



STORMWATER MANAGEMENT PLAN FOR VOLLMER RV STORAGE

Prepared For:

Scott Belknap
3603 First Light Drive
Castle Rock, CO 80109
(719) 322-3556

Contractor Information

Name: _____
Company: _____
Address: _____

Qualified Stormwater Manager

Name: _____
Company: _____
Address: _____

Prepared By:

JR Engineering, LLC
5475 Tech Center Drive, Suite 235
Colorado Springs, Colorado 80919
(303) 267-6178
Contact: Ryan Burns

JR Project No. 25251.00

November, 2023

ENGINEER OF RECORD:

The Stormwater Management Plan was prepared under my direction and supervision and is correct to the best of my knowledge and belief. Said Plan has been prepared according to the criteria established by the County and State for Stormwater Management Plans.



Ryan Burns, P.E.
Registered Professional Engineer
State of Colorado No. 0054412
For and on behalf of JR Engineering, LLC.

1/18/24

Date



REVIEW ENGINEER:

The Stormwater Management Plan was reviewed and found to meet the checklist requirements except where otherwise noted or allowed by an approved deviation request.

Review Engineer

Date

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1. Applicant / Contact Information

Owner/Developer: Belknap Ventures LLC
3603 First Light Drive
Castle Rock, CO 80109
(719) 322-3556

Engineer: JR Engineering, LLC
5475 Tech Center Drive, Suite 235
Colorado Springs, CO 80919
Attn: Ryan Burns (303) 267-6178
rburns@jrengineering.com

SWMP Administrator: Contractor

Contractor: To Be Determined

2. Site Description and Location

Vollmer Road RV Storage herein known as “the site” is located in Section 34, Township 12 South, and Range 65 West of the 6th Principal Meridian. The site is bound on the northwest by existing Vollmer Road. The property is bound to the east by the Sterling Ranch Filing 1 and by Lots B and C of the Mc Clintock Station Subdivision to the south. Vollmer Road RV Storage lies within the Sand Creek Drainage Basin. Flows from this site are tributary to Sand Creek. A vicinity map is presented in Appendix A.

The subject site is currently undeveloped, consisting of sparse native vegetation coverage. In general, the site slopes from the northwest to the south east at slopes ranging from ~2-8% towards the neighboring properties to the south.

The project site is approximately 6.4 acres and is located to the east of Vollmer Road, within the unincorporated area of El Paso County, Colorado. Improvements proposed for the site includes recycled asphalt drives and parking, fencing, storm drainage improvements, drainage swales, and a full-spectrum water quality and detention pond.

Site details:

- a. Estimated area to undergo disturbance: 7.39 acres
- b. Per a NRCS web soil survey, the site is made up of Type B soils. Type B soils have a moderate infiltration when thoroughly wet. A NRCS soil survey map has been presented in Appendix B. BMPs will be installed and maintained to mitigate adverse impacts due to soil erosion.
- c. Existing vegetation: An aerial survey was used to determine percent cover of native meadow grasses (approximately 60% coverage).
- d. There are no streams that cross the project area.
- e. Location and description of potential pollution sources: Potential sources of pollution include:

- Vehicle, equipment maintenance, and fueling – all designated fueling and maintenance areas shall be located a minimum of 100 feet from any drainage course whenever possible. If the fueling area is located on a pervious surface, the area shall be covered with a non-pervious lining so as to prevent soil contamination by way of infiltration. Any spillage shall be cleaned up immediately.

- All exposed and stored soils – all exposed soils will be seeded and mulched upon completion of construction within the vicinity. Silt fence will be utilized to contain sediment deposited by runoff until seeding can take. Silt fence or a similar barrier should be installed as needed around long-term stockpiles (30 days+). Vehicle Tracking Control should be installed at access points to minimize sediment deposition from vehicles exiting the site.

- Vehicle tracking of sediments – if sediment is tracked onto the street, a reasonable attempt shall be made to clean up sediment and mud deposits as soon as possible. A street sweeper may be used as necessary. Vehicle Tracking Control shall be installed at all vehicular access points to the site.

-Management of contaminated soils – appropriate measures will be taken to clean up the cause of the contaminated soil. All contaminated soils must be disposed of offsite in an appropriate manner.

- On-site waste management practices (waste piles, liquid wastes, dumpsters, etc.) – dumpsters will be utilized as needed to remove trash from the site. Any waste material found on-site or generated by construction activities will be disposed of in a manner that prevents polluting of storm water discharges. In the event that waste is to be stored on-site, it shall be in an area located a minimum of 100 feet from any drainage course whenever possible. Whenever waste is not stored in a non-porous container, it shall be in an area enclosed by a 12-inch high compacted earthen ridge. If the enclosed waste area is located on porous soil, the area shall be covered with a non-porous lining to prevent soil contamination. Whenever precipitation is predicted, the waste shall be covered with a non-porous cover, anchored on all sides to prevent its removal by wind, in order to prevent precipitation from leaching out potential pollutants from the waste.

- Non-industrial waste sources such as worker trash and portable toilets – all portable toilets should be kept a minimum of 10 feet from stormwater inlets and 50 feet from state waters. They will be secured at all four corners to prevent overturning and cleaned on a weekly basis. They will be inspected daily for spills.

- f. Spill prevention and pollution controls for dedicated batch plants: Not applicable for this site since there will be no dedicated batch plants.
- g. Location and description of anticipated non-stormwater components of discharge: A potential source of non-stormwater discharge could be the irrigation of permanent seeding (PS). Irrigation will be kept at a rate so as to not create runoff.
- h. Ultimate receiving waters: Sand Creek
- i. No stream crossings on the site.

3. Proposed Sequence of Major Activities

The project will follow standard construction sequences for construction, ie., grading, utility installation, street paving, and landscaping. The contractor will be responsible for implementing and maintaining the erosion and sediment control measures described in this document and the accompanying design drawings. The contractor may designate these tasks to certain subcontractors as they see fit, but the ultimate responsibility for implementing these controls and their proposed function at each phase of the project remains with the contractor. The order of major activities (with estimated completion dates) will be as follows:

1. Install VTC and other perimeter soil erosion control measures (Spring 2024).
2. Install/grade temporary sediment basin (Spring 2024).
3. Clear and rough grade for improvements (Spring 2024).
4. Fine grading and placement of gravel parking area and paving (Spring 2024).
5. Install landscaping/vegetated surface treatments (Spring 2024).
6. Clean up and final stabilization (Spring 2024).
7. Remove BMPs once final stabilization is achieved (Spring 2025)

*** Total construction timeframe < 1 month, with the exception of establishing vegetation. Site does not require a phasing plan.*

4. BMPs for Stormwater Pollution Prevention

See GEC plans in Appendix C for BMP locations and detail sheets.

a. Erosion and Sediment Controls

i. Structural BMPs:

1. Temporary sediment basins and permanent detention pond (SBs) to collect runoff before it enters receiving waters
2. Silt fence (SF) along downstream limits of disturbed areas to filter sediment from runoff
3. Construction marker (CM) to identify limits of construction (LOC)
4. Vehicle tracking control (VTC) at site entrance to prevent sediment from leaving the site via vehicle tires
5. Erosion control blanket (ECB) placed on any slopes of 3:1 or greater, including the sides of sediment basins
6. Inlet protection (IP) around culvert entrances
7. Outlet protection (OP) at culvert outlets
8. Check Dam (CD) to counteract erosion by reducing energy
9. Site grading around entire stockpile area, all road slope toward detention pond. No developed storm water offsite.
10. Temporary stock pile and permanent stock pile (TSP) to consolidate materials such as topsoil in a controlled area bounded by silt fence

11. Stabilized staging area (SSA) near site entrance to consolidate construction equipment in a stabilized location
 12. Concrete washout area (CWA) to allow a controlled area for concrete trucks to be washed
- ii. Non-structural BMPs:
 1. Permanent seeding (PS) to stabilize disturbed areas
- b. Materials Handling and Spill Prevention
 - i. General Materials Handling Practices:
 1. Potential pollutants shall be stored and used in a manner consistent with the manufacturer's instructions in a secure location. To the extent practical, material storage areas should not be located near storm drain inlets and should be equipped with covers, roofs, or secondary containment as required to prevent storm water from contacting stored materials. Chemicals that are not compatible shall be stored in segregated areas so that spilled materials cannot combine and react.
 2. Disposal of materials shall be in accordance with the manufacturer's instructions and applicable local, state, and federal regulations.
 3. Materials no longer required for construction shall be removed from the site as soon as possible.
 4. Adequate garbage, construction waste, and sanitary waste handling and disposal facilities shall be provided as necessary to keep the site clear of obstruction and BMPs clear and functional.
 - ii. Specific Materials Handling Practices
 1. All pollutants, including waste materials and demolition debris, that occur onsite during construction shall be handled in a way that does not contaminate storm water.
 2. All chemicals including liquid products, petroleum products, water treatment chemicals, and wastes stored onsite shall be covered and protected from vandalism.
 3. Maintenance, fueling, and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, degreasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants, shall be conducted under cover during wet weather and on an impervious surface to prevent release of contaminants onto the ground. Materials spilled during maintenance operations shall be cleaned up immediately and properly disposed of. There will be no batch plants onsite.
 4. Wheel wash water shall be settled and discharged onsite by infiltration.
 5. Application of agricultural chemicals, including fertilizers and pesticides, shall be conducted in a manner and at application rates that will not result in loss of chemical to storm water runoff. Follow manufacturer's recommendations for application rates and procedures.

6. pH-modifying sources shall be managed to prevent contamination of runoff and storm water collected onsite. The most common sources of pH-modifying materials are bulk cement, cement kiln dust (CKD), fly ash, new concrete washing and curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate processes, and concrete pumping and mixer washout waters.
- iii. Spill Prevention and Response Procedures
 1. The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize their migration into storm water runoff and conveyance systems. If the release has impacted onsite storm water, it is critical to contain the released materials onsite and prevent their release into receiving waters.
 2. Spill Response Procedures:
 - a. Notify site superintendent immediately when a spill, or the threat of a spill, is observed. The superintendent shall assess the situation and determine the appropriate response.
 - b. If spills represent an imminent threat of escaping onsite facilities and entering the receiving waters, site personnel shall respond immediately to contain the release and notify the superintendent after the situation has stabilized.
 - c. The site superintendent, or his/her designee, shall be responsible for completing a spill reporting form and for reporting the spill to the appropriate agency.
 - d. Spill response equipment shall be inspected and maintained as necessary to replace any materials used in spill response activities.
 3. Spill kits shall be on-hand at all fueling sites. Spill kit location(s) shall be reported to the SWMP administrator.
 4. Absorbent materials shall be on-hand at all fueling areas for use in containing inadvertent spills. Containers shall be on-hand at all fueling sites for disposal of used absorbents.
 5. Recommended components of spill kits include the following:
 - a. Oil absorbent pads (one bale)
 - b. Oil absorbent booms (40 feet)
 - c. 55-gallon drums (2)
 - d. 9-mil plastic bags (10)
 - e. Personal protective equipment including gloves and goggles
 6. Concrete wash water: unless confined in a pre-defined, bermed containment area, the cleaning of concrete truck delivery chutes is prohibited at the job site.
 7. Notification procedures:
 - a. In the event of an accident or spill, the SWMP administrator shall be notified.
 - b. Depending on the nature of the spill material involved, the Colorado Department of Public Health and Environment

- (24-hour spill reporting line: 887-518-5608), downstream water users, or other agencies may also need to be notified.
- c. Any spill of oil which 1) violates water quality standards, 2) produces a “sheen” on a surface water, or 3) causes a sludge or emulsion, or any hazardous substance release, or hazardous waste release which exceeds the reportable quantity, must be reported immediately by telephone to the National Response Center Hotline at (800) 424-8802.

5. Final Stabilization and Long-Term Stormwater Management

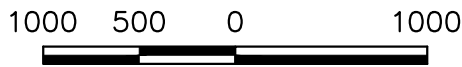
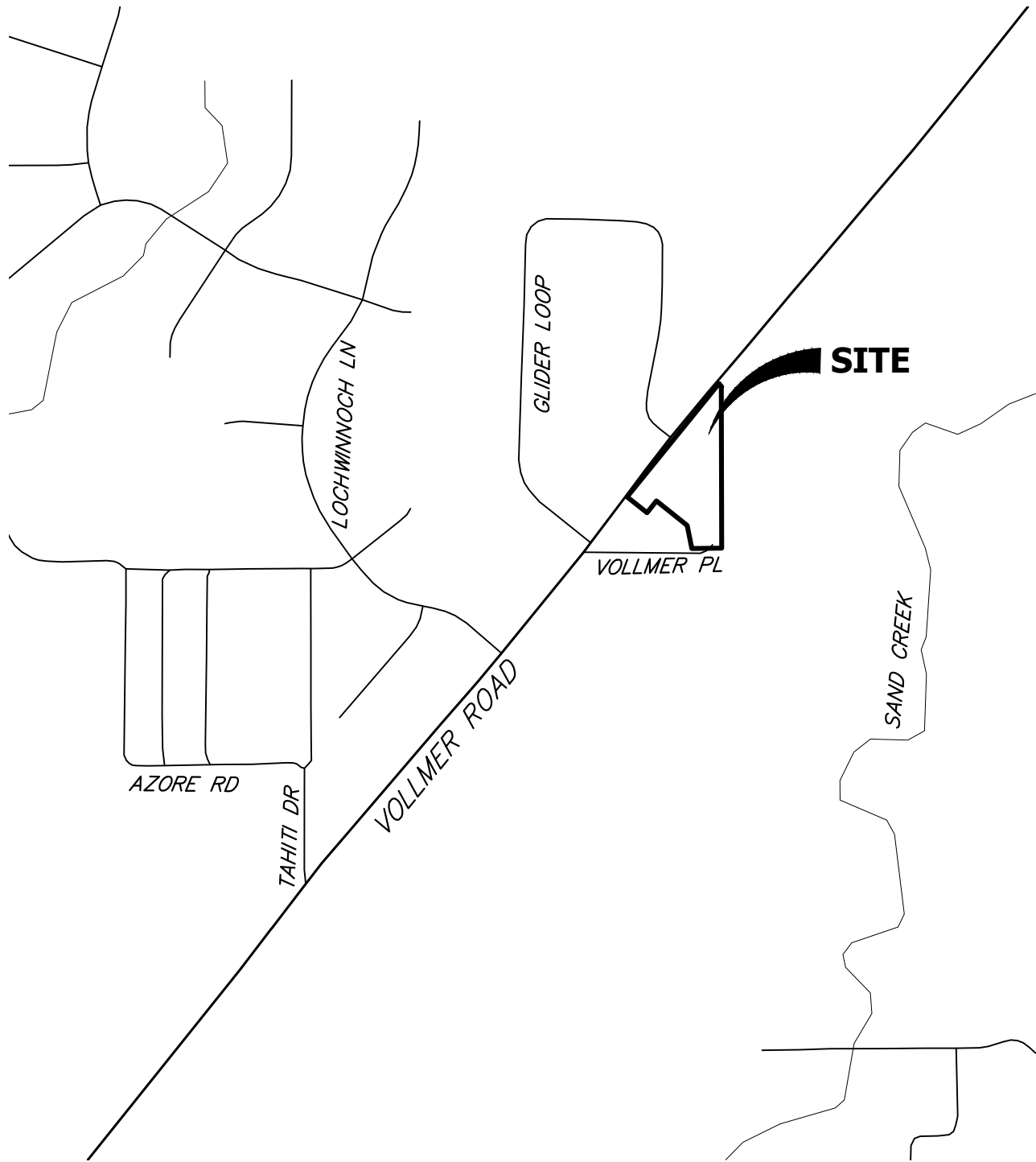
- a. This site does not rely on control measures owned or operated by another entity.
- b. Permanent seeding will be provided to achieve long-term stabilization of the site.
- c. Seed Mix: “Foothills” or approved equal.
- d. Seeding Application Rate: Drill seed 0.25” to 0.5” into the soil. In small areas not accessible to a drill, hand broadcast at double the rate and rake 0.25” to 0.5” into the soil. Apply seed at the following rates:
 - i. Dryland: 20-25 lbs/acre
 - ii. Irrigated: 40 lbs/acre
- e. Soil stabilization Practices:
 - i. Mulching Application: Apply 1-1/2 tons of certified weed free hay per acre mechanically crimped into the soil in combination with an organic mulch tackifier. On slopes and ditches requiring a blanket, the blanket shall be placed in lieu of much and mulch tackifier.
- f. Soil Conditioning and Fertilization Requirements:
 - i. Soil conditioner, organic amendment shall be applied to all seeded areas at 3 CY / 1000 SF.
 - ii. Fertilizer shall consist of 90% fungal biomass (mycelium) and 10% potassium-magnesia with a grade of 6-1-3 or approved equal. Fertilizer shall be applied as recommended by seed supplier.
- g. A full spectrum extended basin detention pond will provided long-term stormwater management of the site. This pond will provide better control of the of the runoff rates over an extended period of time (up to 72 hours). A trickle channel will be place within the pond/basin to improve the water quality and aesthetic value.
- h. Final stabilization is reached when all soil-disturbing activities at the site have been completed, and uniform vegetative cover has been established with an individual plan density of at least 70 percent of pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed.
- i. The contractor will be responsible for any re-excavation of sediment and debris that collects in the basin depression required to ensure that the basin meets the design grades following construction. The storm lines shall also be cleaned and free of sediment once the site becomes stabilized.
- j. The QSM will be sufficiently qualified for the required duties per the ECM appendix I.5.2.A.

