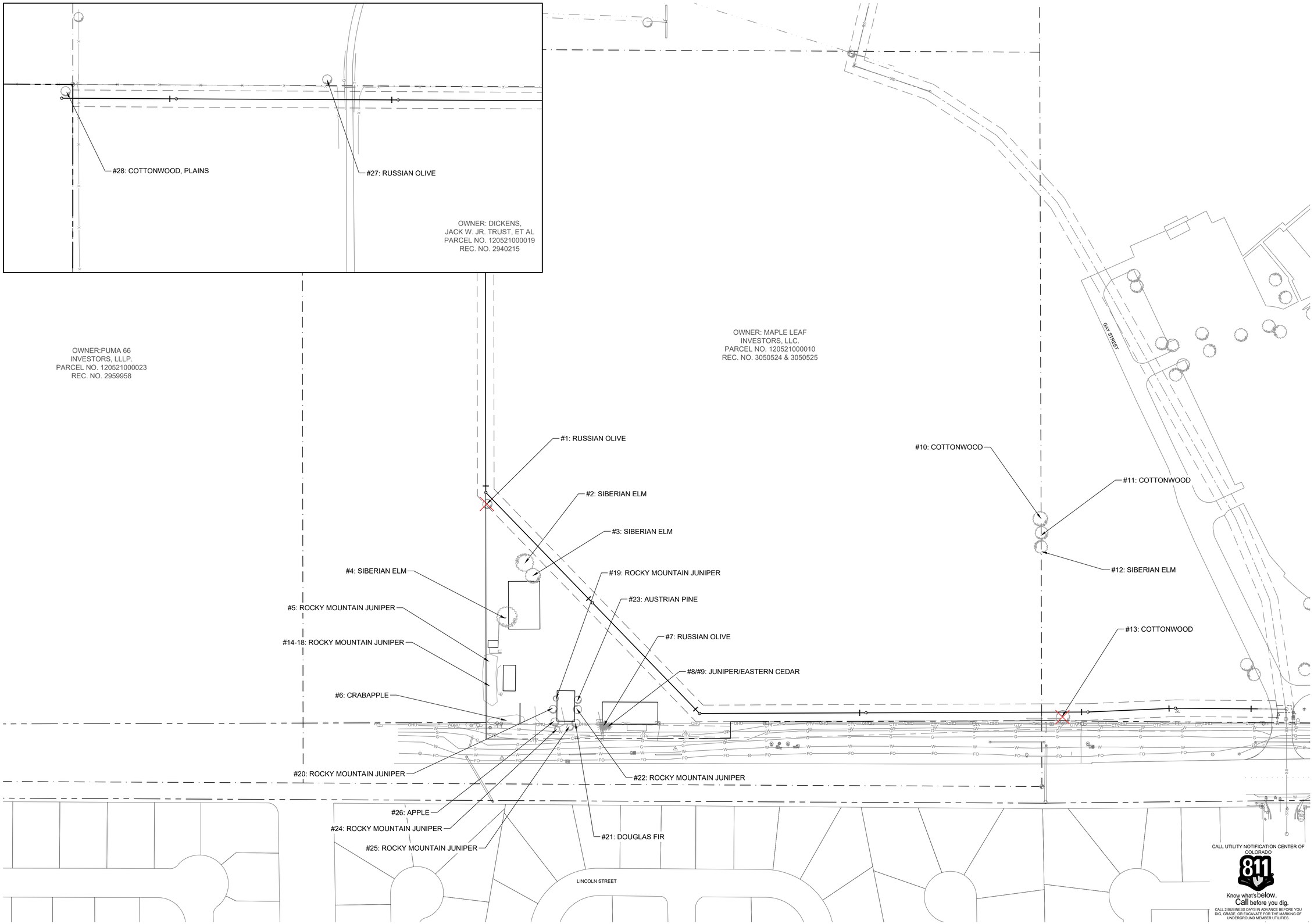
Assumptions: **General Items**

Sanitary Sewer: Approximately 30% of sanitary sewer assumed to need dewatering. Groundwater varies in the area.

Additional Items:

Unit Pricing: Unit pricing shall not include a built in contingency. A contingency line item has been provided at 10%.

Notes: This quantity takeoff is based on the Terry Regional Sanitary Sewer construction plans dated 08.15.23
This is not a bid. Cost estimate shall be provided by contractor.



No.	Revisions:	By:	Date:

REVIEW SET
NOT FOR CONSTRUCTION
07.24.2023

These drawings are instruments of service provided by Northern Engineering Services, Inc. and are not to be used for any type of construction unless signed and sealed by a Professional Engineer in the employ of Northern Engineering Services, Inc.

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

PROJECT: 911-016
DATE: 07.24.2023
DESIGNED BY: S. Hallauer
SCALE: 1" = 75'
DRAWN BY: S. Hallauer
REVIEWED BY: S. Thomas

TERRY LAKE REGIONAL SANITARY SEWER
TREE REMOVAL INVENTORY EXHIBIT

Sheet
of 8

RESOLUTION 2003-103

A RESOLUTION APPROVING THE "THIRD AMENDED LONGMONT PLANNING AREA COMPREHENSIVE DEVELOPMENT PLAN INTERGOVERNMENTAL AGREEMENT" BETWEEN THE CITY OF LONGMONT AND COUNTY OF BOULDER, CONCERNING THE COUNTY'S ACQUISITION OF OPEN SPACE IN THE LONGMONT PLANNING AREA ("LPA"), THE CITY'S EXERCISE OF ITS ANNEXATION POWERS IN THE LPA, AND RELATED MATTERS

WHEREAS, the Board of County Commissioners of the County of Boulder ("the Board") and the City Council of the City of Longmont ("the City") (jointly, "the Parties") are authorized to enter into intergovernmental agreements to plan for and regulate land uses pursuant to C.R.S. §§ 29-20-101, et seq.; and

WHEREAS, the Parties believe that a comprehensive development plan which provides for binding commitments by the Parties regarding the future development of lands within the Longmont Planning Area ("LPA"), with respect to such issues as the County's acquisition of open space lands in the LPA, the City's annexation of lands for development within the LPA, and related matters, is in the best interests of the citizens of each of the Parties; and

WHEREAS, to this end, the Parties, through their designated representatives, entered into a "Longmont Planning Area Comprehensive Development Plan Intergovernmental Agreement" effective June 19, 1997, which has been amended since that time ("the IGA"); and

WHEREAS, the Parties now wish to amend the IGA again, in the form of a proposed "Third Amended Longmont Planning Area Comprehensive Development Plan Intergovernmental Agreement" ("Third Amended IGA"), to update the citations to and amend the provisions of the IGA regarding the County's "1041" regulations ("Regulations of Areas and Activities of State Interest in Article 8 of the Boulder County Land Use Code"), and to update the term of the IGA providing for a term of 20 years following the Third Amended IGA's effective date, with allowance for termination by either party on the tenth anniversary of the effective date of the Third Amended IGA; and

WHEREAS, the proposed Third Amended IGA is attached to and incorporated into this Resolution as Exhibit A, and has been approved following a duly noticed public hearing by the City Council; and

WHEREAS, on August 12, 2003, the County's Board of County Commissioners ("the Board") held a duly noticed public hearing on the proposed Third Amended IGA ("the Public Hearing"), at which hearing the Board considered the proposed IGA as set forth in Exhibit A, and the explanatory comments of the County Attorney, with no members of the public being present to speak to the proposed Third Amended IGA; and

WHEREAS, based on the Public Hearing, the Board determines that the proposed Third Amended IGA, in the form set forth in Exhibit A hereto, serves the best interests of the County's residents, and furthers the County's desire to appropriately protect the rural character of the LPA in conformity with the principles set forth in the Boulder County Land Use Code and the goals and policies of the Boulder County Comprehensive Plan, and should be approved.

NOW, THEREFORE, BE IT RESOLVED that the Board approves the proposed Third Amended IGA, as set forth in Exhibit A hereto.

A motion to approve the proposed Third Amended IGA, as set forth in Exhibit A hereto, was made by Commissioner Stewart, seconded by Commissioner Danish, and passed by a 2-0 vote, with Commissioner Mayer being excused.

ADOPTED this 19th day of August, 2003, nunc pro tunc the 12th day of August, 2003.

BOARD OF COUNTY COMMISSIONERS OF BOULDER COUNTY:

Paul D. Danish, Chair

Ronald K. Stewart, Vice Chair

Thomas A. Mayer, Commissioner
(EXCUSED)

ATTEST:

Clerk to the Board

THIRD AMENDED
LONGMONT PLANNING AREA
COMPREHENSIVE DEVELOPMENT PLAN
INTERGOVERNMENTAL AGREEMENT

This Intergovernmental Agreement by and between the City of Longmont, a Colorado home rule municipal corporation (Longmont), and the County of Boulder, a body politic and corporate of the State of Colorado (Boulder County); (collectively the "Parties").