6. Inspection and Maintenance

- a. Inspection Schedules:
 - i. The contractor shall inspect BMPs once every 14 days at a minimum, and immediately (within 24 hours) after any precipitation or snowmelt event that causes surface erosion (i.e. that results in storm water running across the ground), to ensure that BMPs are maintained in effective operating condition.
- b. Inspection Procedures:
 - i. Site Inspection / Observation Items:
 - 1. Construction site perimeter and discharge points
 - 2. All disturbed areas
 - 3. Areas used for material / waste storage that are exposed to precipitation
 - 4. Other areas having a significant potential for storm water pollution, such as demolition areas or concrete washout areas, or locations where vehicles enter or leave the site
 - 5. Erosion and sediment control measures identified in the SWMP
 - 6. Any other structural BMPs that may require maintenance, such as secondary containment around fuel tanks, or the conditions of spill response kits.
 - ii. Inspection Requirements:
 - 1. Determine if there is any evidence of, or potential for, pollutants entering the receiving waters.
 - 2. Review BMPs to determine if they still meet design and operational criteria in the SWMP, and if they continue to adequately control pollutants at the site.
 - 3. Upgrade and/or revise any BMPs not operating in accordance with the SWMP and update the SWMP to reflect any revisions.
 - iii. BMP Maintenance / Replacement and Failed BMPs:
 - 1. The contractor shall remove sediment that has been collected by perimeter controls, such as silt fence and inlet protection, on a regular basis to prevent failure of BMPs, and remove potential of sediment from being discharged from the site in the event of BMP failure.
 - 2. Removed sediment must be moved to an appropriate location where it will not become an additional pollutant source, and should never be placed in ditches or streams.
 - 3. The contractor shall update the GEC as required with any new BMPs added during the construction period.
 - 4. The contractor shall address BMPs that have failed or have the potential to fail without maintenance or modifications, as soon as possible, immediately in most cases, to prevent discharge of pollutants.
 - iv. Record Keeping and Documenting Inspections:
 - 1. The contractor shall maintain records of all inspection reports,

- including signed inspection logs, at the project site.
2. The permittee shall document inspection results and maintain a record of the results for a period of 3 years following expiration or inactivation of permit coverage.
 3. Site inspection records shall include the following:
 - a. Inspection date
 - b. Name and title of personnel making the inspection
 - c. Location of discharges of sediment or other pollutants from the site
 - d. Location(s) of BMPs in need of maintenance
 - e. Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location
 - f. Location(s) where additional BMPs are needed that were not in place at the time of inspection
 - g. Deviations from the minimum inspection schedule
 - v. The SWMP should be viewed as a “living document” that is continuously being reviewed and modified as a part of the overall process of evaluating and managing stormwater quality issues at the site. The QSM shall amend the SWMP when there is a change in design, construction, O&M of the site which would require the implementation of the new or revised BMPs or if the SWMP proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity or when BMPs are no longer necessary and are removed.

APPENDIX A – VICINITY MAP



ORIGINAL SCALE: 1" = 1000'

VICINITY MAP
 VOLLMER RV STORAGE
 JOB NO. 25251.00
 03/21/2023
 SHEET 1 OF 1



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APPENDIX B – SOILS MAP

Hydrologic Soil Group—El Paso County Area, Colorado



Map Scale: 1:1,840 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84



MAP LEGEND

- Area of Interest (AOI)**
 - Area of Interest (AOI)
- Soils**
 - Soil Rating Polygons**
 - A
 - A/D
 - B
 - B/D
 - C
 - C/D
 - D
 - Not rated or not available
 - Soil Rating Lines**
 - A
 - A/D
 - B
 - B/D
 - C
 - C/D
 - D
 - Not rated or not available
 - Soil Rating Points**
 - A
 - A/D
 - B
 - B/D
- C
- C/D
- D
- Not rated or not available
- Water Features**
 - Streams and Canals
- Transportation**
 - Rails
 - Interstate Highways
 - US Routes
 - Major Roads
 - Local Roads
- Background**
 - Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: El Paso County Area, Colorado
 Survey Area Data: Version 20, Sep 2, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 11, 2018—Oct 20, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
71	Pring coarse sandy loam, 3 to 8 percent slopes	B	6.8	100.0%
Totals for Area of Interest			6.8	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

APPENDIX C – GEC PLANS AND DETAILS

VOLLMER RV STORAGE

SECTION 34, TOWNSHIP 12 SOUTH AND RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN
 COUNTY OF EL PASO
 STATE OF COLORADO

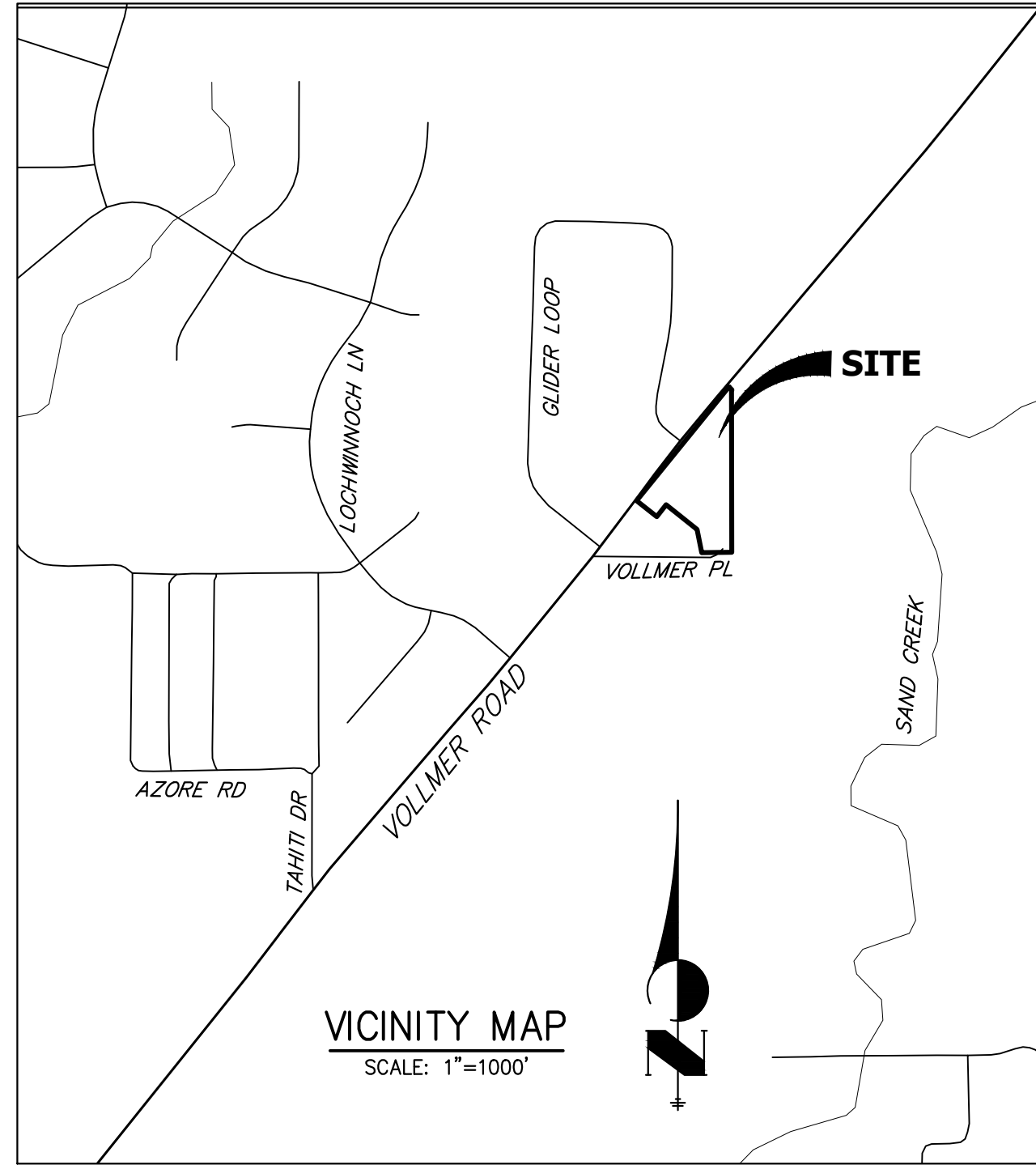


Know what's below.
 Call before you dig.

GRADING AND EROSION CONTROL STANDARD NOTES

- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
- ONCE THE ESQCP IS APPROVED AND A 'NOTICE TO PROCEED' HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
- CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
- TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
- FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
- ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT AFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
- EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
- COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
- ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF-SITE.
- CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
- DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
- EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
- THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
- NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
- OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE 'COLORADO WATER QUALITY CONTROL ACT' (TITLE 25, ARTICLE 8, CRS), AND THE 'CLEAN WATER ACT' (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- A SOILS AND GEOLOGY HAZARD LETTER HAS BEEN PREPARED BY JR ENGINEERING AND SHALL BE CONSIDERED A PART OF THESE PLANS.
- AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:
 COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
 WATER QUALITY CONTROL DIVISION
 WQCD - PERMITS
 4300 CHERRY CREEK DRIVE SOUTH
 DENVER, CO 80246-1530
 ATTN: PERMITS UNIT

GRADING AND EROSION CONTROL PLAN



CONTACTS:

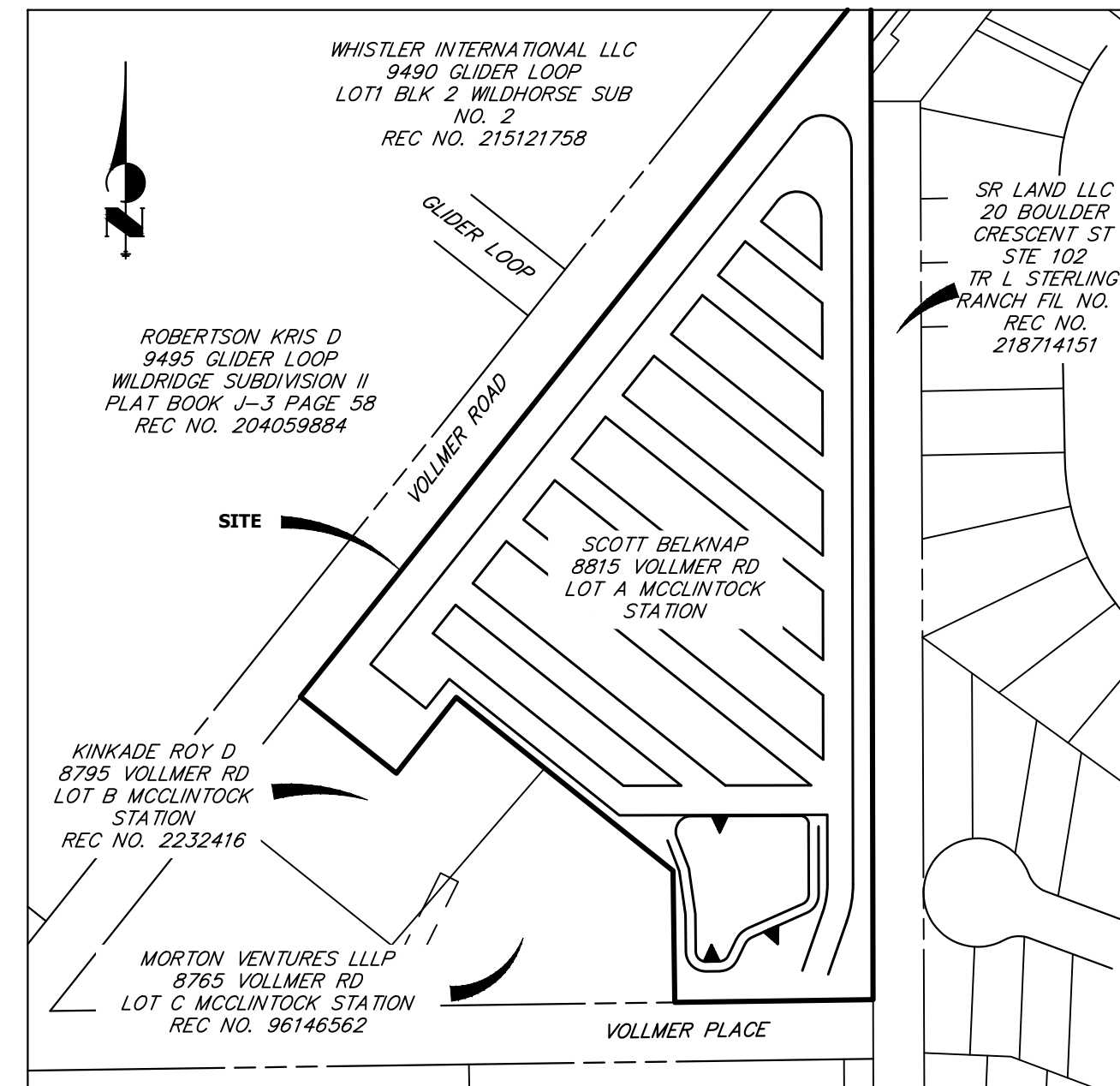
OWNER/DEVELOPER: BELKNAP VENTURES LLC
 ATTN: SCOTT BELKNAP
 3603 FIRST LIGHT DRIVE
 CASTLE ROCK, CO 80109
 P~(719) 322-3556

ENGINEER/SURVEYOR: JR ENGINEERING LLC
 ATTN: RYAN E. BURNS
 5475 TECH CENTER DRIVE, SUITE 235
 COLORADO SPRINGS, CO 80919
 P~(303) 267-6178

ELECTRIC DEPARTMENT: MOUNTAIN VIEW ELECTRIC
 1140 E. WOODMAN ROAD
 FALCON, CO 80831
 (719) 495-2283

SHEET INDEX:

1	-	COVER SHEET
2	-	LEGEND
3	-	EROSION CONTROL PLAN
4-5	-	STORM SEWER PLAN AND PROFILE
6-7	-	POND PLANS
8-11	-	POND DETAILS
12-13	-	GEC DETAILS
13	-	TOTAL SHEETS



SITE MAP

SCALE: 1"=150'

OWNER/DEVELOPER STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENT OF THE GRADING AND EROSION CONTROL PLANS.

SCOTT BELKNAP
 DATE: 1/22/23

3603 FIRST LIGHT DRIVE
 CASTLE ROCK, CO 80109

EL PASO COUNTY STATEMENT

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

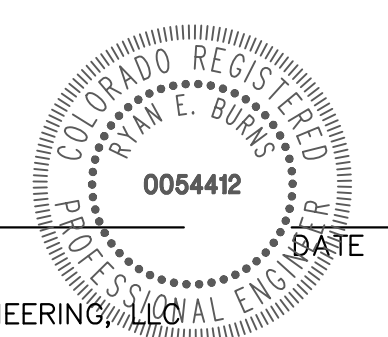
JOSHUA PALMER, P.E. DATE

COUNTY ENGINEER/ECM ADMINISTRATOR

ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

RYAN E. BURNS, P.E.
 COLORADO P.E. 0054412
 FOR AND ON BEHALF OF JR ENGINEERING



VOLLMER RV STORAGE	COVER SHEET	BY	DATE	REVISION
		NO.	DATE	DESCRIPTION
SHEET 1 OF 13	JOB NO. 25251.00			

	EXISTING	PROPOSED
PHASE LINE	---	---
MATCH LINE	---	---
SECTION LINE	---	---
BOUNDARY LINE	---	---
PROPERTY LINE	---	---
EASEMENT LINE	---	---
RIGHT OF WAY	---	---
R.O.W. A LINE	---	---
CENTERLINE	---	---
CITY LIMITS		
WIRE FENCE	x x	x x
CHAIN LINK FENCE	o o	o o
WOOD FENCE	o o	o o
MASONRY FENCE	o o	o o
GUARDRAIL	o o	o o
CONC. BARRIER	o o	o o
CABLE TV	TV TV	TV TV
ELECTRIC	E E	E E
FIBER OPTIC	FO FO	FO FO
GAS MAIN	G G	G G
IRRIGATION MAIN	IRR IRR	IRR IRR
OIL/PETRO. MAIN	O O	O O
OVERHEAD UTILITY	OHU OHU	OHU OHU
SANITARY SEWER	S S	S S
STORM DRAIN	T T	T T
TELEPHONE	T T	T T
WATER MAIN	W W	W W
RAW WATER LINE	RWL RWL	RWL RWL
SWALE/WATERWAY FLOWLINE	---	---
DIVERSION DITCH	---	---
DIVERSION CHANNEL	---	---
MAJOR DRAINAGE BASIN	---	---
MINOR DRAINAGE BASIN	---	---
TOP OF SLOPE	---	---
TOE OF SLOPE	---	---
EDGE OF WATER	---	---
INDEX CONTOUR	6100	6100
INTERMEDIATE CONTOUR	6100	6100
DEPRESSION CONT. (INDEX)	6100	6100
DEPRESSION CONT. (INTER)	---	---
TOP OF CUTS	---	---
TOE OF FILLS	---	---
CUT AND FILL LINE	---	---
SILT FENCE	SF SF	SF SF
100 YEAR FLOODPLAIN	100YR	100YR
500 YEAR FLOODPLAIN	500YR	500YR
FLOODWAY	FLDWY	FLDWY
BASE FLOOD ELEVATION	---	---
EDGE OF WETLANDS	---	---
STONE WALL	---	---

LANDSCAPE LEGEND

	EXISTING	PROPOSED
TREE - CONIFEROUS	☀	☀
TREE - DECIDUOUS	☀	☀
SHRUB/BUSH	☀	☀
SHRUBS AND BUSHES	☀	☀
IRRIGATION BOX	☀	☀
IRRIGATION SPRINKLER	☀	☀
IRRIGATION VALVE	☀	☀
BOLLARD	☀	☀
FLAGPOLE	☀	☀



Know what's below.
Call before you dig.

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE	⊙	●
STORM INLET	⊙	■
AREA INLET - SQUARE	□	■
AREA INLET - ROUND	○	■
FLARED END SECTION	▷	▷
RIPRAP	▨	▨
SANITARY SEWER		
LINE MARKER	⊙Mr San	
SERVICE MARKER	△	
CLEAN-OUT	o	
MANHOLE W/ DIRECTIONAL FLOW ARROW	⊙◄	◄
WATER LINE		
LINE MARKER	⊙Mr W	
SERVICE MARKER	△	
FIRE HYDRANT	⊕	⊕
FIRE CONNECTION	⊕	⊕
MANHOLE	⊙	●
BEND	⊕	⊕
BLOW-OFF VALVE	⊕	⊕
WELL	⊙WELL	●WELL
METER	⊙	●
VALVE	⊕	⊕
REDUCER	⊕	⊕
THRUST BLOCK	⊕	⊕
CROSS	⊕	⊕
PLUG W/ THRUST BLOCK	⊕	⊕
TEE	⊕	⊕
REVERSE ANCHOR	⊕	⊕
ANODE	⊕	⊕
AIR & VACUUM VALVE ASSEMBLY	⊕	⊕
TRANSMISSION BLOW-OFF ASSEMBLY	⊕	⊕
GAS LINE		
MARKER	⊙Mr G	
SERVICE MARKER	△	
METER	⊙	●
VALVE	⊕	⊕
PLUG	⊕	⊕
TEE	⊕	⊕
DRY UTILITIES		
CABLE TV MARKER	⊙Mr TV	
CABLE TELEVISION PEDESTAL	⊕	
ELECTRIC MARKER	⊙Mr E	
ELECTRIC SERVICE MARKER	△	
ELECTRICAL PEDESTAL	⊕	
ELECTRICAL METER	⊙	●
ELECTRICAL MANHOLE	⊙	●
FIBER-OPTIC MARKER	⊙Mr FO	
IRRIGATION PEDESTAL	⊕	
TELEPHONE MARKER	⊙Mr T	
TELEPHONE PEDESTAL	⊕	
TELEPHONE MANHOLE	⊙	●
UTILITY POLE	o	●
GUY ANCHOR	e	
GUY POLE	o	●
MISC. UTILITIES		
VENT PIPE	⊙VP	●VP
TEST HOLE DESIGNATOR	⊙	●

MONUMENTATION LEGEND

ALUMINUM CAP - FOUND	●AC
BRASS CAP - FOUND	●BC
BENCHMARK - FOUND	⊕
CROSS - FOUND	+
MONUMENT - SET	○
MONUMENT - FOUND (DEFAULT)	●
MONUMENT - FOUND (ALTERNATE 1)	■
MONUMENT - FOUND (ALTERNATE 2)	□
MONUMENT - FOUND (ALTERNATE 3)	▲
MONUMENT - FOUND (ALTERNATE 4)	△
MONUMENT - FOUND (ALTERNATE 5)	●
MONUMENT - FOUND (ALTERNATE 6)	⊕
MONUMENT - FOUND (ALTERNATE 7)	⊕
NAIL & WASHER - FOUND	●NAIL & WASHER
PANEL - FOUND	⊕
PK NAIL - FOUND	⊕PK NAIL
ROW MONUMENT - FOUND	⊕
ROW MARKER - FOUND	⊕
SECTION CORNER - FOUND	⊕
SECTION CORNER - SET	⊕
QUARTER-SECTION CORNER - FOUND	⊕
QUARTER-SECTION CORNER - SET	⊕
SECTION CENTER - FOUND	⊙
SECTION CENTER - FOUND	⊙
CONTROL/TRVERSE POINT - SET	△

STORM WATER MANAGEMENT

KEY	SYMBOL
CHECK DAM	⊕
CONSTRUCTION ROAD STABILIZATION	⊕
CURB SOCK INLET PROTECTION	⊕
CONCRETE WASHOUT AREA	⊕
DIVERSION DITCH AND DIKE, TEMPORARY	⊕
DIVERSION CHANNEL, TEMPORARY	⊕
DEWATERING	⊕
EROSION CONTROL BLANKET	▨
INLET FILTER	⊕
INLET PROTECTION	⊕
MULCHING	▨
OUTLET PROTECTION	▨
PAVED FLUME	⊕
PERMENTENT SEEDING	⊕
REINFORCED CONCRETE DAM	⊕
ROUGH CUT STREET CONTROL	⊕
SEDIMENT BASIN	⊕
SEDIMENT CONTROL LOG	⊕
SILT FENCE	⊕
SURFACE ROUGHENING	⊕
STABILIZED STAGING AREA	▨
SEDIMENT TRAP	⊕
STRAW BALE BARRIER	▨
TERRACING	⊕
TEMPORARY SEEDING	⊕
TEMPORARY STREAM CROSSING CULVERT/BRIDGE	⊕
TEMPORARY STREAM CROSSING FORD TYPE	⊕
TEMPORARY SLOPE DRAIN	⊕
VEHICLE TRACKING CONTROL	⊕
VEHICLE TRACKING CONTROL WITH WASH RACK	⊕

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
BELKNAP VENTURES LLC
3603 FIRST LIGHT DRIVE
CASTLE ROCK, CO 80109
(719) 322-3556
SCOTT.BELKNAP@TAHOOC.COM
ATTN: SCOTT BELKNAP

J.R. ENGINEERING
A Westman Company
Central 303-740-8888 • Colorado Springs 719-588-2583
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY		DATE	
		BY	DATE	BY	DATE

ENGINEER'S STATEMENT
THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

RYAN E. BURNS, P.E.
COLORADO P.E. 0054412
FOR AND ON BEHALF OF JR ENGINEERING

1/16/24

VOLLMER RV STORAGE

LEGEND

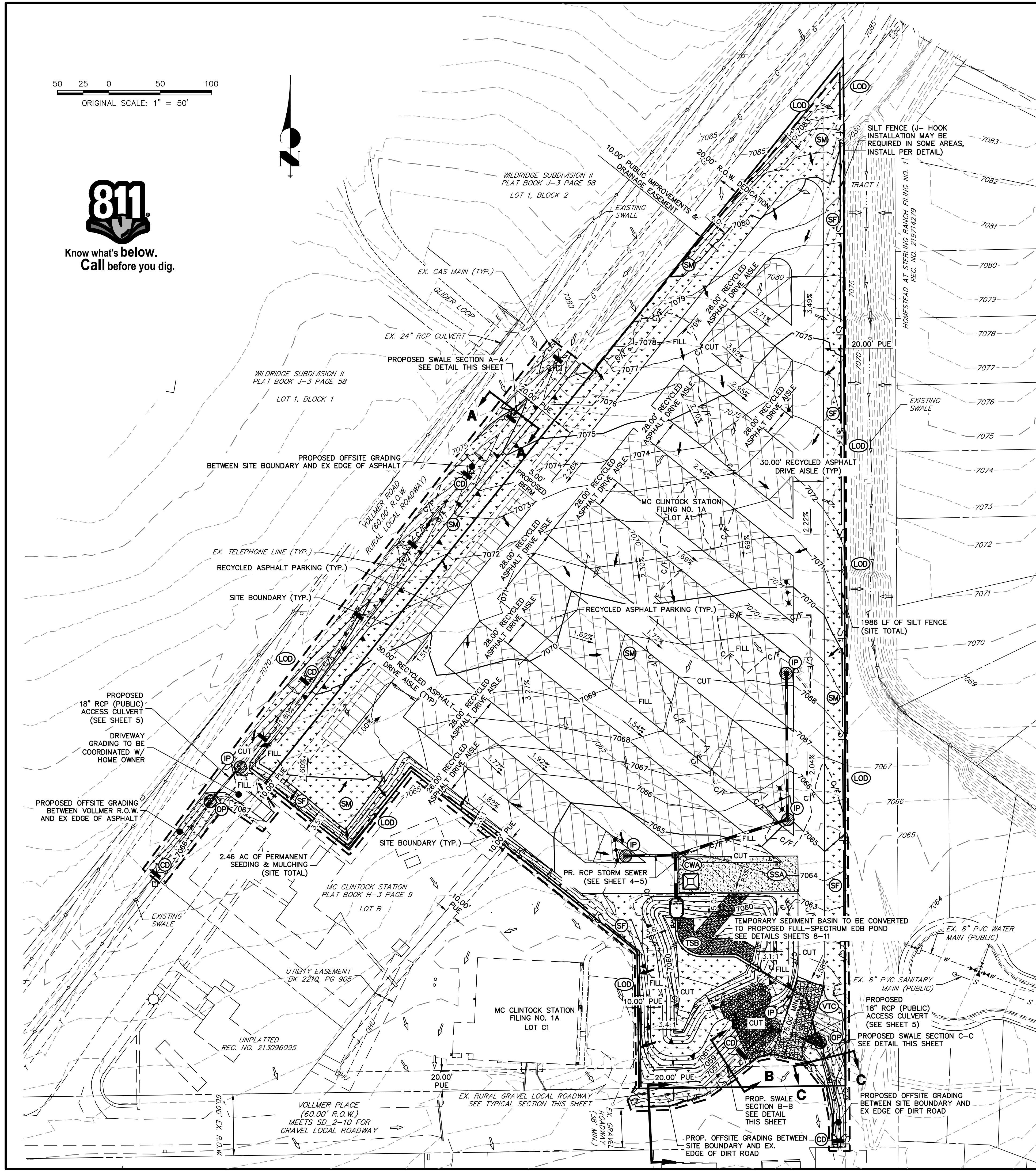
SHEET 2 OF 13

JOB NO. 25251.00

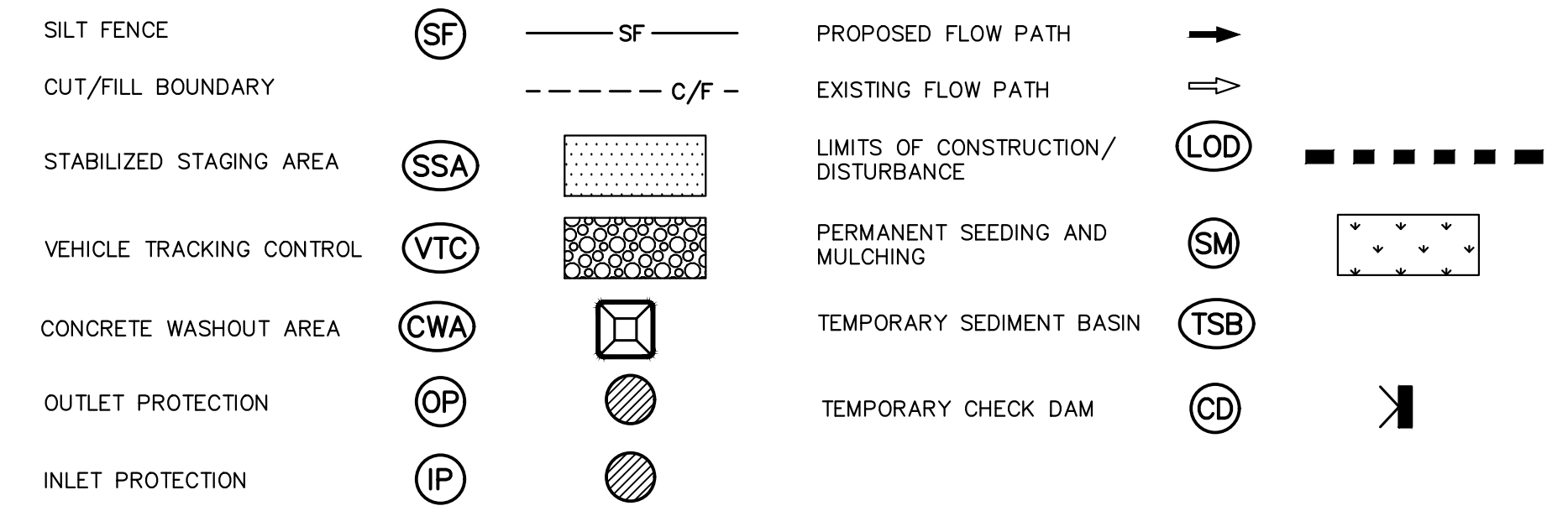
50 25 0 50 100
ORIGINAL SCALE: 1" = 50'



Know what's below.
Call before you dig.