WITNESSETH:

WHEREAS, §29-20-101 et seq., CRS as amended, enables the Parties to enter into Intergovernmental Agreements to plan for and regulate land uses, in order to minimize the negative impacts on the surrounding areas and protect the environment, and specifically authorizes local (i.e., City and County) governments to cooperate and contract with each other for the purpose of planning and regulating the development of land by means of a "comprehensive development plan"; and

WHEREAS, in order to ensure that the unique and individual character of Longmont and of the rural area within Boulder County outside the Longmont Planning Area (hereinafter "the LPA") are preserved, the Parties believe that a comprehensive development plan which recognizes the area of potential urbanization within the LPA which would not be interrupted by Boulder County open space, accompanied by a commitment by Longmont for the preservation of the rural character of lands surrounding the LPA within Boulder County, is in the best interest of the citizens of each of the Parties; and

WHEREAS, the Parties find that the acquisition of open space by Boulder County within the LPA does not serve the public interest in that Longmont's plan for infrastructure and other services to the LPA should occur without unanticipated interruptions brought by open space purchases within the LPA: and

WHEREAS, the Parties find that providing for the area outside the LPA within Boulder County to remain as rural in character through the term of this Agreement for the purpose of preserving a community buffer serves the economic and civic interest of their citizens and meets the goals of the Boulder County Comprehensive Plan; and

WHEREAS, with respect to the annexation provisions herein, the City of Longmont declares that the area outside the LPA within Boulder County is not appropriate for urban development, unless certain criteria are met, during the term of this Agreement; and

WHEREAS, consistent with the municipal annexation, utility service, and land use laws of the State of Colorado, this Agreement, including specifically the annexation and open space portions hereof, is intended to encourage the natural and well-ordered

EXHIBIT
A
(Res. 2003-103)

future development of each Party; to promote planned and orderly growth in the affected areas; to distribute fairly and equitably the costs of government services among those persons who benefit therefrom; to extend government services and facilities to the affected areas in a logical fashion; to simplify providing utility services to the affected areas; to simplify the governmental structure of the affected areas; to reduce and avoid, where possible, friction between the Parties; and to promote the economic viability of the Parties; and

WHEREAS, the functions described in this Agreement are lawfully authorized to each of the Parties which perform such functions hereunder, as provided in article 20 of title 29; part 1 of article 28 of title 30; part 1 of article 12 of title 31; and parts 2 and 3 of article 23 of title 31; CRS, as amended; and

WHEREAS, §29-1-201, et seq., CRS, as amended, authorizes the Parties to cooperate and contract with one another with respect to functions lawfully authorized to each of the Parties and the people of the State of Colorado have encouraged such cooperation and contracting through the adoption of Colorado Constitution, Article XIV, § 18(2); and

WHEREAS, the Parties have each held hearings after proper public notice for the consideration of entering into this Agreement and the adoption of a comprehensive development plan for the subject lands, hereinafter referred to as the "Plan Area", as shown on the map attached hereto as Exhibit A; and

WHEREAS, the Parties desire to enter into this Intergovernmental Agreement in order to plan for the use of the lands within the Plan Area through joint adoption of a mutually binding and enforceable comprehensive development plan.

NOW THEREFORE, in consideration of the above and the mutual covenants and commitments made herein, the Parties agree as follows:

1. LONGMONT PLANNING AREA (LPA) COMPREHENSIVE DEVELOPMENT PLAN.

This Agreement, including the Map attached hereto as Exhibit A, is adopted by the Parties as the Longmont Planning Area (LPA) Comprehensive Development Plan (the "Plan") governing the Plan Area. The "Plan Area" is hereby defined as the unincorporated area of Boulder County outside the Longmont Planning Area as shown on Exhibit A, or as subsequently amended in accordance with this Agreement.

2. ANNEXATION PROVISIONS.

(a) Longmont agrees that it will disclose to Boulder County any and all instances in which they receive an application for annexation of land outside the LPA within Boulder County. Further, Longmont commits that it is not currently pursuing any annexations within the Rural Preservation Area. Also, Boulder County commits that it

will not actively pursue open space acquisitions in the LPA not currently designated as open space.

(b) The area outside the LPA is intended to remain in Boulder County's regulatory jurisdiction for the term of this Agreement, unless changed by mutual agreement of the Parties. Further, the City Council of the City of Longmont, by authorizing the execution of this Agreement, finds and determines that there is no community of interest between said area and the City for the term of this Agreement, and the City will annex lands outside the LPA within Boulder County only pursuant to mutual agreement of the Parties.

(c) The City agrees that, during the term of this Agreement, it will expand the LPA within Boulder County only pursuant to mutual agreement of the Parties. Expansion would include only properties adjacent to the then existing LPA boundary, and would not be comprised of flagpoles to nonadjacent properties. The City and Boulder County agree to the following set of criteria by which proposals for expansion of the LPA will be allowed by the City Council and the Board of County Commissioners.

(1) Transfer of Development Rights - (TDR) receiving sites, in accordance with the Longmont TDR IGA, and TDR sending sites in accordance with the map attached thereto.

(2) Major Industrial User -if land inside LPA does not meet the needs of the development. The developer must demonstrate that factors other than land price preclude building within the LPA.

(3) Changes in the rural character of land (e.g., existing unincorporated residential subdivisions) outside the LPA that would be better served by the urban structure of Longmont (e.g., creation of significant institutional uses or the presence of existing residential subdivisions on surrounding unincorporated area properties).

(4) Enclaves of more than one home site per five (5) acres and which result from annexation that has left county property an island surrounded by Longmont, and where the provision of infrastructure from the City of Longmont would be more beneficial to property owners.

(d) Longmont Planning Area: The Map portion of this Plan identifies areas encompassing the LPA, which are currently located within unincorporated Boulder County but which may in the future and possibly during the term of this Agreement, be annexed to the City of Longmont. By authorizing the execution of this Agreement, Boulder County finds and declares that a community of interest in the area designated as the LPA on Exhibit A of this Plan, which is attached hereto and incorporated herein, exists with the City of Longmont.

(e) Any property located within the current municipal limits of Longmont, and any property which hereafter annexes to Longmont in accordance with the provisions of this Agreement, which subsequently is disconnected from the municipality, shall thereafter, for purposes of this Agreement, continue to be within the LPA unless excluded by action of the City.

3. OPEN SPACE.

(a) Any of the lands shown on the attached Exhibit A of the Plan outside the LPA may be acquired as open space by either of the Parties.

(b) Boulder County agrees that, for the term of this Agreement, it will not purchase any of the lands within the LPA for open space purposes, excepting only those lands which are designated "open space" on the Longmont Area Comprehensive Plan or otherwise changed to open space pursuant to an LACP amendment, and excepting those lands which are currently under contract or for which a letter of intent has been sent to the owner and which have been referred to the City of Longmont and except for those lands for which the consent of the City Council has been obtained as provided in section 5. Nothing in this section is intended to affect the continued ownership and maintenance of open space lands within the LPA which Boulder County currently owns or which are currently under contract with Boulder County or for which a letter of intent has been sent to the owner, and which have been referred to the City for comment.

(c) For lands within the LPA upon which Boulder County currently owns a conservation easement (identified on Exhibit A), Longmont agrees that it will annex said land only after release of the conservation easement thereon by Boulder County (except for those easements which automatically terminate upon annexation by any municipality) and will thereafter approve development of said land only in accordance with the provisions for TDR receiving and sending sites in the Longmont TDR Comprehensive Development Plan Intergovernmental Agreement (hereinafter "TDR Agreement") previously executed by these Parties. Upon expiration of said TDR Agreement and for the term of this Agreement, these lands will continue to be governed by the provisions of the TDR Agreement, said provisions being incorporated into this Agreement as if fully set forth herein. It is the intent of the Parties that this Agreement, and to the extent cross-referenced herein the Longmont TDR IGA, be and is the sole mutually adopted comprehensive plan related to these lands. However, nothing herein shall be construed to rescind Longmont's adoption and application of its comprehensive plan(s) to these lands.

(d) In the event Boulder County purchases 40 acres of John M. Keyes Trust farm, located within the LPA, Boulder County agrees it will provide Longmont the right-of-way necessary for the extension of Pike Road across said parcel upon such terms and conditions as are mutually agreed, including at least 120 foot width for an arterial street, and located as shown on the Longmont Comprehensive Plan, unless otherwise mutually agreed. Boulder County further agrees to allow Longmont to construct, operate, and maintain a trail under its St. Vrain River Greenways program, across the Keyes parcel through which the St Vrain River runs.

4. CITY OF LONGMONT UTILITIES AND ARTERIAL HIGHWAYS

It will be necessary for the City to seek additional water supplies, water storage, and water and sewer transportation and treatment facilities, both within and without the Plan Area. The areas designated in the Map portion of Exhibit A as the LPA shall be deemed to be the City's "Service Area" for all purposes, including, but not limited to, Boulder County's Regulations of Areas and Activities of State Interest in Article 8 of the Boulder County Land Use Code. To the extent such supplies and facilities are necessary to serve development within the LPA which is consistent with the provisions of this Agreement, the County agrees to use its best efforts in good faith to take action under any permitting requirements without undue delay, recognizing applications for such permits as being in conformance with this comprehensive development plan.

To this end, the County agrees that the City, in applying for such permits under the provisions of the Regulation of Areas and Activities of State Interest in Article 8 of the Boulder County Land Use Code, shall not be required to demonstrate compliance with the following provisions of said Regulation: Sections 8-511 B.3, 10, 11, 12, 13 &14 C.1 & 2.a, D & E. Section 8-511 C.2.b shall not apply to applications for projects that involve the removal of native agricultural water rights after the effective date of this agreement from land located within the Longmont Planning Area or TDR Receiving Sites located within the TDR Area. For the purposes of this Agreement, TDR Receiving Sites and TDR Area shall have the same meanings as set forth in the Intergovernmental Agreement Between the City of Longmont and County of Boulder Concerning Transferred Development Rights which was effective as of February 5, 1996. Sections 8-511 B.5.c & d shall only be applicable to sanitary sewage facilities. Sections 8-511 B.5.b, e, f & g, B.6, 7 & 8 shall apply to site location, construction and operation of facilities within areas designated on Maps 2, 3 & 4 of the Boulder County Comprehensive Plan, and with respect to other areas shall be limited in its application to construction and operation of such facilities. The application of Section 8-511 B.7 concerning archeological resources shall be limited to a determination whether archeologically-significant resources will be negatively impacted by the proposed project, and if so, provide for mitigation of those impacts. The application of Section 8-511 B.5.h concerning geologic hazards shall be limited to resolution of floodplain issues. The remaining portions of Section 8-511 shall only be applicable to the direct, site specific, impacts of the proposal. The County through the Board of County Commissioners finds pursuant to Section 8-504 of the Boulder County Land Use Code, that this intergovernmental agreement shall serve in lieu of review of permit applications under those regulations of Article 8, Section 5 of the County land Use Code which are limited herein, to the extent of such limitations. Section 8-407 shall exempt all upgrades to existing facilities that are required maintenance or otherwise required by federal, state, or County regulations, including repairing and/or replacing old or outdated equipment, or installing new equipment, provided the improvements do not expand levels of service beyond the design capacity, and provided further that the upgrade does not alter the location of the existing facility.