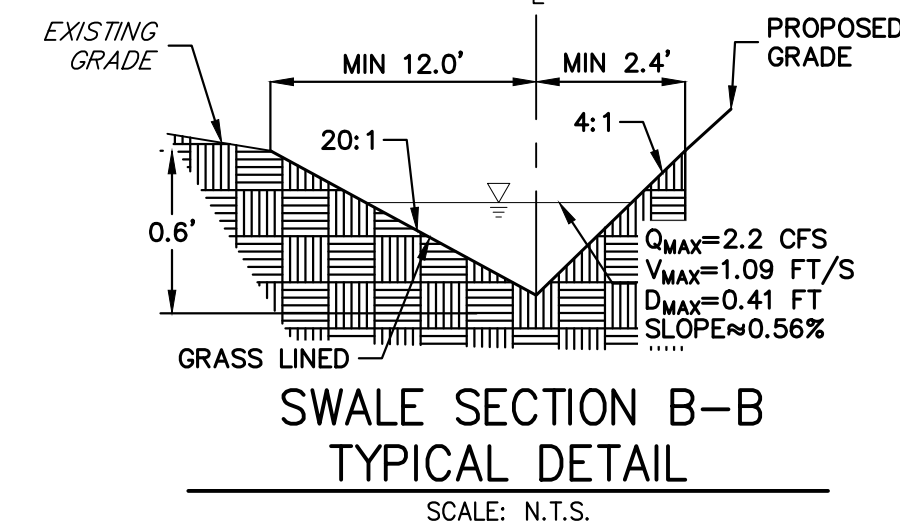
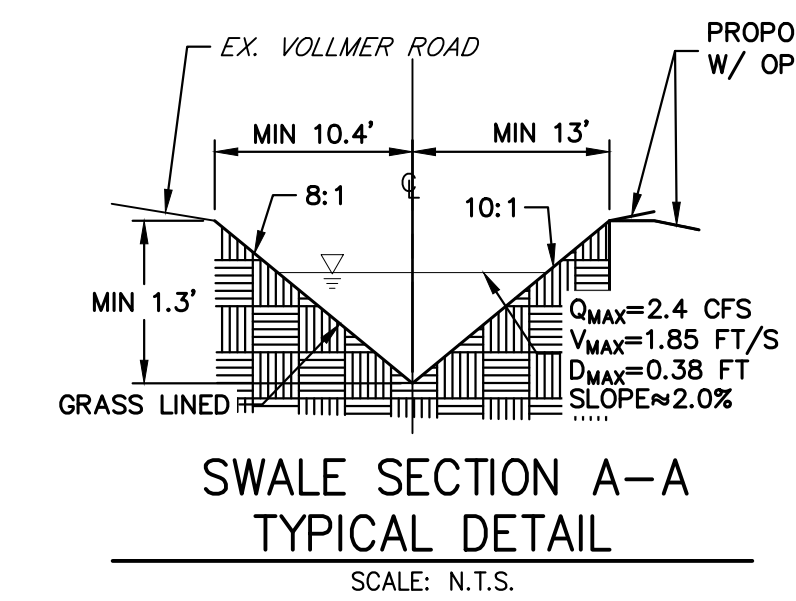


LEGEND



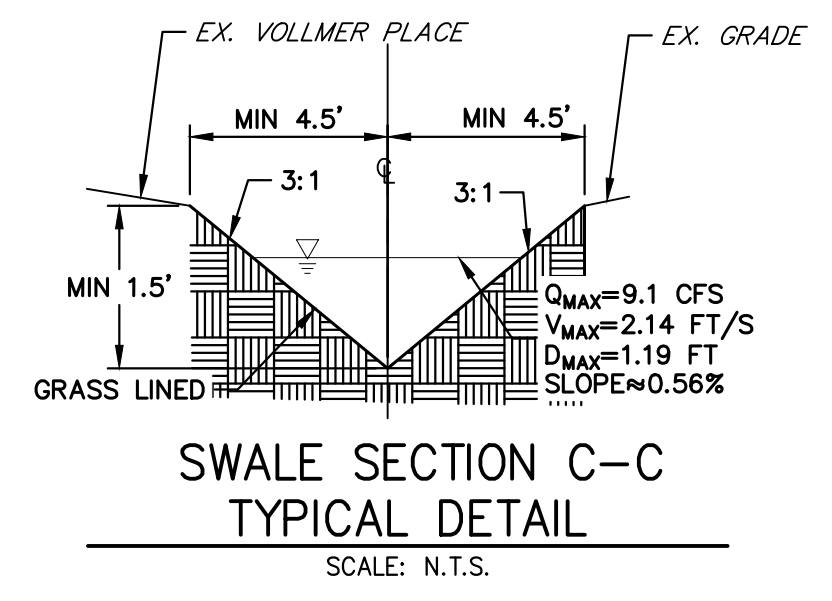
GEC NOTES:

1. THE EXISTING VEGETATION IS NATIVE MEADOW GRASSES AND COVERS APPROXIMATELY 60% OF THE SITE.
2. NO BATCH PLANTS WILL BE UTILIZED ON THIS SITE.
3. OFFSITE GRADING IS REQUIRED FOR THE DEVELOPMENT OF THIS SITE IN ORDER TO SAFELY ROUTE PROPOSED FLOWS. GRADING HAS BEEN LIMITED TO THE VOLLMER ROAD R.O.W. AND VOLLMER PLACE R.O.W. CONTRACTOR REQUIRED TO OBTAIN A WORK IN R.O.W. PERMIT FOR THE PROPOSED IMPROVEMENTS.
4. THE INITIAL BMPs INCLUDE: SF, VTC, SSA, CD, AND TSB
THE INTERIM BMPs INCLUDE: OP AND IP
THE FINAL PHASE BMPs INCLUDE: SM AND REMOVAL OF TEMPORARY BMPs ONCE FINAL STABILIZATION IS COMPLETE
5. REFER TO LANDSCAPE PLANS FOR FINAL STABILIZATION.

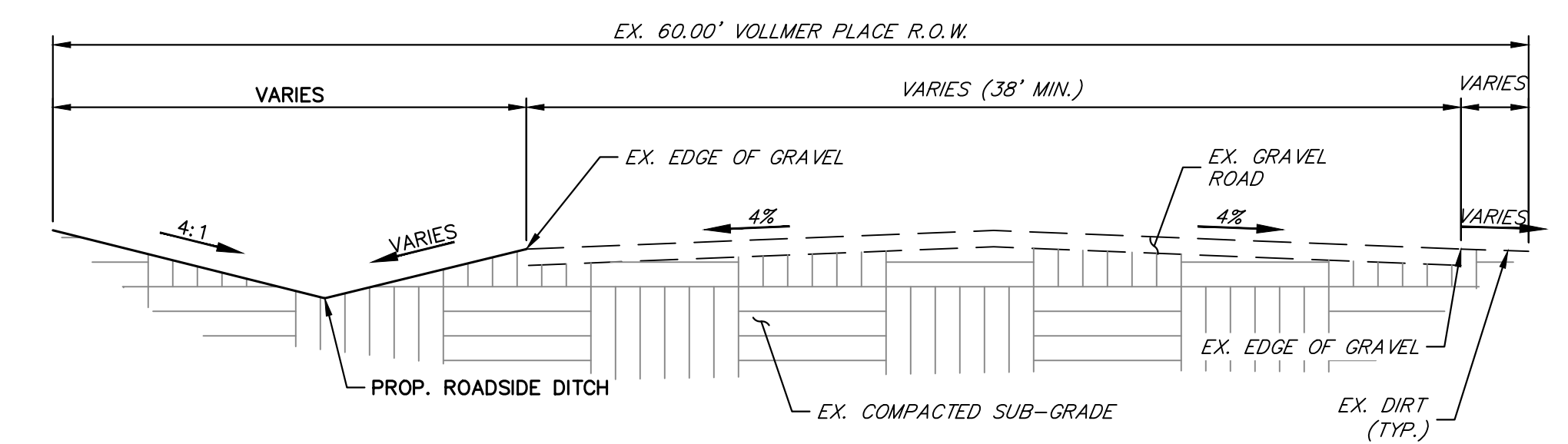


SWALE SECTION A-A
TYPICAL DETAIL
SCALE: N.T.S.

SWALE SECTION B-B
TYPICAL DETAIL
SCALE: N.T.S.



SWALE SECTION C-C
TYPICAL DETAIL
SCALE: N.T.S.



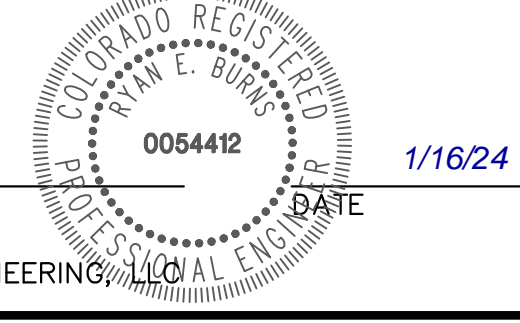
RURAL GRAVEL LOCAL ROADWAY
STANDARD CROSS SECTION
SCALE: 1"=6'

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

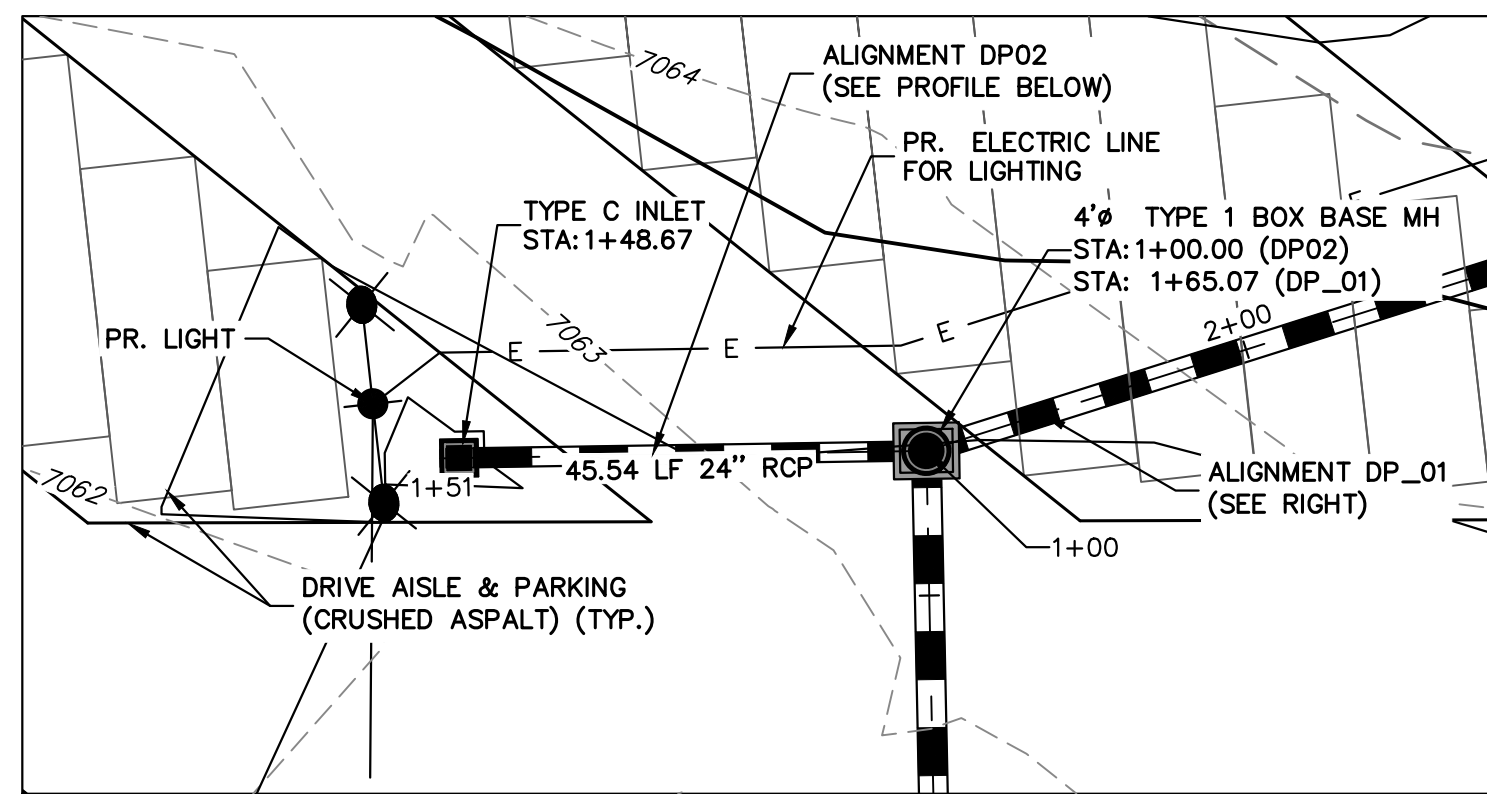
ENGINEER'S STATEMENT

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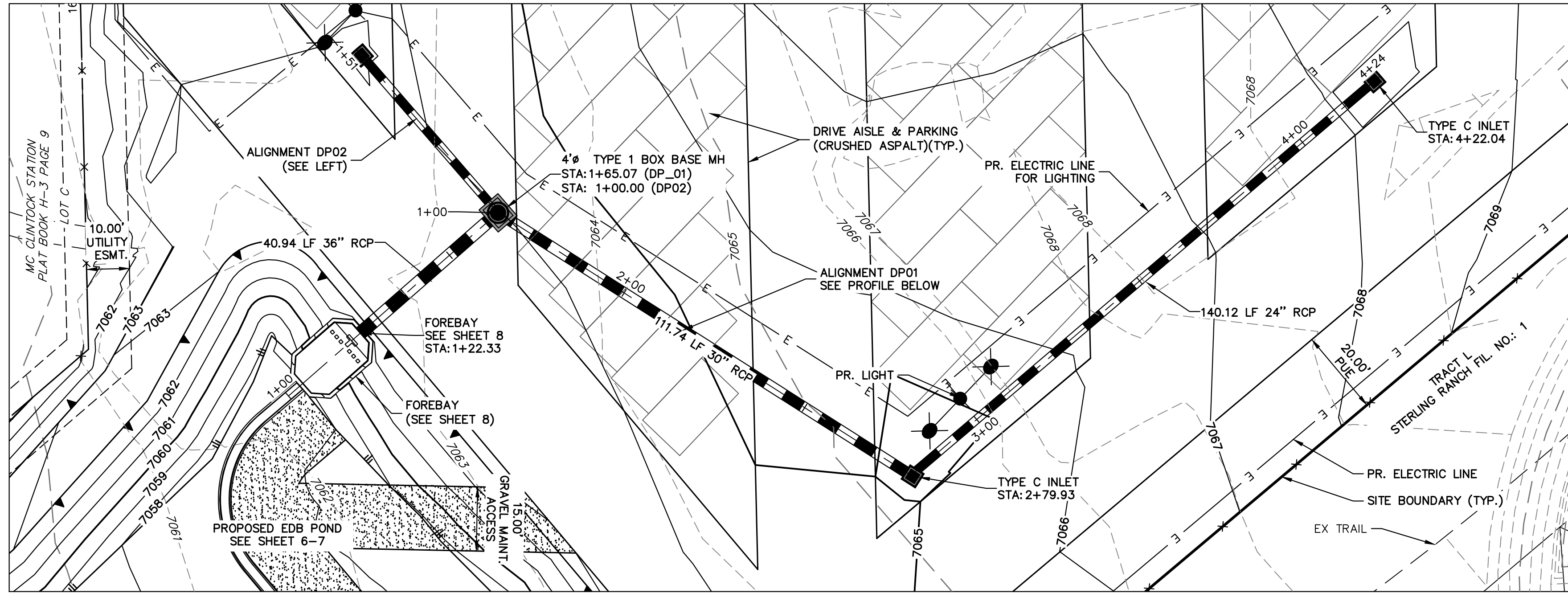
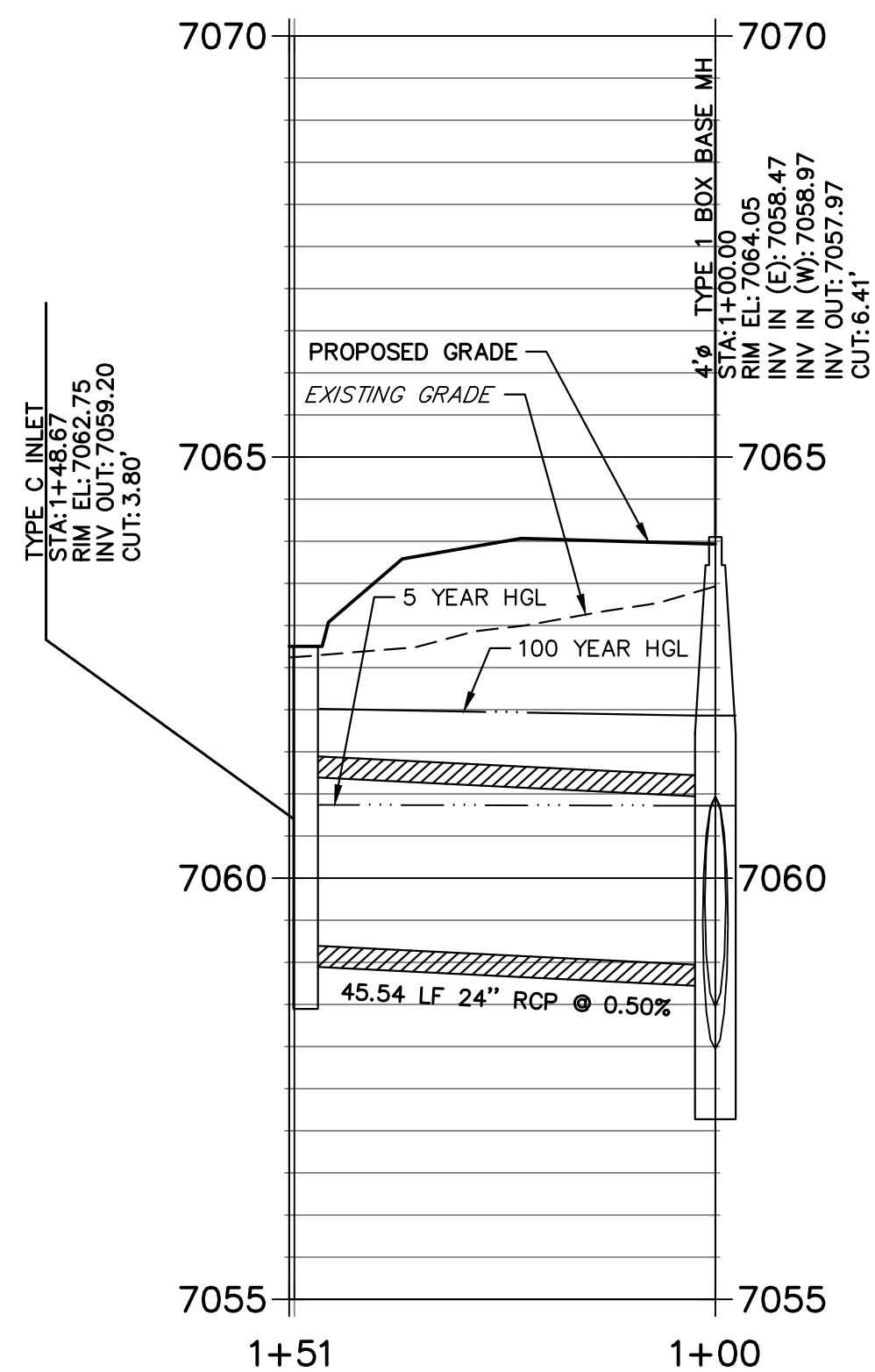
[Signature]
RYAN E. BURNS, P.E.
COLORADO P.E. 0054412