Boulder County agrees to exempt Longmont from the Regulations of Areas and Activities of State Interest in Article 8 of the Boulder County Land Use Code, if Boulder County passes amendments to those regulations governing arterial highways and interchanges. Specifically, this exemption shall apply to:

(a) the site section and construction of arterial highways and interchanges by Longmont within the LPA, which are designated on the Longmont Comprehensive Plan as adopted as of the effective date of this Agreement; and

(b) areas around arterial highway interchanges (as those areas are defined in the County's regulations). which interchanges are designated on the Longmont Comprehensive Plan, as adopted as of the date of this Agreement.]

5. IMPLEMENTATION PROCEDURES.

A plan amendment agreed to by both the city and county must occur in order to annex, or allow any use or development, or acquire for open space any parcel within the

Plan Area where such annexation, use or development, or acquisition does not comply with the Plan. Where the County seeks to acquire land for open space within the LPA after referral as provided in section 6(a), the City Council may, by resolution, agree to such acquisition and may condition its consent, and substantial compliance with such conditions shall be required for such acquisition to proceed.

The Parties each agree to undertake all steps to adopt procedures, plans, policies, and ordinances or other regulations as may be necessary to implement and enforce the provisions of this Plan. The Parties agree that, in adopting such procedures, plans, policies, ordinances or regulations, each will give the other Party sufficient advance notice of such action as will enable such Party, if it so desires, to comment upon the planned actions of that Party.

6. REFERRALS

(a) Any application for annexation or development on any parcel outside the LPA, and/or any proposal for acquisition of open space within the LPA, shall be referred in writing to the other Party, and no action shall be taken thereon by the referring Party until the receiving Party has had the opportunity to respond concerning the proposal's conformity to this Plan and any other land use concerns, provided those comments are made within existing state and local regulations regarding the processing of the application. All such responses shall be sent within 30 days of the date of receipt of the referral by the receiving Party.

(b) The City shall refer in writing to the County, any application for annexation and/or development, for an amendment to the Longmont Comprehensive Plan, for any parcel within the LPA and outside of the Municipal Service Area, unless otherwise determined through this Agreement.

(c) The County shall refer in writing to the City, any application for discretionary development and/or amendment to the Boulder County Comprehensive Plan for any parcel within the St. Vrain Valley Planning Area, Longmont Planning Area, or Municipal Service Area unless otherwise determined through this Agreement.

(d) Annexation applications of 10 or more acres within the LPA, and Longmont Area Comprehensive Plan amendments shall adhere to the following referral process unless otherwise determined through this Agreement:

(i) The staff of the referring party shall send the receiving party the pertinent information.

(ii) The staff of the receiving party shall have 30 days from the date of receipt of the referral to respond in writing to the referring party, unless otherwise required by state statute. The receiving party will call the referring party for clarification on questions and to give an idea of issues before sending formal comments. If the referring party does not receive a response within the 30 day period, the referring party may assume that the receiving party has no conflict with the proposal.

(e) Annexation applications of less than 10 acres within the LPA and County discretionary review processes other than PUD development, shall adhere to the following referral process unless otherwise determined through this Agreement:

(i) The staff of the referring party shall mail the receiving party the pertinent information.

(ii) The staff of the receiving party shall have 14 days from the date of receipt of the referral to respond in writing to the referring party, unless otherwise required by state statute. The receiving party will call the referring party for clarification on questions and to give an idea on issues before sending formal comments. If the referring party does not receive a response within the 14 day period, the referring party may assume that the receiving party has no conflict with the proposal.

(f) Every six months, each party shall provide the other party with a written notice of the status of each referral, including but not limited to, the status of the proposal within the approval process and, if applicable, the final density approved for a proposal.

7. AMENDMENTS.

This Plan contains the entire agreement between the Parties. Any proposed amendment of the Plan affecting the jurisdiction over lands or the development regulation of lands must be referred to the other Party by the Regulatory Party. The "Regulatory Party" is hereby defined as the Party having final land use or annexation approval jurisdiction, as the context requires. Amendment of the Plan shall take place only upon approval by resolution or ordinance adopted by the governing body of each of the Parties, after notice and hearing as may be required by law. The Regulatory Party shall not approve nor permit any development or change of use of any parcel in the Plan by any means in a manner inconsistent with this Agreement until and unless the Plan has been amended so that the proposed development or use of such parcel is consistent with the Plan.

8. NON-SEVERABILITY.

If any portion of this Plan is held by a court in a final, non-appealable decision to be per se invalid or unenforceable as to any Party, the entire Agreement and the Plan shall be terminated, it being the understanding and intent of the Parties that every portion of the Agreement and Plan is essential to and not severable from the remainder.

9. BENEFICIARIES.

The Parties, in their corporate and representative governmental capacities, are the only entities intended to be the beneficiaries of the Plan, and no other person or entity is so intended.

10. ENFORCEMENT.

Any one or more of the Parties may enforce this Agreement by any legal or equitable means including specific performance, declaratory and injunctive relief. No other person or entity shall have any right to enforce the provisions of this Agreement.

11. DEFENSE OF CLAIMS/INDEMNIFICATION.

If any person allegedly aggrieved by any provision of the Plan and who is not a Party to the Plan should sue any Party concerning such Plan provision, Boulder County shall, and any other Party may, defend such claim upon receiving timely and appropriate notice of pendency of such claim. Defense costs shall be paid by the Party providing such defense.

In the event that any person not a Party to the Plan should obtain a final money judgment against any Party who is the Regulatory Party for the diminution in value of any regulated parcel resulting from regulations in the Plan or regulations adopted by such Party implementing the Plan, Boulder County shall, to the extent permitted by law, indemnify such Party for the amount of said judgment.

12. GOVERNING LAW AND VENUE.

This Agreement shall be governed by the laws of the State of Colorado and venue shall lie in the County of Boulder.

13. TERM AND EFFECTIVE DATE.

This Agreement shall become effective when signed by authorized representatives of the governing bodies of each of the Parties. Except as provided herein, this Agreement shall remain in effect for a period of twenty (20) years, unless terminated prior thereto by agreement of all the Parties or pursuant to the terms of section 7 above.

At any time until ninety days prior to the tenth anniversary of the effective date of the Agreement, either Party may give written notice to the other Party by first class certified mail that it intends to terminate the Agreement effective on that anniversary and may, accordingly, terminate the Agreement .

Each Party shall, at least 90 days before the then current expiration date, hold a duly noticed public hearing to determine whether the term of this Agreement shall be extended an additional five (5) years from the expiration date then in effect. Notices of the hearing and subsequent action of the Party shall be sent to the other Party.

14. PARTY REPRESENTATIVES.

Referrals made under the terms of this Agreement shall be sent to the Parties' and Parties' representatives as follows:

ENTITY: REPRESENTATIVE:

County of Boulder
Director, Land Use Department
P.O. Box 471
Boulder, CO 80306

City of Longmont
Director of Community Development
Civic Center Complex
350 Kimbark Street
Longmont, CO 80501

Name and address changes for representatives shall be made in writing, mailed to the other representatives at the then current address.

THIS AGREEMENT made and entered into to be effective on the date as set forth above.

CITY OF LONGMONT

By: _____
Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
Deputy City Attorney

COUNTY OF BOULDER
BY: BOARD OF COUNTY COMMISSIONERS

_____
Paul D. Danish, Stewart, Chair

ATTEST:

_____
Clerk to the Board

APPROVED AS TO FORM:

_____
County Attorney

Community Planning & Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930 • Fax: 303.441.4856
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • **www.bouldercounty.org**

Building Safety & Inspection Services Team

M E M O

TO: Pete L'Orange, Staff Planner
FROM: Michelle Huebner, Plans Examiner Supervisor
DATE: October 17, 2022

RE: Referral Response, Docket SI-22-0001: Areas and Activities of State Interest (1041) review for the westward extension of an existing sanitary sewer located on Gay Street just north of Highway 66 to provide service for future development of parcels along Highway 66 from Gay Street to Hover Road, known as the Terry Lake Neighborhood.

Location: 2080 Hwy 66 (parcel no. 120521000021), 12734 Longford Drive (parcel no. 120521000019), 9911 Ute Road (parcel no. 120521000023), 10161 Ute Hwy (parcel no. 120521000010), and 12822 N 95th Street (parcel no. 120521000008), located north of Highway 66 approximately 1/2 mile west of Highway 66 and US 287, in Section 21, Township 3N, Range 69W.

Thank you for the referral. We have reviewed the proposal and have no conflicts with it.

If the applicants should have questions or need additional information, we'd be happy to work with them toward solutions that meet minimum building code requirements. Please call (720) 564-2640 or contact us via e-mail at building@bouldercounty.org

Matt Jones *County Commissioner* **Claire Levy** *County Commissioner* **Marta Loachamin** *County Commissioner*

Parks & Open Space
5201 St. Vrain Road • Longmont, CO 80503
303-678-6200 • POSinfo@bouldercounty.org
www.BoulderCountyOpenSpace.org

TO: Pete L'Orange, Community Planning & Permitting Department
FROM: Ron West, Natural Resource Planner
DATE: December 11, 2022
SUBJECT: Docket SI-22-0001, Terry Lake Regional Sanitary Sewer

Site Conditions

Within the unincorporated county, the length of pipeline is about 4100 linear feet -- less than one mile. This can be divided into the following sections, east to west:

Approximate Linear Feet	Characteristics
400	Fallow: pasture grasses & common weed species
660	Edge of cultivated field
850	Edge of previously disturbed "farmyard"
850	Edge of cultivated field
1340	Edge of fallow field in pasture grasses
4100	Total

With some exceptions below (such as specific locations of disturbances), the natural resource information provided in the application is adequate for the 1041 review. This is primarily found in the *Species and Habitat Characterization Plan*.

County Comprehensive Plan Designations

The parcel has the following designations in the Boulder County Comprehensive Plan.

- Significant Agricultural Lands of National Importance – most of the route
- Adjacent to Public Lands – county open space, far to the north

Discussion

Staff does not foresee significant natural resource impacts *as long as* construction does not occur under wet or moist soil conditions. The application text states that the project, "…will have no impact on the agricultural productivity of the affected land after completion." This can only be true if soil disturbances do not occur under wet soil conditions; therefore, this must be mandatory and enforced. Using heavy machinery on wet soils can, and likely would, permanently damage soil structure. Such damage cannot be remediated, resulting in permanent reductions in productivity.

Matt Jones *County Commissioner* **Claire Levy** *County Commissioner* **Marta Loachamin** *County Commissioner*

Restrictions on construction during wet soil conditions must be included in construction drawings; such conditions would include melting snow. During these times, any construction that involves the movement of soils or the driving of machinery over field soils must cease. Some other operations, such as in-trench work, could continue. It is unclear where access/hauling corridors would be and how they would be delimited in the field as to avoid random driving.

The separation of topsoils and subsoils is required; this also cannot occur during wet weather. Details of how soils would be replaced back into the trench are also required.

The application text states that 11.6 acres would be disturbed, but there is no explanation nor map that shows where these disturbances would be.

With groundwater in some areas at 2 feet (application text), what de-watering methods and BMP's would be used? Details must be included in the construction drawings.

It is very possible that underground field drain pipes would be encountered. These are usually clay pipes that are easily damaged. How would field drains be managed?

It is unclear if there would be a temporary construction easement in addition to the permanent easement. This should be shown on construction drawings.

Staff understands that wetlands are non-jurisdictional. The pipe would be bored under lateral ditches/wetlands. Tree removal is minor and almost all horticultural trees.

<u>Recommendations</u>

- All items discussed above must be addressed, and questions resolved.
- The application states that, "…the disturbed soil will be restored with native seeding…." However, only a relatively small portion of the pipeline disturbances would be revegetated in a conventional sense; many other areas are in cultivation or in non-native pasture grasses. Staff assumes that pasture grass areas would be returned to such. A parcel by parcel (owner by owner) Revegetation Plan is therefore required that includes species to be used, mapped delineation of all disturbance areas (including construction staging), and locations of silt fences or erosion control logs down slope of all disturbed areas.
- 90 percent drawings must be reviewed and approved by the county.
- The *Tree Inventory Appraisal* includes an appraisal of tree values, yet staff cannot find information on how the appraisal would be used. Are trees to be replaced by the applicant, or is compensation to be paid to the landowners, or is some other method to be used?
- Staging areas must be shown on the final plans. What re-fueling BMP's would be used? These requirements must be in the specifications.
- Prior to transporting equipment to the site, all machinery must be cleaned to remove soil/mud and attendant weed seeds.
- Weed management needs to be incorporated into the project. Specific weed species to be targeted, and the proposed control techniques for each, must be stated.
- If straw mulch or straw bale barriers are used, all straw must be certified weed-free.

Hay cannot be used.

- Hydroseeding should not be used; it is often unsuccessful in our climate. Grass seed can be either broadcast or drilled, but rates doubled if broadcast. Hydromulching, after seeding, is encouraged.
- As stated in the application, "…the site [must be] surveyed by a qualified biologist directly prior to commencement of construction…."
- Who is responsible for seeing that the conditions of approval, and commitments of record, are incorporated into the construction specifications for the project?

From: Cavaleri, Keli
To: L"Orange, Pete
Subject: RE: Referral packet for SI-22-0001: Terry Lake Regional Sanitary Sewer project
Date: Thursday, October 27, 2022 11:21:22 AM
Attachments: image002.png
image003.png

Hello,
Parks and Open Space has reviewed this request from a real estate perspective and has no issues, or comments.
Thank you!

Keli Cavaleri
Paralegal Specialist – Real Estate
Boulder County Parks & Open Space
5201 St. Vrain Road, Longmont, CO 80503
Office (303) 678-6265
kcavaleri@bouldercounty.org

Parks & Open Space

New: Boulder County has a new website: BoulderCounty.gov! Bookmark it today. Email addresses will transition at a later date.

From: Milner, Anna <amilner@bouldercounty.org>
Sent: Thursday, October 27, 2022 9:21 AM
To: Hippely, Hannah <hhippely@bouldercounty.org>; Historic <historic@bouldercounty.org>; Abner, Ethan <eabner@bouldercounty.org>; Vaughn, Andrea <avaughn@bouldercounty.org>; #CodeCompliance <codecompliance@bouldercounty.org>; Transportation Development Review <TransDevReview@bouldercounty.org>; #AssessorReferral <AssessorReferral@bouldercounty.org>; #CAreferral <CAreferral@bouldercounty.org>; #CEreferral <CEreferral@bouldercounty.org>; Thomas, Mike <mthomas@bouldercounty.org>; Kiepe, Bob <bkiepe@bouldercounty.org>; Stadele, Lee <leestadele@bouldercounty.org>; Stadele, Lee <leestadele@flagstaffsurveying.com>; Eliasen, Bill <beliasen@bouldercounty.org>; Stadele, Lee <leestadele@bouldercounty.org>; Stadele, Lee <leestadele@flagstaffsurveying.com>; LPC@longmontcolorado.gov; morgan@pvrea.com; g.allen@lpwd.org; jstruble@northernwater.org; bflockhart@northernwater.org; BDRCO@xcelenergy.com; Donna.L.George@xcelenergy.com; Renee.Hester@lumen.com; kevin.boden@longmontcolorado.gov; Phil@philwillis.com; angie@dangrantbookkeeping.com; frontrangewater@gmail.com; ayanna.reed@longmontcolorado.gov; don.burchett@longmontcolorado.gov; drcog@drcog.org; asummers@drcog.org; ataylor@drcog.org; sarah.brucker@state.co.us; dora_puc_website@state.co.us; timothy.bilobran@state.co.us; joe.padia@state.co.us; tyler.asnicar@state.co.us; samuel.peterson@state.co.us; CGS_LUR@mines.edu; cdphe_localreferral@state.co.us; hc_filesearch@state.co.us; cody.trevithick@hygienefire.org; travis.homyak@hygienefire.org;

Michele.goldman@longmontcolorado.gov; Moline, Jeffrey <jmoline@bouldercounty.org>; Strenge, Ernst <estrenge@bouldercounty.org>; Cavaleri, Keli <kcavaleri@bouldercounty.org>; Flax, Ron <rflax@bouldercounty.org>; Frederick, Summer <sfrederick@bouldercounty.org>; Goldstein, Andrew <agoldstein@bouldercounty.org>; HealthWaterQuality-EnvironmentalBP LU <HealthWQ-EnvironBPLU@bouldercounty.org>; Huebner, Michelle <mhuebner@bouldercounty.org>; Sanchez, Kimberly <ksanchez@bouldercounty.org>; Severson, Jennifer <jseverson@bouldercounty.org>; West, Ron <rowest@bouldercounty.org>
Cc: L'Orange, Pete <plorange@bouldercounty.org>
Subject: RE: Referral packet for SI-22-0001: Terry Lake Regional Sanitary Sewer project

Hi everyone,
Please see attached memo. The referral period has been extended until November 25, 2022.
Best Regards,
Anna

From: Milner, Anna
Sent: Wednesday, October 12, 2022 11:24 AM
To: Hippely, Hannah <hhippely@bouldercounty.org>; #Historic <Historic@co.boulder.co.us>; Abner, Ethan <eabner@bouldercounty.org>; Vaughn, Andrea <avaughn@bouldercounty.org>; #CodeCompliance <codecompliance@bouldercounty.org>; Transportation Development Review <TransDevReview@bouldercounty.org>; #AssessorReferral <AssessorReferral@bouldercounty.org>; #CAreferral <CAreferral@bouldercounty.org>; #CEreferral <CEreferral@bouldercounty.org>; Thomas, Mike <mthomas@bouldercounty.org>; Kiepe, Bob <bkiepe@bouldercounty.org>; Stadele, Lee <leestadele@bouldercounty.org>; Stadele, Lee <leestadele@flagstaffsurveying.com>; Eliasen, Bill <beliasen@bouldercounty.org>; Stadele, Lee <leestadele@bouldercounty.org>; Stadele, Lee <leestadele@flagstaffsurveying.com>; LPC@longmontcolorado.gov; morgan@pvrea.com; g.allen@lpwd.org; jstruble@northernwater.org; bflockhart@northernwater.org; BDRCO@xcelenergy.com; Donna.L.George@xcelenergy.com; Renee.Hester@lumen.com; kevin.boden@longmontcolorado.gov; Phil@philwillis.com; angie@dangrantbookkeeping.com; frontrangewater@gmail.com; ayanna.reed@longmontcolorado.gov; don.burchett@longmontcolorado.gov; drcog@drcog.org; asummers@drcog.org; ataylor@drcog.org; sarah.brucker@state.co.us; dora_puc_website@state.co.us; timothy.bilobran@state.co.us; joe.padia@state.co.us; tyler.asnicar@state.co.us; samuel.peterson@state.co.us; CGS_LUR@mines.edu; cdphe_localreferral@state.co.us; hc_filesearch@state.co.us; cody.trevithick@hygienefire.org; travis.homyak@hygienefire.org; Michele.goldman@longmontcolorado.gov; Moline, Jeffrey <jmoline@bouldercounty.org>; Strenge, Ernst <estrenge@bouldercounty.org>; Cavaleri, Keli <kcavaleri@bouldercounty.org>; Flax, Ron <rflax@bouldercounty.org>; Frederick, Summer <sfrederick@bouldercounty.org>; Goldstein, Andrew <agoldstein@bouldercounty.org>; HealthWaterQuality-EnvironmentalBP LU <HealthWQ-EnvironBPLU@bouldercounty.org>; Huebner, Michelle <mhuebner@bouldercounty.org>; Sanchez, Kimberly <ksanchez@bouldercounty.org>; Severson, Jennifer <jseverson@bouldercounty.org>; West, Ron <rowest@bouldercounty.org>
Cc: L'Orange, Pete <plorange@bouldercounty.org>
Subject: Referral packet for SI-22-0001: Terry Lake Regional Sanitary Sewer project