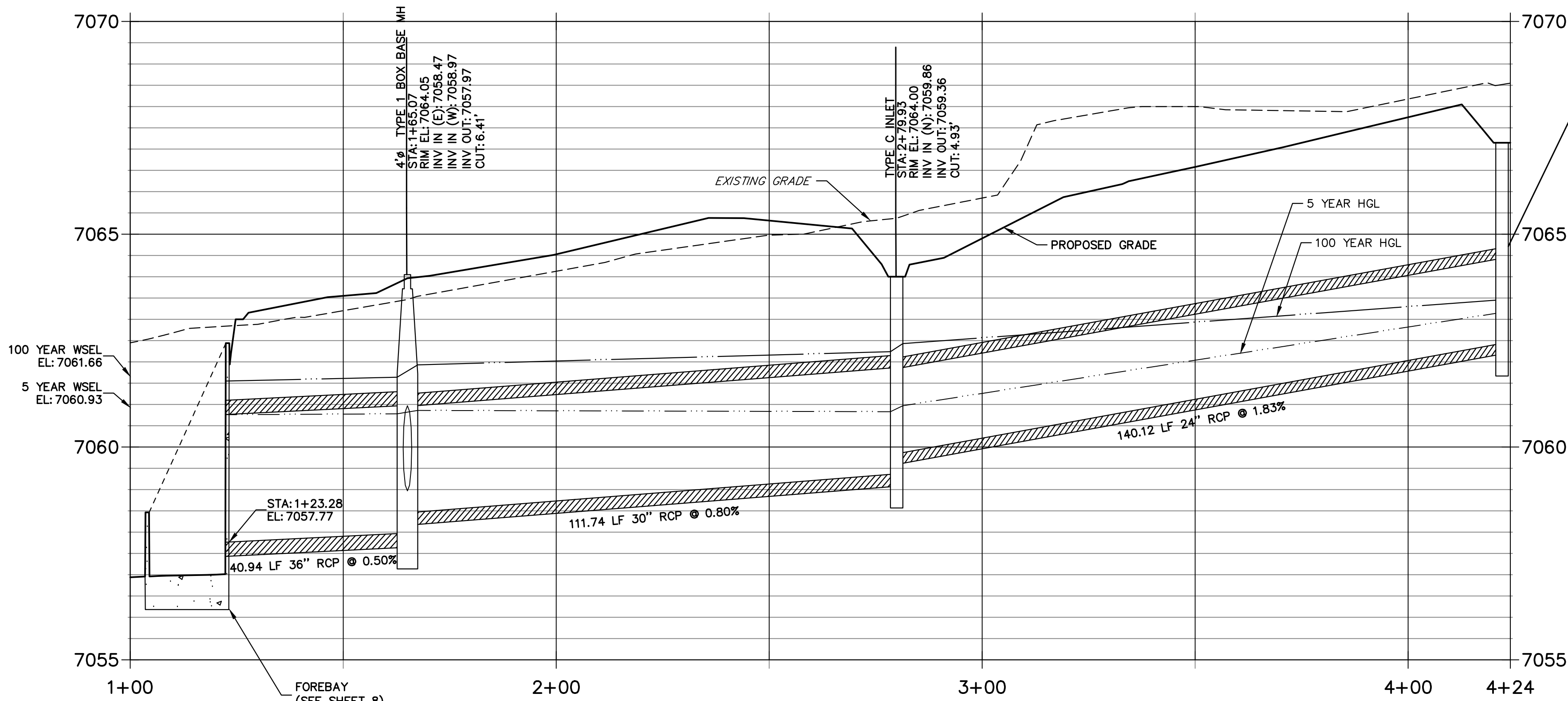
PREPARED FOR	BELKNAP VENTURES LLC 3603 FIRST LIGHT DRIVE CASTLE ROCK, CO 80109 (719)-322-3556 SCOTT.BELKNAP@TAHOOC.COM ATTN: SCOTT BELKNAP		
	J.R. ENGINEERING A Westman Company Central 303-740-9888 • Colorado Springs 719-583-2583 Fort Collins 970-491-9888 • www.jrengineering.com		
BY	DATE		
No.	REVISION		
H-SCALE	1"=40'	N/A	
V-SCALE			
DATE	DESIGNED BY	APL	PAL
	DRAWN BY		
	CHECKED BY		
VOLLMER RV STORAGE		EROSION CONTROL PLAN	
SHEET 3 OF 13		JOB NO. 25251.00	



**DP02 PROFILE
STA 1+00.00 TO 1+50.63**



**DP_01 PROFILE
STA 1+00.00 TO 4+24.00**



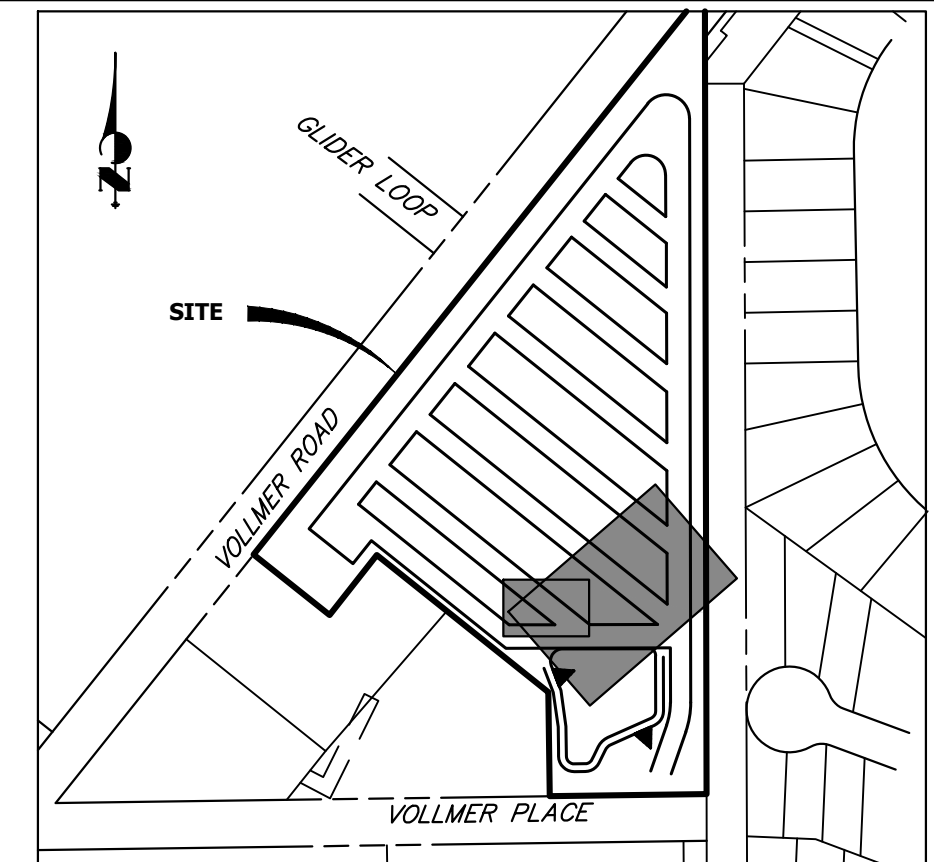
STORM SEWER NOTES

- SEE SHEET 1 FOR BASIS OF BEARING. SEE SHEET 2 FOR LEGEND.
- ALL STORM SEWER PIPES, INLETS, MANHOLES, AND APPURTENANCES WITHIN THE R.O.W. ARE PUBLIC. STORM FACILITIES OUTSIDE OF THE PUBLIC R.O.W. ARE PRIVATE, UNLESS OTHERWISE NOTED.
- ALL STATIONING IS PIPE CENTERLINE UNLESS OTHERWISE NOTED.
- ALL PROPOSED RCP STORM SEWER PIPE SHALL BE CLASS III UNLESS OTHERWISE NOTED.
- PIPE LENGTHS ARE FROM INSIDE INLET WALL TO INSIDE INLET WALL FROM CENTER OF MANHOLE TO INSIDE INLET OF WALL, OR FROM CENTER OF MANHOLE TO CENTER OF MANHOLE. PIPE LENGTHS INCLUDE FEES OR HEADWALL.
- WHERE PIPES ENTER STRUCTURES, THE CENTERLINE STATION CALLED OUT ON THE PLANS IS TO THE CENTER OF STRUCTURE. WHERE PIPES ENTER STRUCTURES ON A SKEW, CONTRACTOR IS REQUIRED TO EXTEND PIPE TO ENSURE THAT BOTH EDGES OF THE PIPE EXTEND INTO THE STRUCTURE. CONTRACTOR WILL THEN BE REQUIRED TO CUT PIPE FLUSH WITH THE INSIDE FACE OF THE STRUCTURE AND GROUT IN PLACE.
- ALL MANHOLE COVERS SHALL BE ORIENTED TO AVOID CURB, GUTTER, SIDEWALK AND CROSSPANS UNLESS OTHERWISE NOTED.
- ALL MANHOLES ARE EL PASO COUNTY TYPE I UNLESS OTHERWISE SPECIFIED. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR ALL EL PASO COUNTY TYPE I MANHOLES PRIOR TO CONSTRUCTION OR ORDERING MATERIALS.
- ALL MANHOLES HAVE AN ECCENTRIC CONE UNLESS OTHERWISE SPECIFIED.
- PIPES SHALL HAVE JOINT RESTRAINTS ON LAST 3 JOINTS AT PIPE OUTFALL.
- PIPES WITH PRESSURE HEAD SHALL USE WATER TIGHT JOINTS WITH A 100-YEAR SERVICE LIFE.
- PIPE BEDDING SHALL CONFORM TO EL PASO COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS. BEDDING FOR RCP SHALL BE AG7122 NO. 57/67 CRUSHED ROCK, SQUEEGEE OR MIXTURES CONTAINING SQUEEGEE SHALL NOT BE USED. BEDDING SHALL BE 6 TO 8 INCHES DEEP UNDER THE PIPE AND BACKFILLED TO THE SPRING LINE.
- ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH MANUFACTURERS SPECIFICATIONS AND EL PASO COUNTY STANDARDS AND SPECIFICATION.
- SEE DETAIL SHEETS 8-11 FOR APPLICABLE DETAILS.

ENGINEER'S STATEMENT

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[Signature]
 RYAN E. BURNS, P.E.
 COLORADO P.E. 0054412
 FOR AND ON BEHALF OF JR ENGINEERING
 COLORADO REGISTERED PROFESSIONAL ENGINEER
 0054412
 DATE 1/16/24



**KEY MAP
SCALE: NTS**

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
BELKNAP VENTURES LLC
 3603 FIRST LIGHT DRIVE
 CASTLE ROCK, CO 80109
 (719) 322-3556
 SCOTT.BELKNAP@YAHOO.COM
 ATTN: SCOTT BELKNAP

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 A Westman Company
 Central 303-740-9888 • Colorado Springs 719-583-2693
 Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	No.	REVISION