Please click here to access the referral packet for ***SI-22-0001: Terry Lake Regional Sanitary Sewer*** project**.**

Please return responses and direct any questions to ***Pete L'Orange*** by ***October 26, 2022.*** (Boulder County internal departments and agencies: Please attach the referral comments in Accela.)

Best Regards,
Anna

Anna Milner | **Admin. Lead Tech.**
Boulder County Community Planning & Permitting
Pronouns: she/her/hers
Physical address: 2045 13th St., Boulder CO 80302
Mailing address: PO Box 471, Boulder, CO 80306
(720) 564-2638 (Direct)
amilner@bouldercounty.org
Service hours are 8 a.m.-4:30 p.m. Monday, Wednesday, Thursday, Friday, and 10 a.m.-4:30 p.m. Tuesday
*My core working hours are 7am-5:30pm Tues - Fri

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www.bouldercounty.gov

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To participate please see this link -- https://berrydunn.mysocialpinpoint.com/boulder-county-cpp-strategic-plan/home

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Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 •
Tel: 303-441-3930 • www.BoulderCounty.gov

October 9, 2023

TO: Pete L'Orange, Planner II; Community Planning & Permitting, Development Review Team - Zoning

FROM: Anita Riley, Principal Planner; Community Planning & Permitting, Development Review Team – Access & Engineering

SUBJECT: Docket # SI-22-0001: Terry Lake Regional Sanitary Sewer – Revised Referral 2080 Hwy 66, 12734 Longford Drive, 9911 Ute Road, 10161 Ute Hwy, 12822 N. 95th Street

The Development Review Team – Access & Engineering staff has reviewed the revised documents for the above referenced docket and has the following comments:

1. The proposed sewer pipe alignment crosses four separate parcels with parcel numbers 120521000010, 120521000023, 120521000019, and 120521000009. The project will be accessed via State Highway 66 right-of-way (ROW), which is owned and maintained by the Colorado Department of Transportation (CDOT).

2. As presented, the proposal meets the requirements of the Boulder County Multimodal Transportation Standards (Standards).

3. Since no work is proposed in Boulder County right-of-way, no Boulder County utility construction permit will be required.

4. The proposal will result in more than one acre of disturbance and will, therefore, require a stormwater quality permit (SWQP). More information regarding the SWQP may be found at https://bouldercounty.gov/transportation/permits/stormwater-quality-permit/.

   Prior to grading permit, obtain a stormwater quality permit.

5. All relevant permits must be obtained from the Colorado Department of Transportation prior to construction.

6. A jurisdictional agreement is strongly recommended. Please reach out to all relevant jurisdictions to determine the feasibility of a jurisdictional agreement between Boulder County, the City of Longmont, and the Colorado Department of Transportation.

Claire Levy *County Commissioner* **Marta Loachamin** *County Commissioner* **Ashley Stolzmann** *County Commissioner*

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Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • **www.bouldercounty.org**

November 30th, 2022

TO: Pete L'Orange, Planner II; Community Planning & Permitting, Development Review Team - Zoning

FROM: Ian Brighton, Planner II; Community Planning & Permitting, Development Review Team – Access & Engineering

SUBJECT: Docket # SI-22-0001: Terry Lake Regional Sanitary Sewer

2080 Hwy 66, 12734 Longford Drive, 9911 Ute Road, 10161 Ute Hwy, 12822 N. 95th Street

The Development Review Team – Access & Engineering staff has reviewed the above referenced docket and has the following comments:

1. The proposed sewer pipe alignment crosses four separate parcels identified as parcel #120521000010, #120521000023, # 120521000019,and parcel #120521000009. The project will be accessed via State Highway 66 right-of-way (ROW), which is owned and maintained by the Colorado Department of Transportation (CDOT).

2. Staff has reviewed the proposed alignment and has no concerns.

3. No information has been provided regarding the location of staging areas. If any staging areas are proposed in a County ROW such as along north 95th street, a staging plan shall be provided as part of the final project design proposal.

4. A Utility Construction Permit (UCP) is required. The permit application is available through Boulder County Public Works. The UCP will address work hours and construction impacts to the surrounding transportation network including traffic control and staging. Note that hours of work are regulated by the UCP.

   Note that, among other things, hours of work are regulated by the Utility Construction Permit. The permit application is available through the Boulder County Public Works. Contact Bill Eliasen at (720) 564-2661.

5. A Boulder County Hauler License is required for hauling of material off site, regardless of where the material is deposited. This applies to the prime contractor as well as any subcontractors that collect, transport or dispose of any materials (dirt, gravel, garbage, recyclables, or compostables, construction and demolition waste, or landscaping materials) anywhere except within the project site, including locations outside unincorporated Boulder County. Additional information can be found here: https://www.bouldercounty.org/environment/trash/hauler-license/.

This concludes our comments at this time.

Matt Jones *County Commissioner* **Claire Levy** *County Commissioner* **Marta Loachamin** *County Commissioner*

From:	Milner, Anna
To:	L"Orange, Pete
Subject:	RE: DRSM on December 21, 2022
Date:	Friday, December 16, 2022 11:39:35 AM

Hi Pete – I think this is related to your SI docket for DRSM? If not let me know.

From: Swope, Tim <tswope@bouldercounty.org>
Sent: Friday, December 16, 2022 11:37 AM
To: Milner, Anna <amilner@bouldercounty.org>
Subject: RE: DRSM on December 21, 2022

Hi Anna,

Public Works is working with CDOT and the city of Longmont on a future widening of Highway 66. The current plan includes changes to access for Gay Road which theatrically might impact the future development in this area.

I'm not sure if there's a direct connection with this current development application, but did want to bring it up.

I'll likely attend Wednesday's meeting and will check against the current road plans to identify any potential impacts.

See you then!

Tim

Tim Swope, *AICP - Capital Programs Coordinator*
Boulder County Public Works
he/him/his
tswope@bouldercounty.org
720 564-2658

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-----Original Appointment-----
From: Milner, Anna <amilner@bouldercounty.org>
Sent: Thursday, December 15, 2022 9:12 PM
To: Milner, Anna; Sheehan, Jack; Coulson, Scott; Dominguez, Yvonne; Willits, Amelia; #CEreferral; #LandUseFP; #WildfireMitigation; Abner, Ethan; Arndt, Rachel; Arnold, Melissa; Baum, David; Bjelland, Erica; Brighton, Ian; Case, Dale; Duff, Sandra; Fasick, Jessica; Flax, Ron; Floodplain Admin; Frederick, Summer; Goldstein, Andrew; Gracia, Bonnie; Grimm, Denise; Hackett, Richard; Haines, David; Harden, Dyan; Hippely, Hannah; Holste, John; Hughes, David; James, Liana; Jefferies, Wesley;

Keyes, Jennifer; Knotts, Amber; Lattes, Conrad; L'Orange, Pete; LU Land Use Planner; Maxwell, Jeffery; McCatty, Kyle; Moline, Jeffrey; Nielsen, Tina; Northrup, Elizabeth; Perez, Martha; Proctor, Stacey; Rogers, Erica; Sanchez, Kimberly; Sandoval, Kathy; Scheuermann, Abigail; Shannon, Abigail; Stadele, Lee; Strenge, Ernst; Strife, Susie; Swope, Tim; Tardif, Jonathan; Thomas, Mike; Todacheene, Waylon; Torres, Sabrina; Transportation Development Review; Van Gerwen, Jena; Vaughn, Andrea; Walker, Samuel; Watson, Kelly; Webster, James B.; Weeks, Scott; West, Ron; Whisman, Janis; Yelton, Dana; Laws, Martin
Subject: DRSM on December 21, 2022
When: Wednesday, December 21, 2022 1:15 PM-3:45 PM (UTC-07:00) Mountain Time (US & Canada).
Where: Microsoft Teams Meeting

Hello everyone,

The agenda for DRSM on Wednesday, December 21, 2022 is attached. **This is a Teams meeting - see details below.**
Please feel free to forward to anyone else you think should attend.
……

DRSM = "Docket Review Staff Meeting." It is the meeting at which we discuss dockets or other items that are slated for Planning Commission the following month, and it is a good time for policy discussions. It is the last Wednesday of every month starting @ 1:15 P.M.

Planning Commission = 3rd Wednesday of the month, typically starting at 1:30 P.M.