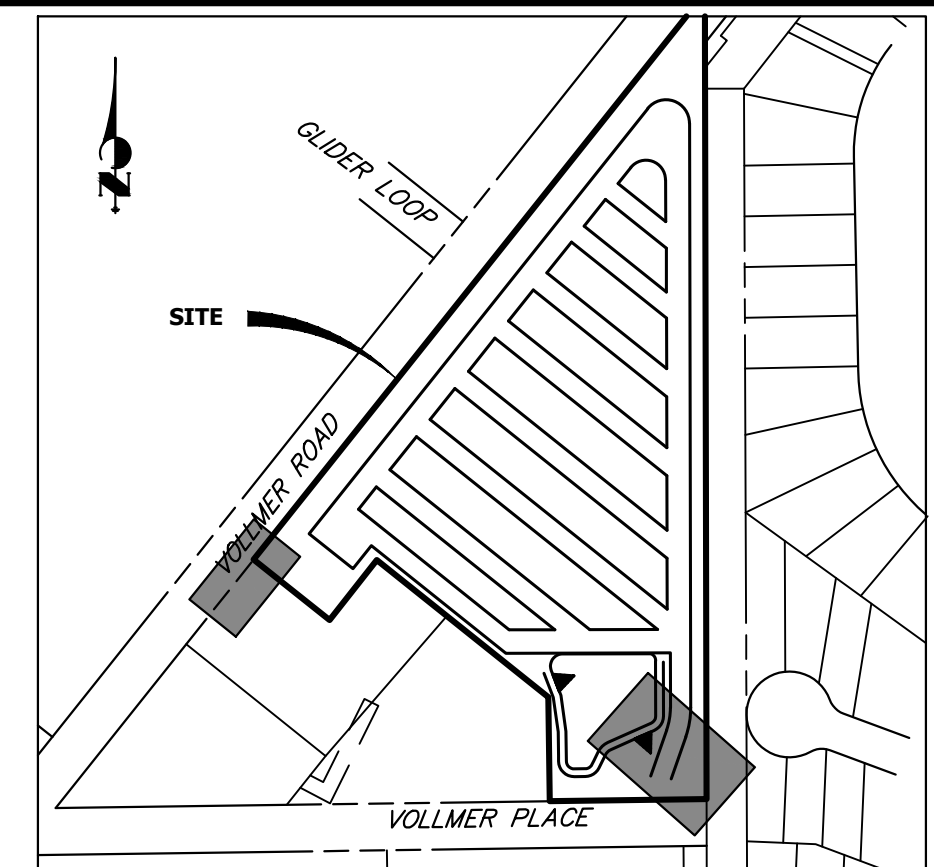
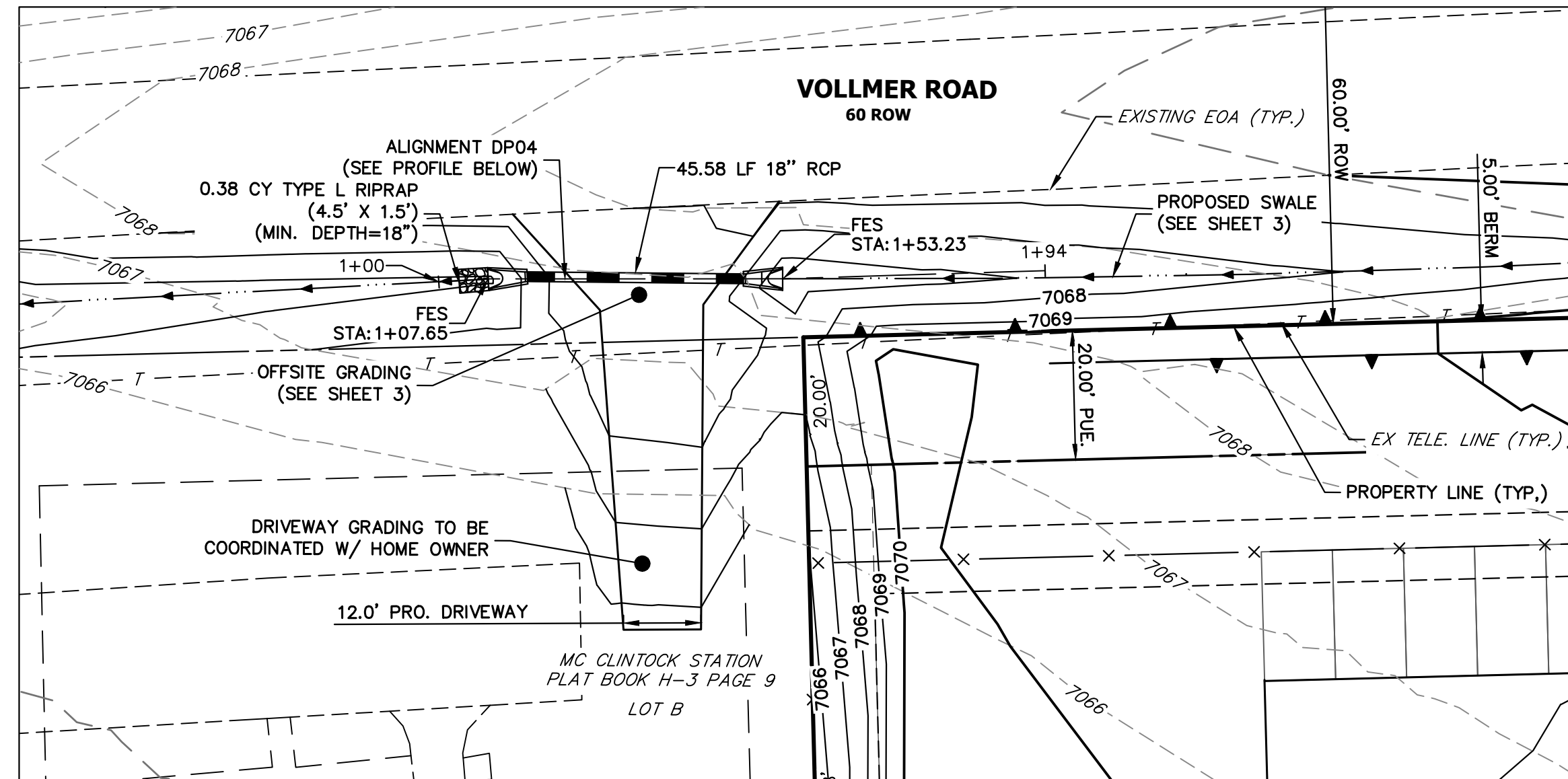
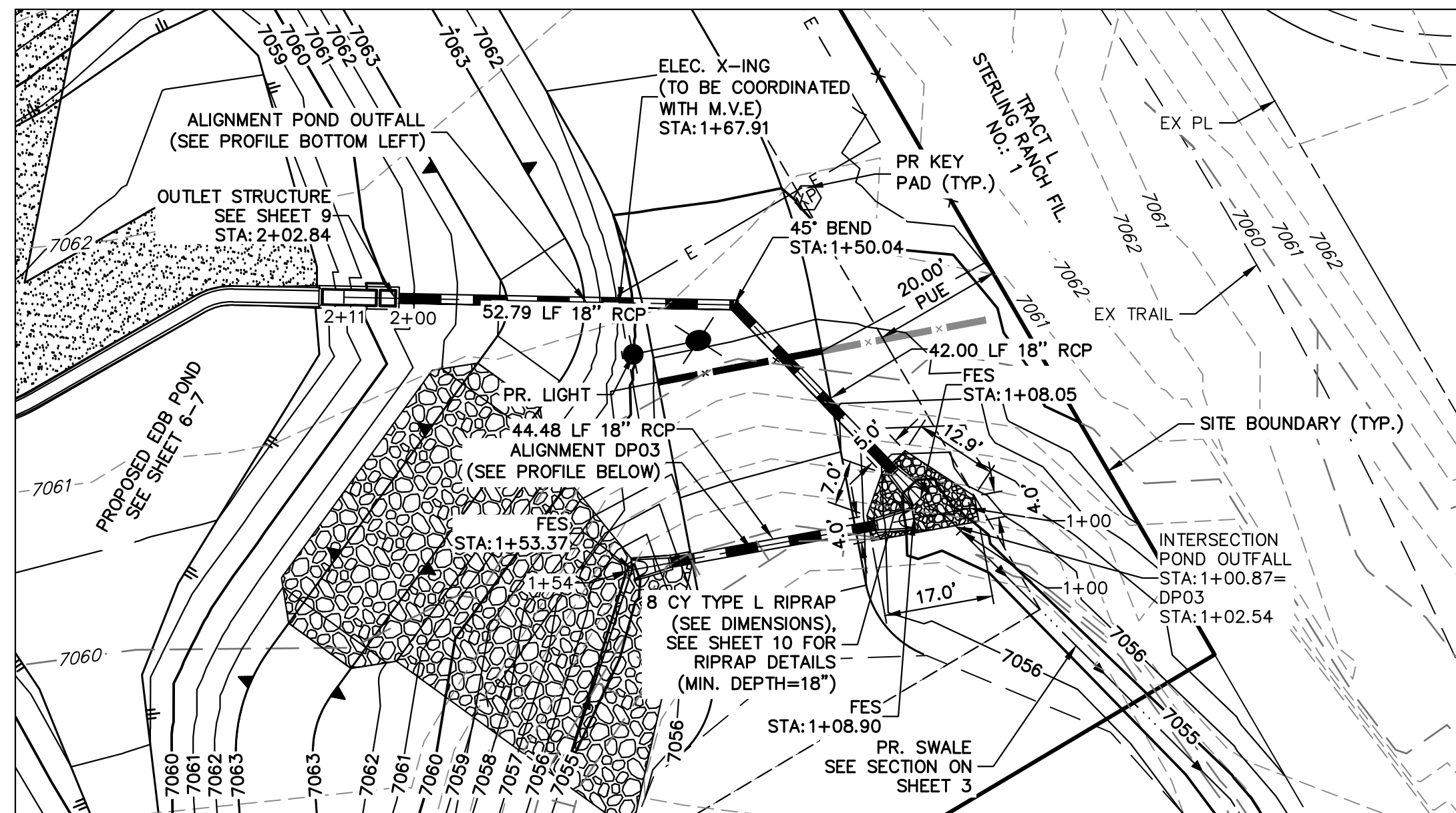
H-SCALE 1"=20'	V-SCALE 1"=2'	DATE 01/15/24	DESIGNED BY QNL	DRAWN BY QNL	CHECKED BY
VOLLMER RV STORAGE		STORM SEWER PLAN AND PROFILE			
SHEET 4 OF 13					
JOB NO. 25251.00					

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

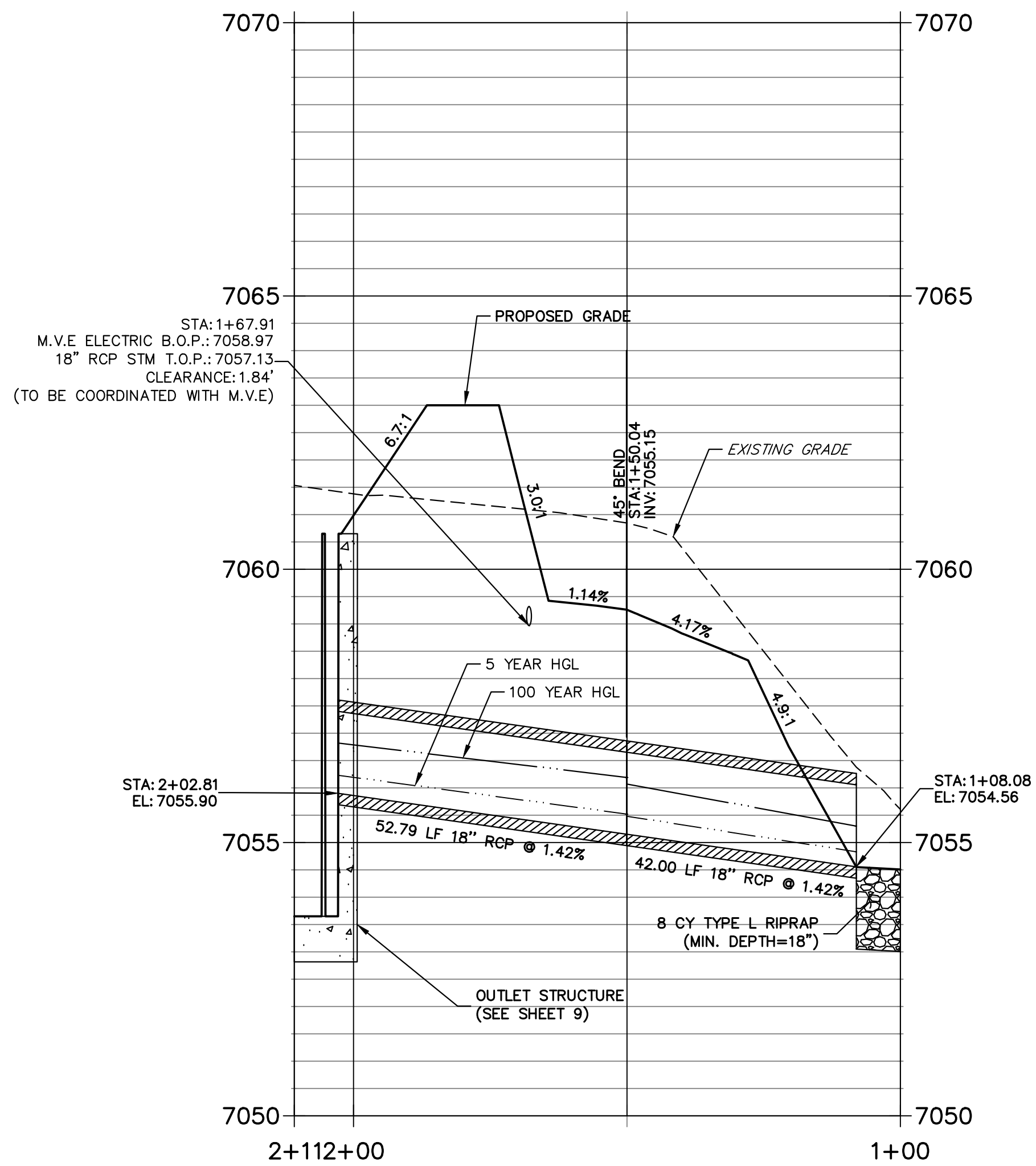


HORIZONTAL ORIGINAL SCALE: 1" = 20'
 VERTICAL ORIGINAL SCALE: 1" = 2'

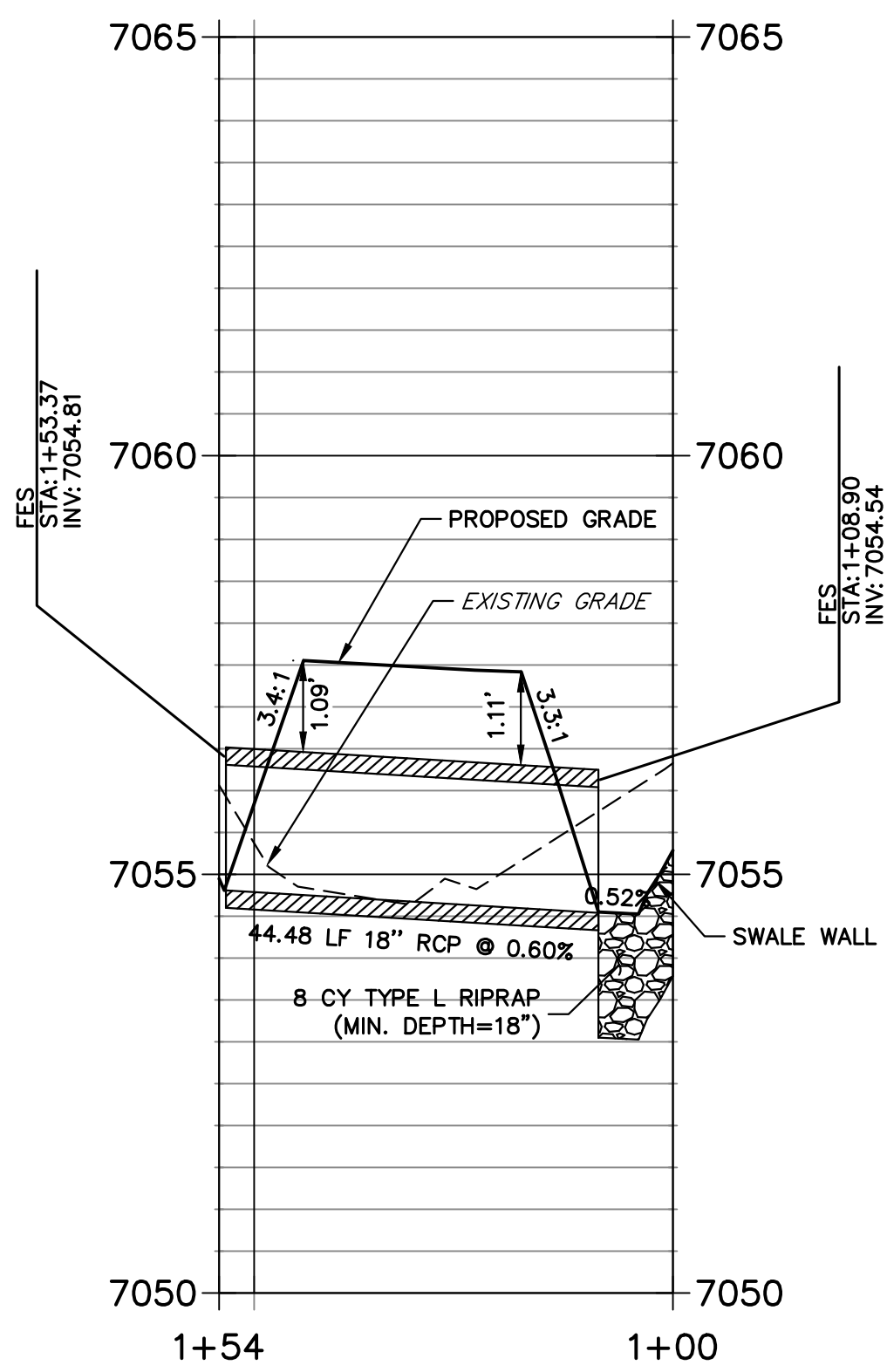
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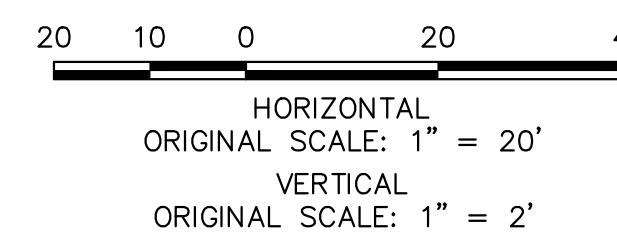
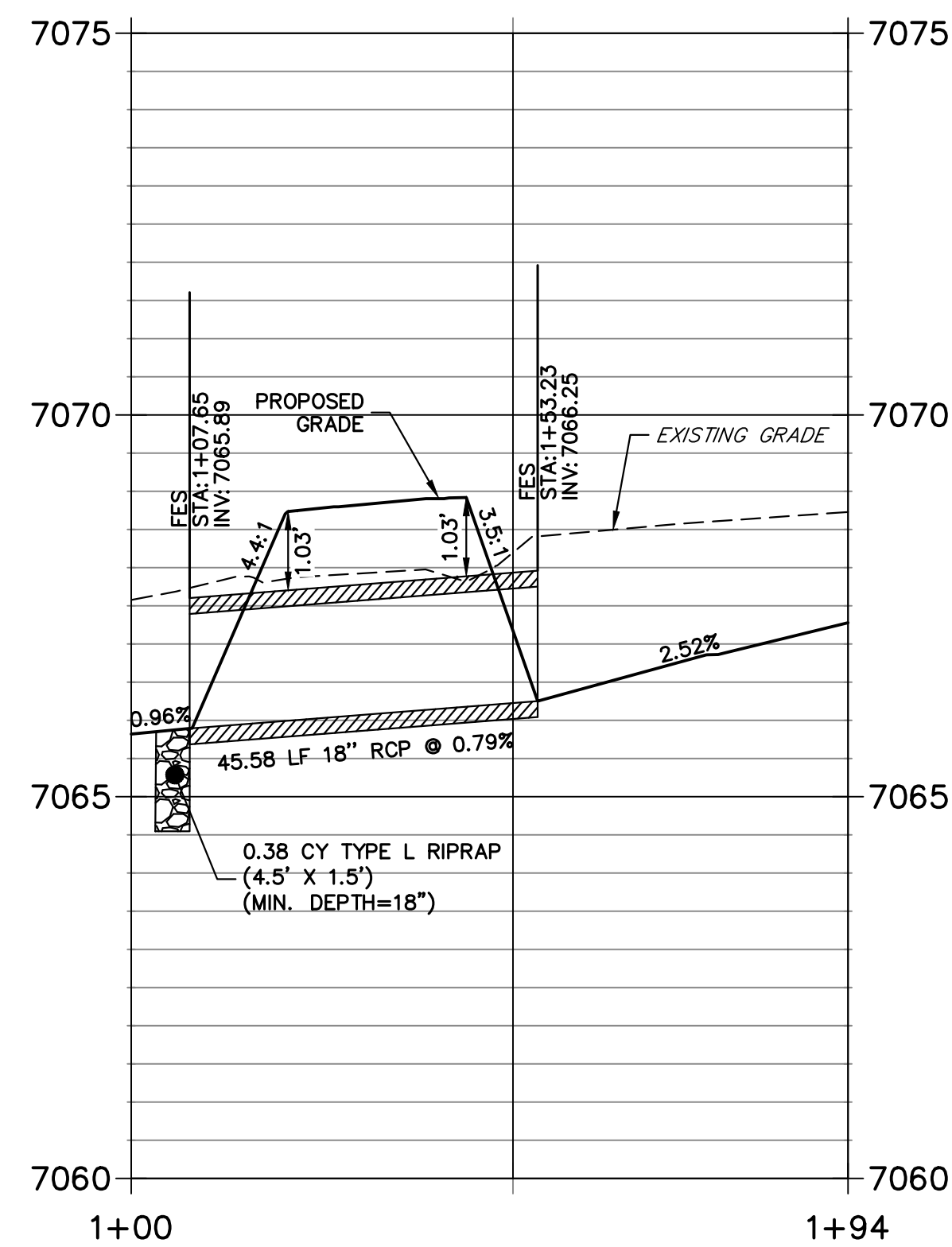
POND OUTFALL PROFILE
 STA 1+00.00 TO 2+10.85