Microsoft Teams meeting

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MEMO TO: Agencies and adjacent property owners
FROM: Pete L'Orange, Staff Planner
DATE: October 12, 2022
RE: **Docket SI-22-0001**

Docket SI-22-0001: Terry Lake Regional Sanitary Sewer

Request:	Areas and Activities of State Interest (1041) review for the westward extension of an existing sanitary sewer located on Gay Street just north of Highway 66 to provide service for future development of parcels along Highway 66 from Gay Street to Hover Road, known as the Terry Lake Neighborhood.
Location:	2080 Hwy 66 (parcel no. 120521000021), 12734 Longford Drive (parcel no. 120521000019), 9911 Ute Road (parcel no. 120521000023), 10161 Ute Hwy (parcel no. 120521000010), and 12822 N 95th Street (parcel no. 120521000008), located north of Highway 66 approximately 1/2 mile west of Highway 66 and US 287, in Section 21, Township 3N, Range 69W.
Zoning:	Agricultural
Applicant:	Jeff Mark, The Landhuis Company
Property Owners:	Babcock Land Corp., Jack Dickens Trust, Puma 66 Investors, Maple Leaf Investors LLC, Lifebridge Christian Church
Agent:	Stephanie Thomas, Northern Engineering

This process includes public hearings before the Board of County Commissioners and may include a public hearing before the Boulder County Planning Commission. Adjacent property owners and holders of liens, mortgages, easements or other rights in the subject property are notified of these hearings.

Community Planning & Permitting staff, Planning Commission, and County Commissioners value comments from individuals and referral agencies. Please check the appropriate response below or send a letter. Late responses will be reviewed as the process permits; all comments will be made part of the public record and given to the applicant. Only a portion of the submitted documents may have been enclosed; you are welcome to review the entire file at the Community Planning & Permitting Department, 2045 13th Street, Boulder, and on-line at https://boco.org/SI-22-0001 . If you have any questions regarding this application, please contact the Community Planning & Permitting Department office at (303) 441-3930 or via email at plorange@bouldercounty.org .

As required per article 8-508(C)1.a, referral responses must be returned within 14 days or **October 26, 2022**.
*As noted in section 8-508(C)1.b, an extension may be expressly granted by the Director.

_____ We have reviewed the proposal and have no conflicts.
__x__ Letter is enclosed.
Signed _____ PRINTED Name Jessica Fasick
Agency or Address CP& P Historic Review

Matt Jones *County Commissioner* **Claire Levy** *County Commissioner* **Marta Loachamin** *County Commissioner*

Boulder County

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Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • **www.BoulderCounty.org**

TO: Pete L'Orange, Community Planning & Permitting Department

FROM: Jessica Fasick, Historic Review, Community Planning & Permitting Department

DATE: November 9, 2022

SUBJECT: Docket SI-22-0001: Terry Lake Regional Sanitary Sewer

On November 7, 2022, a subcommittee of the Historic Preservation Advisory Board (HPAB) reviewed the property at 10161 Ute Hwy. The subcommittee unanimously agreed (3-0) that the five structures are eligible for landmark status with Boulder County under Criterion 1 for their association with the Nishida family, who represent the region's post World War II Japanese immigrant families who established vegetable farms and roadside produce stands in the Longmont area. They then reviewed docket SI-22-0001: Terry Lake Regional Sanitary Sewer and agreed that they would like the applicants to explore options to avoid negative impacts to the structures. Further, they ask that the applicants have Longmont's HPC evaluate the structures on the property at 9911 Ute Hwy to determine significance.

Matt Jones *County Commissioner* **Claire Levy** *County Commissioner* **Marta Loachamin** *County Commissioner*

From: Arnold, Melissa
To: L"Orange, Pete
Cc: Northrup, Elizabeth
Subject: RE: Referral packet for SI-22-0001: Terry Lake Regional Sanitary Sewer project
Date: Wednesday, October 12, 2022 11:58:41 AM
Attachments: image001.png

Hi Pete,
The Conservation Easement Program at Parks & Open Space does not have a comment on this docket (SI-22-0001) at this time, as it should not impact the nearby conservation easement properties.
Thanks,
Melissa

Melissa Arnold | Conservation Easement Program Manager
Pronouns | she/her/hers
Boulder County Parks & Open Space
303.678.6266 Office
720.745.2115 Cell
5201 St. Vrain Road, Longmont, CO 80503
marnold@bouldercounty.org
BoulderCounty.gov

New: Boulder County has a new website: BoulderCounty.gov! Bookmark it today. Email addresses will transition at a later date.

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Sent: Wednesday, October 12, 2022 11:24 AM
To: Hippely, Hannah <hhippely@bouldercounty.org>; Historic <historic@bouldercounty.org>; Abner, Ethan <eabner@bouldercounty.org>; Vaughn, Andrea <avaughn@bouldercounty.org>; #CodeCompliance <codecompliance@bouldercounty.org>; Transportation Development Review <TransDevReview@bouldercounty.org>; #AssessorReferral <AssessorReferral@bouldercounty.org>; #CAreferral <CAreferral@bouldercounty.org>; #CEreferral <CEreferral@bouldercounty.org>; Thomas, Mike <mthomas@bouldercounty.org>; Kiepe, Bob <bkiepe@bouldercounty.org>; Stadele, Lee <leestadele@bouldercounty.org>; Stadele, Lee <leestadele@flagstaffsurveying.com>; Eliasen, Bill <beliasen@bouldercounty.org>; Stadele, Lee <leestadele@bouldercounty.org>; Stadele, Lee <leestadele@flagstaffsurveying.com>; LPC@longmontcolorado.gov; morgan@pvrea.com; g.allen@lpwd.org; jstruble@northernwater.org; bflockhart@northernwater.org; BDRCO@xcelenergy.com; Donna.L.George@xcelenergy.com; Renee.Hester@lumen.com; kevin.boden@longmontcolorado.gov; Phil@philwillis.com; angie@dangrantbookkeeping.com; frontrangewater@gmail.com; ayanna.reed@longmontcolorado.gov; don.burchett@longmontcolorado.gov; drcog@drcog.org; asummers@drcog.org; ataylor@drcog.org; sarah.brucker@state.co.us; dora_puc_website@state.co.us; timothy.bilobran@state.co.us; joe.padia@state.co.us; tyler.asnicar@state.co.us; samuel.peterson@state.co.us; CGS_LUR@mines.edu; cdphe_localreferral@state.co.us; hc_filesearch@state.co.us;

cody.trevithick@hygienefire.org; travis.homyak@hygienefire.org; Michele.goldman@longmontcolorado.gov; Moline, Jeffrey <jmoline@bouldercounty.org>; Strenge, Ernst <estrenge@bouldercounty.org>; Cavaleri, Keli <kcavaleri@bouldercounty.org>; Flax, Ron <rflax@bouldercounty.org>; Frederick, Summer <sfrederick@bouldercounty.org>; Goldstein, Andrew <agoldstein@bouldercounty.org>; HealthWaterQuality-EnvironmentalBP LU <HealthWQ-EnvironBPLU@bouldercounty.org>; Huebner, Michelle <mhuebner@bouldercounty.org>; Sanchez, Kimberly <ksanchez@bouldercounty.org>; Severson, Jennifer; West, Ron <rowest@bouldercounty.org>
Cc: L'Orange, Pete <plorange@bouldercounty.org>
Subject: Referral packet for SI-22-0001: Terry Lake Regional Sanitary Sewer project

Please click here to access the referral packet for ***SI-22-0001: Terry Lake Regional Sanitary Sewer*** project***.***

Please return responses and direct any questions to ***Pete L'Orange*** by ***October 26, 2022.*** (Boulder County internal departments and agencies: Please attach the referral comments in Accela.)

Best Regards,
Anna

Anna Milner | **Admin. Lead Tech.**
Boulder County Community Planning & Permitting
Pronouns: she/her/hers
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Community Planning & Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • **www.bouldercounty.org**

MEMO TO:	Agencies and adjacent property owners
FROM:	Pete L'Orange, Staff Planner
DATE:	October 12, 2022
RE:	**Docket SI-22-0001**

Docket SI-22-0001: Terry Lake Regional Sanitary Sewer

Request:	Areas and Activities of State Interest (1041) review for the westward extension of an existing sanitary sewer located on Gay Street just north of Highway 66 to provide service for future development of parcels along Highway 66 from Gay Street to Hover Road, known as the Terry Lake Neighborhood.
Location:	2080 Hwy 66 (parcel no. 120521000021), 12734 Longford Drive (parcel no. 120521000019), 9911 Ute Road (parcel no. 120521000023), 10161 Ute Hwy (parcel no. 120521000010), and 12822 N 95th Street (parcel no. 120521000008), located north of Highway 66 approximately 1/2 mile west of Highway 66 and US 287, in Section 21, Township 3N, Range 69W.
Zoning:	Agricultural
Applicant:	Jeff Mark, The Landhuis Company
Property Owners:	Babcock Land Corp., Jack Dickens Trust, Puma 66 Investors, Maple Leaf Investors LLC, Lifebridge Christian Church
Agent:	Stephanie Thomas, Northern Engineering

This process includes public hearings before the Board of County Commissioners and may include a public hearing before the Boulder County Planning Commission. Adjacent property owners and holders of liens, mortgages, easements or other rights in the subject property are notified of these hearings.

Community Planning & Permitting staff, Planning Commission, and County Commissioners value comments from individuals and referral agencies. Please check the appropriate response below or send a letter. Late responses will be reviewed as the process permits; all comments will be made part of the public record and given to the applicant. Only a portion of the submitted documents may have been enclosed; you are welcome to review the entire file at the Community Planning & Permitting Department, 2045 13th Street, Boulder, and on-line at https://boco.org/SI-22-0001 . If you have any questions regarding this application, please contact the Community Planning & Permitting Department office at (303) 441-3930 or via email at plorange@bouldercounty.org .

As required per article 8-508(C)1.a, referral responses must be returned within 14 days or **October 26, 2022**.
*As noted in section 8-508(C)1.b, an extension may be expressly granted by the Director.

__X___ We have reviewed the proposal and have no conflicts.
_____ Letter is enclosed.
Signed _____ PRINTED Name_____Ayanna Reed_____
Agency or Address_____City of Longmont_____

Matt Jones *County Commissioner* **Claire Levy** *County Commissioner* **Marta Loachamin** *County Commissioner*

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_____ We have reviewed the proposal and have no conflicts.
__✓__ Letter is enclosed.
Signed _____ PRINTED Name Sarah Brucker
Agency or Address Colorado Division of Water Resources, 1313 Sherman St, Ste 821, Denver CO 80203

Matt Jones *County Commissioner* **Claire Levy** *County Commissioner* **Marta Loachamin** *County Commissioner*

COLORADO
Division of Water Resources
Department of Natural Resources

October 26, 2022

Pete L'Orange, Staff Planner
Boulder County Community Planning & Permitting
Transmission via email: plorange@bouldercounty.org

Re: Terry Lake Regional Sanitary Sewer Project
Docket SI-22-0001
S½ Section 21, Twp. 3 North, Rng. 69 West, 6th P.M.
Water Division 1, Water District 5

Mr. L'Orange:

The Colorado Division of Water Resources has received the above-referenced referral packet for an Areas and Activities of State Interest (1041) review for the extension of an existing sanitary sewer to provide service for future development.

The project seeks to extend the existing sanitary sewer located on Gay Street just north of Highway 66 westward for a distance of approximately one mile towards Hover/N. 95th Street. Depth to groundwater along the proposed sewer alignment ranges from 2 to 14 feet below ground surface. The applicant has proposed to install groundwater barriers upstream of all manholes to prevent the transmission of groundwater along the sanitary sewer trench once the installation is complete. If dewatering wells will be required for temporary dewatering purposes during construction of the trench or installation of the sewer line, the applicant will need to submit a Notice of Intent to Construct Dewatering Wells (form no. GWS-62) to this office at least 72 hours prior to construction of the dewatering well(s).

The project will be located entirely within private lands and consists primarily of agricultural fields and suburban development. The Rough & Ready Ditch (WDID 0500527) runs north-to-south through the proposed sewer alignment. The Division of Water Resources administers water to the headgate of the ditch, which is located several miles from the proposed project area. Should construction activities impact the ability of the ditch company to deliver water to users under the ditch, the applicant will need to coordinate with the ditch company to mitigate any such impacts.

Should you or the applicant have any questions regarding this matter, please contact me at this office (303-866-3581 ext. 8249 or sarah.brucker@state.co.us).

Sincerely,

Sarah Brucker, P.E.
Water Resources Engineer

Cc: Referral file no. 30510

CGS Unique ID BO-23-0002
40.2067, -105.1202
11.6 acres of disturbance
RMG's 12/3/2021 geotechnical recommendations are valid

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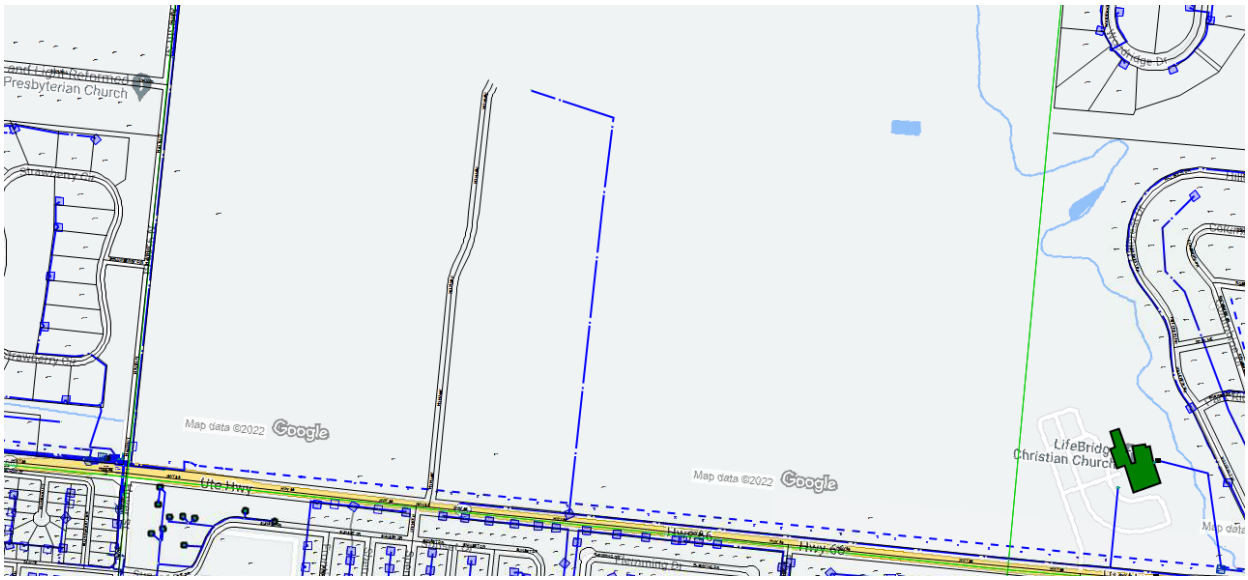
__X__ We have reviewed the proposal and have no conflicts.
_____ Letter is enclosed.
Signed _____ PRINTED Name Jill Carlson
Agency or Address Colorado Geological Survey

Matt Jones *County Commissioner* **Claire Levy** *County Commissioner* **Marta Loachamin** *County Commissioner*

From: Hester, Renee
To: Milner, Anna; Hippely, Hannah; Historic; Abner, Ethan; Vaughn, Andrea; #CodeCompliance; Transportation Development Review; #AssessorReferral; #CAreferral; #CEreferral; Thomas, Mike; Kiepe, Bob; Stadele, Lee; Stadele, Lee; Eliasen, Bill; Stadele, Lee; Stadele, Lee; LPC@longmontcolorado.gov; morgan@pvrea.com; g.allen@lpwd.org; jstruble@northernwater.org; bflockhart@northernwater.org; BDRCO@xcelenergy.com; Donna.L.George@xcelenergy.com; kevin.boden@longmontcolorado.gov; Phil@philwillis.com; angie@dangrantbookkeeping.com; frontrangewater@gmail.com; ayanna.reed@longmontcolorado.gov; don.burchett@longmontcolorado.gov; drcog@drcog.org; asummers@drcog.org; ataylor@drcog.org; sarah.brucker@state.co.us; dora_puc_website@state.co.us; timothy.bilobran@state.co.us; joe.padia@state.co.us; tyler.asnicar@state.co.us; samuel.peterson@state.co.us; CGS_LUR@mines.edu; cdphe_localreferral@state.co.us; hc_filesearch@state.co.us; cody.trevithick@hygienefire.org; travis.homyak@hygienefire.org; Michele.goldman@longmontcolorado.gov; Moline, Jeffrey; Strenge, Ernst; Cavaleri, Keli; Flax, Ron; Frederick, Summer; Goldstein, Andrew; HealthWaterQuality-EnvironmentalBP LU; Huebner, Michelle; Sanchez, Kimberly; Severson, Jennifer; West, Ron
Cc: L'Orange, Pete
Subject: [EXTERNAL] RE: Referral packet for SI-22-0001: Terry Lake Regional Sanitary Sewer project
Date: Wednesday, October 19, 2022 3:16:36 PM
Attachments: image002.png
image003.png

Hello,

Lumen has Aerial facilities running east/west along HWY 66 – see attached snip for details.



Thanks…
Renee Hester
Network Implementation Engineer
5325 Zunit St.
Denver, CO 80221
Tel: 720-738-2778
renee.hester@lumen.com

From: Milner, Anna <amilner@bouldercounty.org>
Sent: Wednesday, October 12, 2022 11:24 AM
To: Hippely, Hannah <hhippely@bouldercounty.org>; Historic <historic@bouldercounty.org>; Abner, Ethan <eabner@bouldercounty.org>; Vaughn, Andrea <avaughn@bouldercounty.org>; #CodeCompliance <codecompliance@bouldercounty.org>; Transportation Development Review <TransDevReview@bouldercounty.org>; #AssessorReferral <AssessorReferral@bouldercounty.org>; #CAreferral <CAreferral@bouldercounty.org>; #CEreferral <CEreferral@bouldercounty.org>; Thomas, Mike <mthomas@bouldercounty.org>; Kiepe, Bob <bkiepe@bouldercounty.org>; Stadele, Lee <leestadele@bouldercounty.org>; Stadele, Lee <leestadele@flagstaffsurveying.com>; Eliasen, Bill <beliasen@bouldercounty.org>; Stadele, Lee <leestadele@bouldercounty.org>; Stadele, Lee <leestadele@flagstaffsurveying.com>; LPC@longmontcolorado.gov; morgan@pvrea.com; g.allen@lpwd.org; jstruble@northernwater.org; bflockhart@northernwater.org; BDRCO@xcelenergy.com; Donna.L.George@xcelenergy.com; Hester, Renee <Renee.Hester@lumen.com>; kevin.boden@longmontcolorado.gov; Phil@philwillis.com; angie@dangrantbookkeeping.com; frontrangewater@gmail.com; ayanna.reed@longmontcolorado.gov; don.burchett@longmontcolorado.gov; drcog@drcog.org; asummers@drcog.org; ataylor@drcog.org; sarah.brucker@state.co.us; dora_puc_website@state.co.us; timothy.bilobran@state.co.us; joe.padia@state.co.us; tyler.asnicar@state.co.us; samuel.peterson@state.co.us; CGS_LUR@mines.edu; cdphe_localreferral@state.co.us; hc_filesearch@state.co.us; cody.trevithick@hygienefire.org; travis.homyak@hygienefire.org; Michele.goldman@longmontcolorado.gov; Moline, Jeffrey <jmoline@bouldercounty.org>; Strenge, Ernst <estrenge@bouldercounty.org>; Cavaleri, Keli <kcavaleri@bouldercounty.org>; Flax, Ron <rflax@bouldercounty.org>; Frederick, Summer <sfrederick@bouldercounty.org>; Goldstein, Andrew <agoldstein@bouldercounty.org>; HealthWaterQuality-EnvironmentalBP LU <HealthWQ-EnvironBPLU@bouldercounty.org>; Huebner, Michelle <mhuebner@bouldercounty.org>; Sanchez, Kimberly <ksanchez@bouldercounty.org>; Severson, Jennifer <IMCEAEX-_o=Boulder+20County_ou=Exchange+20Administrative+20Group+20+28FYDIBOHF23SPDLT+29_cn=Recipients_cn=Severson+2C+20Jennifereca@namprd09.prod.outlook.com>; West, Ron <rowest@bouldercounty.org>
Cc: L'Orange, Pete <plorange@bouldercounty.org>
Subject: Referral packet for SI-22-0001: Terry Lake Regional Sanitary Sewer project