DP03 PROFILE
 STA 1+00.00 TO 1+54.19



DP04 PROFILE
 STA 1+00.00 TO 1+93.88



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STORM SEWER NOTES

- SEE SHEET 1 FOR BASIS OF BEARING. SEE SHEET 2 FOR LEGEND.
- ALL STORM SEWER PIPES, INLETS, MANHOLES, AND APPURTENANCES WITHIN THE R.O.W. ARE PUBLIC. STORM FACILITIES OUTSIDE OF THE PUBLIC R.O.W. ARE PRIVATE, UNLESS OTHERWISE NOTED.
- ALL STATIONING IS PIPE CENTERLINE UNLESS OTHERWISE NOTED.
- ALL PROPOSED RCP STORM SEWER PIPE SHALL BE CLASS III UNLESS OTHERWISE NOTED.
- PIPE LENGTHS ARE FROM INSIDE INLET WALL TO INSIDE INLET WALL, FROM CENTER OF MANHOLE TO INSIDE INLET OF WALL, OR FROM CENTER OF MANHOLE TO CENTER OF MANHOLE. PIPE LENGTHS INCLUDE FES OR HEADWALL.
- WHERE PIPES ENTER STRUCTURES, THE CENTERLINE STATION CALLED OUT ON THE PLANS IS TO THE CENTER OF STRUCTURE. WHERE PIPES ENTER STRUCTURES ON A SKEW, CONTRACTOR IS REQUIRED TO EXTEND PIPE TO ENSURE THAT BOTH EDGES OF THE PIPE EXTEND INTO THE STRUCTURE. CONTRACTOR WILL THEN BE REQUIRED TO CUT PIPE FLUSH WITH THE INSIDE FACE OF THE STRUCTURE AND GROUT IN PLACE.
- ALL MANHOLE COVERS SHALL BE ORIENTED TO AVOID CURB, GUTTER, SIDEWALK AND CROSSPANS UNLESS OTHERWISE NOTED.
- ALL MANHOLES ARE EL PASO COUNTY TYPE I UNLESS OTHERWISE SPECIFIED. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR ALL EL PASO COUNTY TYPE I MANHOLES PRIOR TO CONSTRUCTION OR ORDERING MATERIALS.
- ALL MANHOLES HAVE AN ECCENTRIC CONE UNLESS OTHERWISE SPECIFIED.
- PIPES SHALL HAVE JOINT RESTRAINTS ON LAST 3 JOINTS AT PIPE OUTFALL.
- PIPES WITH PRESSURE HEAD SHALL USE WATER TIGHT JOINTS WITH A 100-YEAR SERVICE LIFE.
- PIPE BEDDING SHALL CONFORM TO EL PASO COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS FOR RCP SHALL BE AG7122 NO. 57/67 CRUSHED ROCK, SQUEEGEE OR MIXTURES CONTAINING SQUEEGEE SHALL NOT BE USED. BEDDING SHALL BE 6 TO 8 INCHES DEEP UNDER THE PIPE AND BACKFILLED TO THE SPRING LINE.
- ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH MANUFACTURER'S SPECIFICATIONS AND EL PASO COUNTY STANDARDS AND SPECIFICATION.
- SEE DETAIL SHEETS 8-11 FOR APPLICABLE DETAILS.

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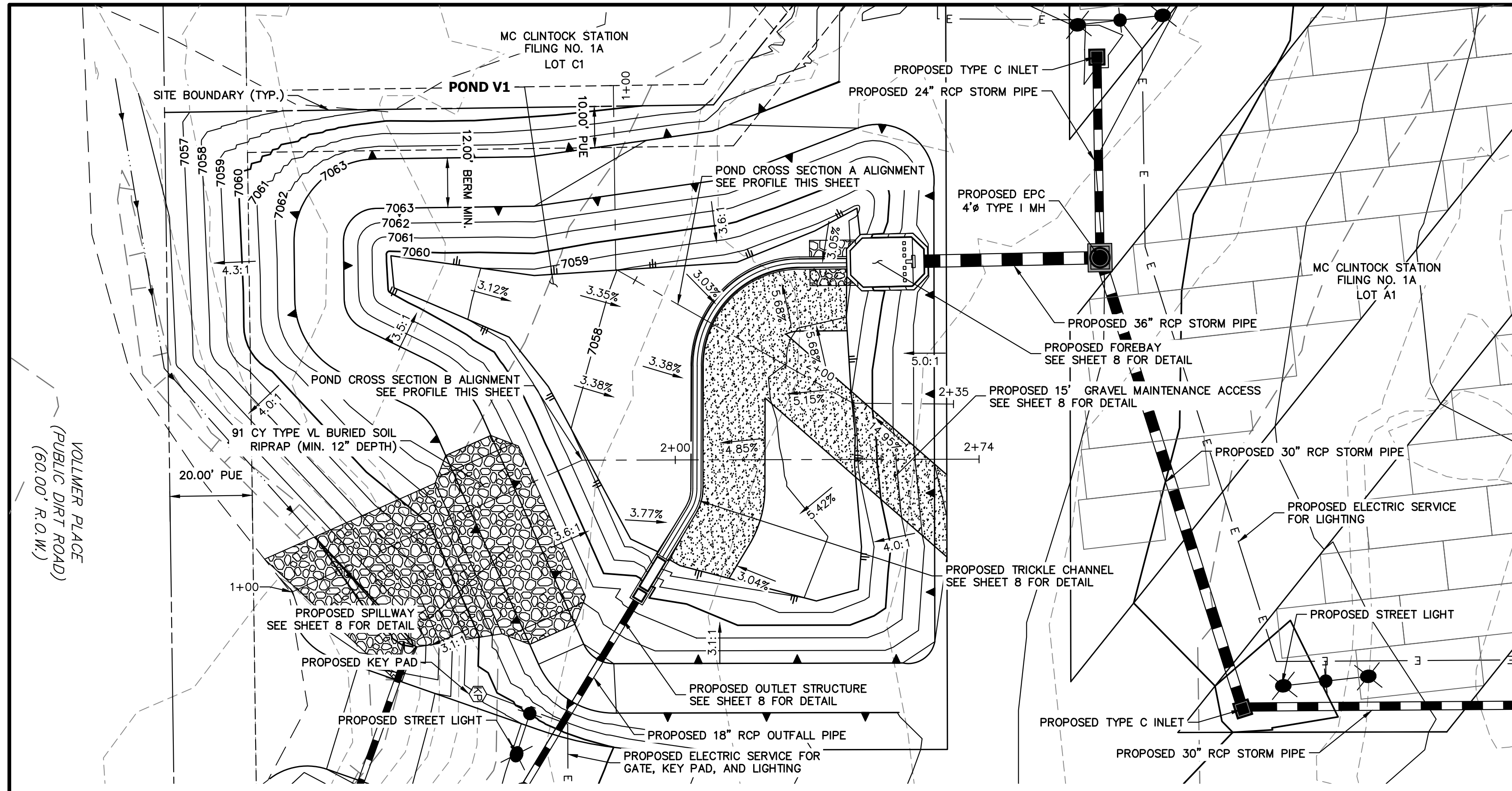
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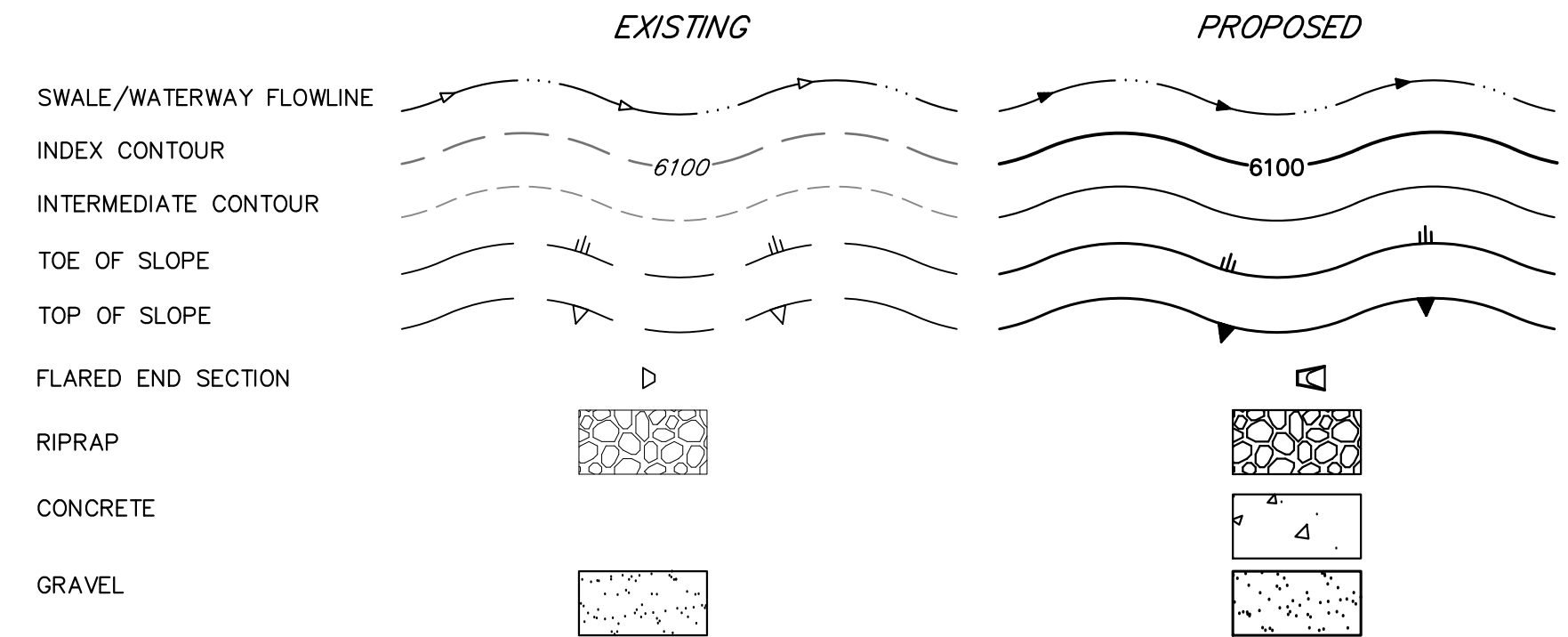
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VOLLMER RV STORAGE
 STORM SEWER PLAN AND PROFILE

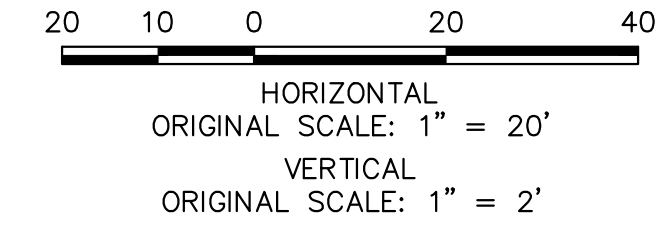
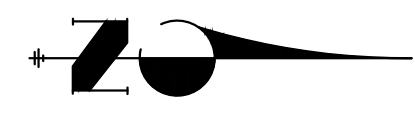
SHEET 5 OF 13
 JOB NO. 25251.00