Please click here to access the referral packet for ***SI-22-0001: Terry Lake Regional Sanitary Sewer*** project**.**

Please return responses and direct any questions to ***Pete L'Orange*** by ***October 26, 2022.*** (Boulder County internal departments and agencies: Please attach the referral comments in Accela.)

Best Regards,
Anna

Anna Milner | Admin. Lead Tech.
Boulder County Community Planning & Permitting
Pronouns: she/her/hers
Physical address: 2045 13th St., Boulder CO 80302
Mailing address: PO Box 471, Boulder, CO 80306
(720) 564-2638 (Direct)
amilner@bouldercounty.org
Service hours are 8 a.m.-4:30 p.m. Monday, Wednesday, Thursday, Friday, and 10 a.m.-4:30 p.m. Tuesday
*My core working hours are 7am-5:30pm Tues - Fri

New: Boulder County has a new website: BoulderCounty.gov! Bookmark it today. Email addresses will transition at a later date.

www.bouldercounty.gov

Invitation to participate!!!

Boulder County Community Planning & Permitting is currently working on a new strategic plan! The plan will be a long-term vision and roadmap for CPP's future and will guide decisions. The plan's

recommendations and strategies will be based on the community's vision for the future of Boulder County.
Your input is critical to developing a plan that reflects the values and goals of the community.

To participate please see this link -- https://berrydunn.mysocialpinpoint.com/boulder-county-cpp-strategic-plan/home

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From: Michele Goldman
To: L"Orange, Pete
Subject: [EXTERNAL] SI-22-0001: Terry Lake Regional Sanitary Sewer project
Date: Wednesday, October 12, 2022 12:46:21 PM

Hello Pete,
Longmont Fire has no objections to the proposed project. Longmont Fire would like to respectfully request that if there is any impact or loss of service to City of Longmont residences or businesses, we get advance notice to plan operations and response accordingly.

Thanks,

Michele Goldman, Captain
Fire Marshal
Fire Codes & Planning | Public Safety Department | City of Longmont
–
OFFICE 303-651-8426
E-MAIL michele.goldman@longmontcolorado.gov
225 Kimbark Street | Longmont, Colorado 80501

longmontcolorado.gov

Right of Way & Permits

1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: **303.571.3306**
Facsimile: 303. 571. 3284
donna.l.george@xcelenergy.com

October 26, 2022

Boulder County Community Planning and Permitting
PO Box 471
Boulder, CO 80306

Attn: Pete L'Orange

Re: Terry Lake Regional Sanitary Sewer, Case # SI-22-0001

Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has reviewed the AASI 1041 for **Terry Lake Regional Sanitary Sewer**. Please be aware PSCo owns and operates the following existing distribution facilities along Colorado State Highway / Ute Highway:

- natural gas main
- intermediate pressure natural gas
- overhead electric

Note that proper clearances must be maintained including ground cover that should not be modified from original depths. Contact Colorado 811 before excavating. Use caution and hand dig when excavating within 18-inches of each side of the marked facilities. Please be aware that all risk and responsibility for this request are unilaterally that of the Applicant/Requestor.

Donna George
Right of Way and Permits
Public Service Company of Colorado dba Xcel Energy
Office: 303-571-3306 – Email: donna.l.george@xcelenergy.com

From: Marguerite Sprague
To: L"Orange, Pete
Subject: Re: [EXTERNAL] Ask a Planner - M Hubbard - SI-22-0001 - 12809 Hillcrest Dr.
Date: Thursday, October 20, 2022 3:49:20 PM

Pete L'Orange:

Thank you for your prompt reply, map, and the clarifications!

You're very right about wildlife: last year about this time we woke up to a dead stag right in the project area you describe, west of the church lot. A cleanup crew took shifts: turkey buzzards by day, coyotes and others by night, to clean it up over a few days. So yes; they use that area as well though clearly not as often!

Thanks again,
Marguerite Hubbard

On Thu, Oct 20, 2022 at 3:32 PM L'Orange, Pete <plorange@bouldercounty.org> wrote:

> Thank you for your comments. They have been received and will included in the official record.
>
> Impacts to wildlife are most definitely one of things that we look at when conducting our review. In this case, it looks like the ditches east of the church (the Rough and Ready Ditches) are outside of the proposed project area. Right now, the proposed sewer line upgrades would start on the west side of the church's driveway, so impacts to the wildlife corridor along the ditches should be very minimal. I have attached the project map submitted by the applicant that shows where the work is proposed to occur.
>
> That said, we all know that wildlife does not stay within human-made boundaries. So we will be sure to pay attention to this during our review.
>
> If you have any additional questions or comments, please don't hesitate to contact us again. Thanks!
>
> **Pete L'Orange | Planner II**
>
> **Boulder County Community Planning & Permitting**
>
> Courthouse Annex | 2045 13th Street | Boulder, CO 80302
>
> Mailing address: PO Box 471 | Boulder, CO 80306
>
> Direct: 303-441-1418 | Main: 303-441-3930

plorange@bouldercounty.org

www.bouldercounty.gov/lu

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-----Original Message-----
From: LU Land Use Planner <planner@bouldercounty.org>
Sent: Thursday, October 20, 2022 2:07 PM
To: L'Orange, Pete <plorange@bouldercounty.org>
Subject: FW: [EXTERNAL] Ask a Planner - M Hubbard - SI-22-0001 - 12809 Hillcrest Dr.

Dana Yelton

Planner I | Boulder County Community Planning & Permitting

Direct: 720-564-2647

dyelton@bouldercounty.org

Work Schedule: Mon-Thurs 7:00 a.m.-5:30 p.m.

-----Original Message-----

From: Ask A Planner <no-reply@wufoo.com>

Sent: Thursday, October 20, 2022 1:49 PM

To: LU Land Use Planner <planner@bouldercounty.org>

Subject: [EXTERNAL] Ask a Planner - M Hubbard - SI-22-0001 - 12809 Hillcrest Dr.

Boulder County Property Address : 12809 Hillcrest Dr.

If your comments are regarding a specific Docket, please enter the Docket number: SI-22-0001

Name: M Hubbard

Email Address: mshtahoe@gmail.com

Phone Number: (530) 386-7861

Please enter your question or comment: Regarding this project, if you've visited the area you have noticed the ditches just east of the church. Please note and recognize that this area, and the area immediately west of the ditches (a buffer area) have become an established wildlife corridor that is used regularly, if not daily, by multiple species of wild mammals living in the area. These species are not just the common raccoon and coyote but also include deer, bobcats, elk, and less commonly, moose and bear. If you doubt it, please come talk with residents in this area who have seen all these species here. Most have pictures!

Preserving this buffer area will help preserve the local existence of these species who--it should be respected--were here first. Rampant development in our area has hugely reduced their natural habitat. This is an excellent opportunity to preserve this corridor, to respect the existence and needs of native non-human species. We're all hooked together on this planet, as we learn more and more vividly each year. Please take the responsible steps to preserve this wildlife corridor.

Public record acknowledgement:

I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.

From: LU Land Use Planner
To: L"Orange, Pete
Subject: FW: Docket SI-22-0001: Terry Lake Regional Sanitary Sewer
Date: Thursday, October 20, 2022 2:07:14 PM

Dana Yelton
Planner I | Boulder County Community Planning & Permitting
Direct: 720-564-2647
dyelton@bouldercounty.org
Work Schedule: Mon-Thurs 7:00 a.m.-5:30 p.m.

From: Jonathan Stumbles <stumblesj@outlook.com>
Sent: Thursday, October 20, 2022 1:35 PM
To: LU Land Use Planner <planner@bouldercounty.org>
Subject: [EXTERNAL] Docket SI-22-0001: Terry Lake Regional Sanitary Sewer

Hello – hope you're well.
Comments regarding this proposal: Would like to see an extension of sanitary sewer into the Willis Heights neighborhood as well. Is that something the Boulder County Community Planning & Permitting Department is planning?

Regards,
Jonathan Stumbles

From: David Stemler
To: L"Orange, Pete
Subject: [EXTERNAL] Docket SI-22-0001: Terry Lake Regional Sanitary Sewer
Date: Tuesday, October 25, 2022 3:56:46 PM

I am opposed to granting this sewer extension without provisions regarding future Hwy 66 traffic analysis as the only reason to upgrade the sewer is for more residential or commercial construction. Who will pay for the upgrades needed to Hwy 66? This must be considered before this application is granted.

It is my opinion that the developers of any future construction connected to this sewer line should pay the transportation costs and for the total construction of this project.

David Stemler Trustee of
2436 and 2438 Scott Ct.
Longmont, CO 80501