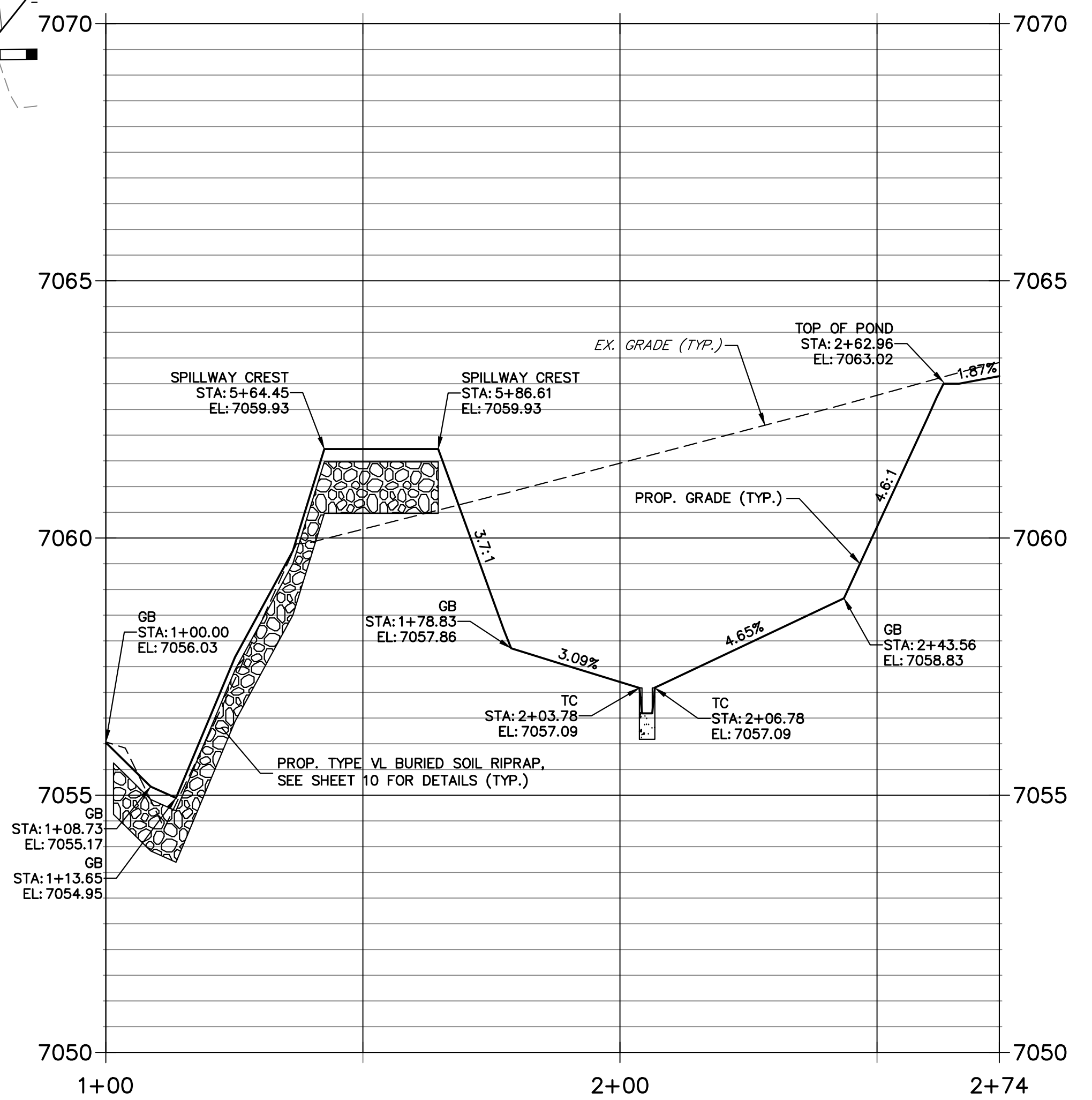
LAYER LINETYPE LEGEND



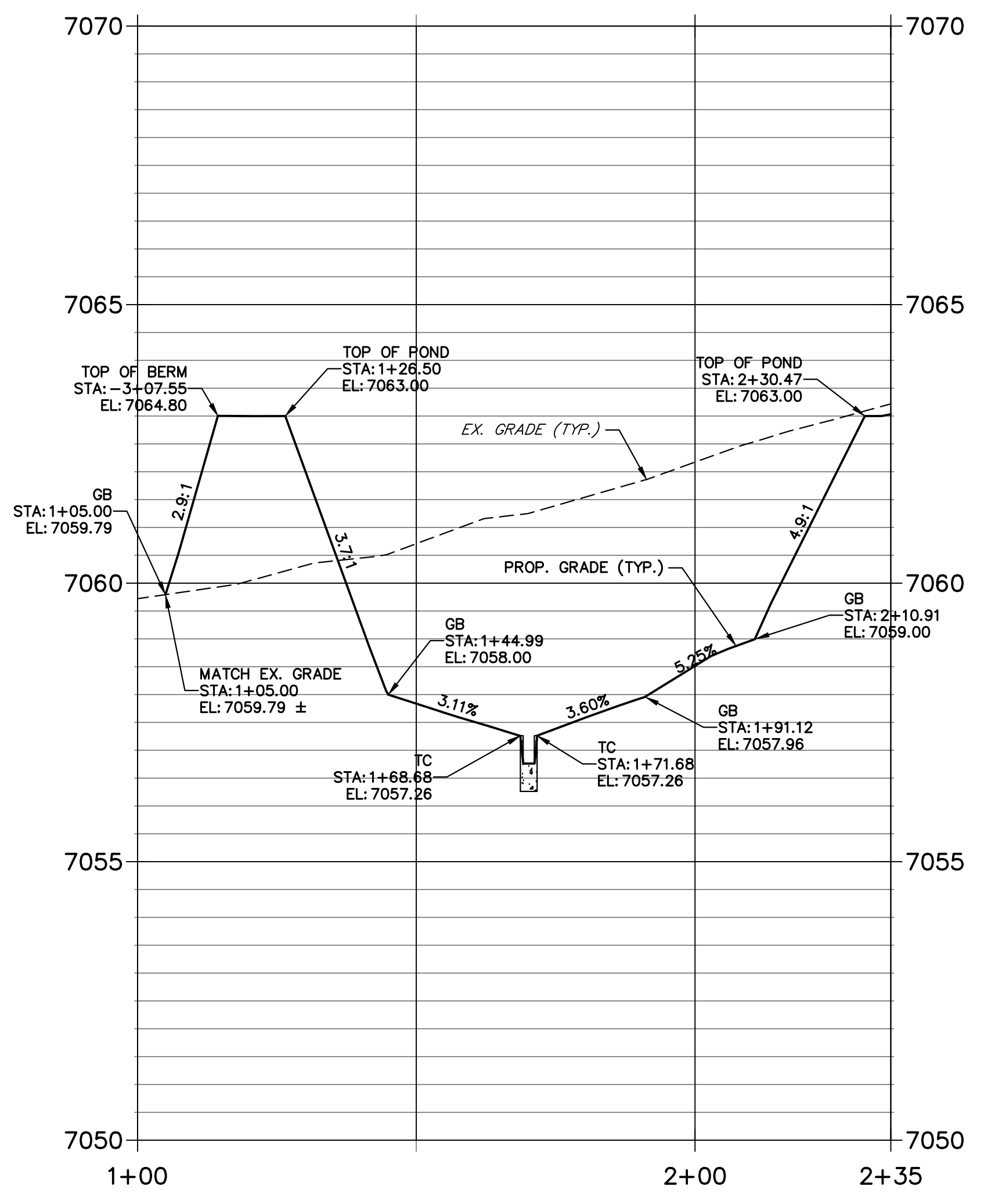
Know what's below.
Call before you dig.



**POND CROSS SECTION B PROFILE
STA 1+00.00 TO 2+73.77**



**POND CROSS SECTION A PROFILE
STA 1+00.00 TO 2+35.14**

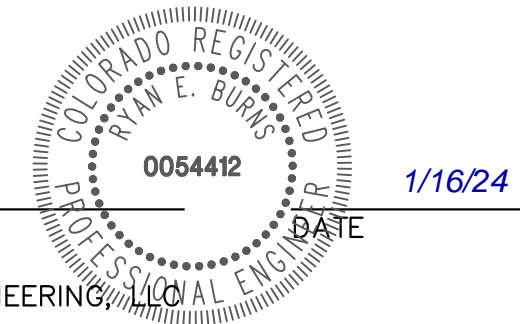


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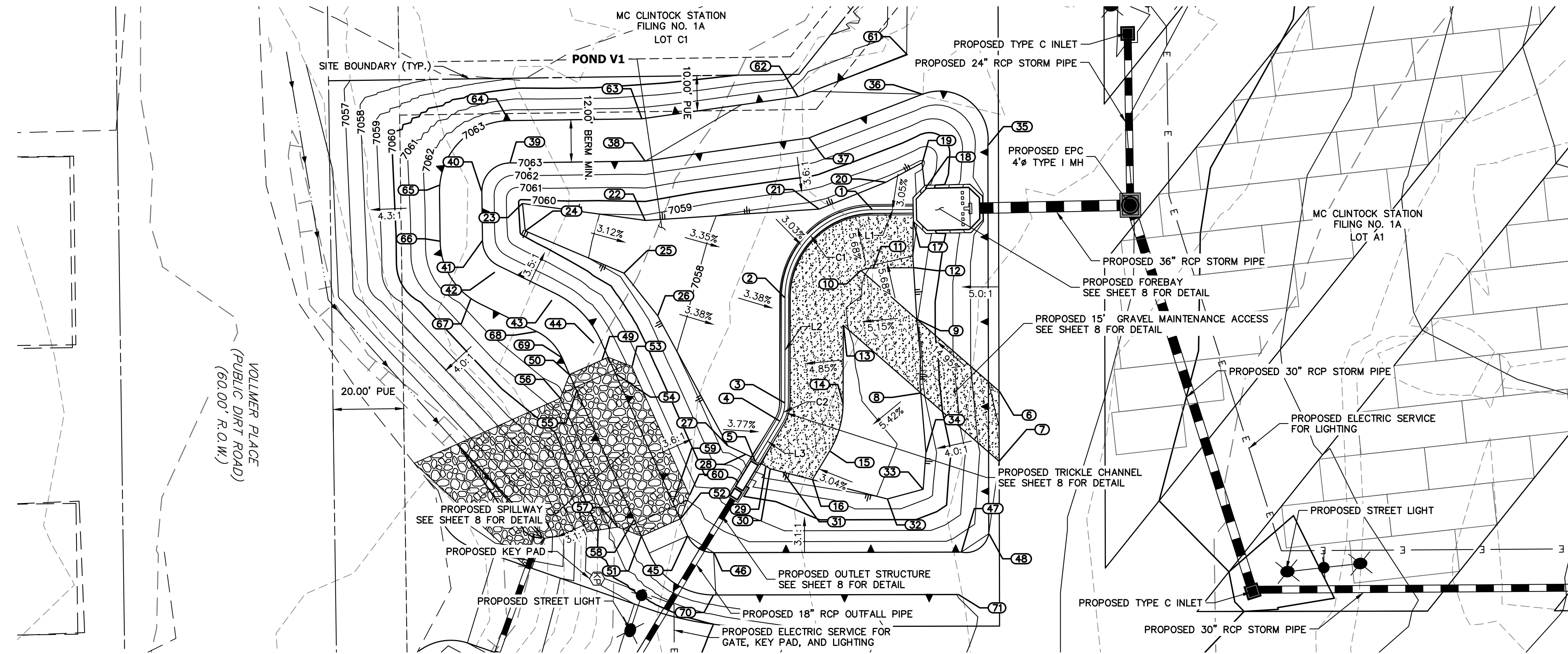
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PREPARED FOR BELKNAP VENTURES LLC 3603 FIRST LIGHT DRIVE CASTLE ROCK, CO 80109 (719)-322-3556 SCOTT.BELKNAP@TAHOOC.COM ATTN: SCOTT BELKNAP

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No.	REVISION	BY	DATE

VOLLMER RV STORAGE
POND PLANS
SHEET 6 OF 13
JOB NO. 25251.00

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Know what's below.
Call before you dig.

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LINE TABLE		
LINE	BEARING	DISTANCE
L1	S00°25'00"E	11.42'
L2	S89°53'39"E	29.78'
L3	S58°52'17"E	13.39'

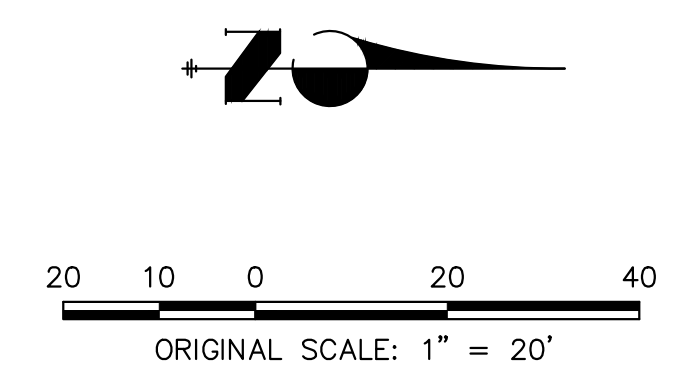
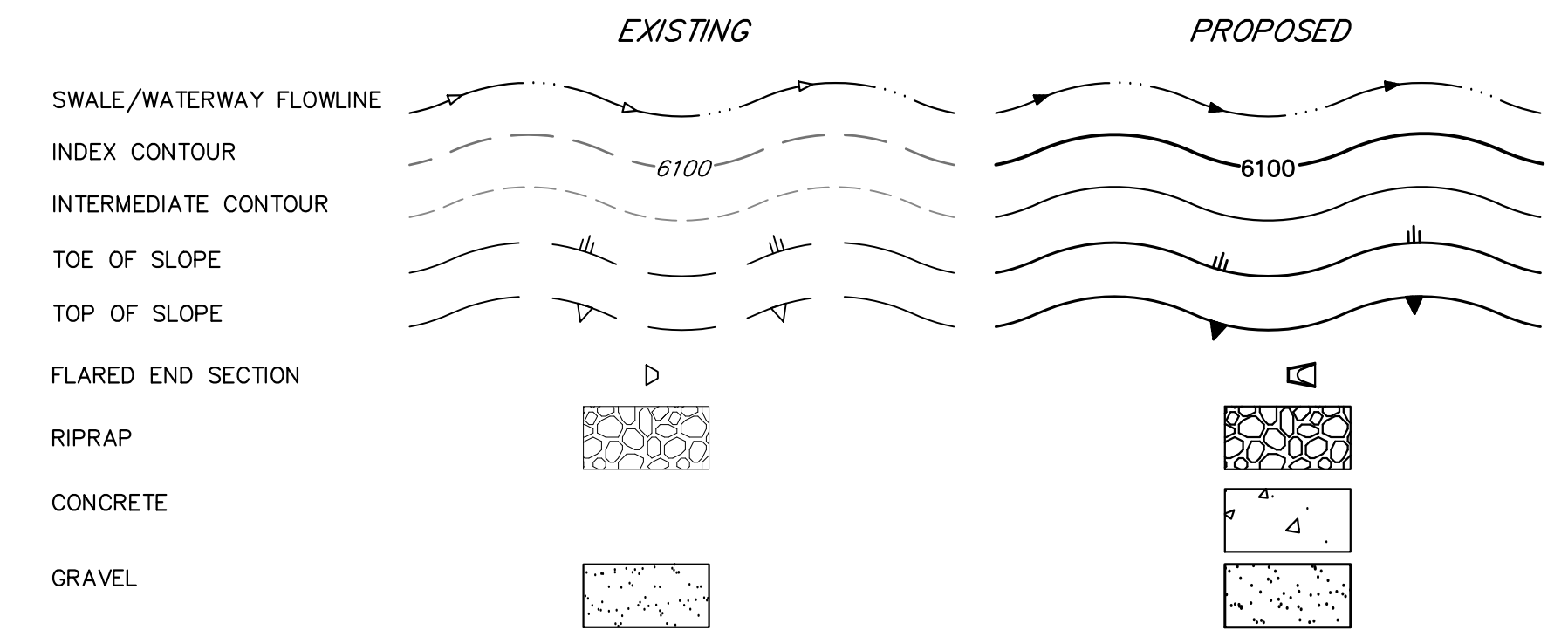
CURVE TABLE				
CURVE	DELTA	RADIUS	LENGTH	CHORD
C1	89°28'39"	25.00'	39.04'	S45°09'20"E 35.19'
C2	31°01'22"	10.00'	5.41'	S74°22'58"E 5.35'

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
1	TRICKLE CHANNEL	N: 412949.04 E: 234999.68	7056.90
2	TRICKLE CHANNEL	N: 412924.22 E: 235024.63	7056.71
3	TRICKLE CHANNEL	N: 412924.17 E: 235054.41	7056.56
4	TRICKLE CHANNEL	N: 412922.73 E: 235059.56	7056.53
5	TRICKLE CHANNEL	N: 412915.83 E: 235070.98	7056.46
6	MAINT. ROAD	N: 412984.84 E: 235051.05	7063.00
7	MAINT. ROAD	N: 412984.87 E: 235070.93	7063.00
8	MAINT. ROAD/ TOE	N: 412962.69 E: 235051.61	7058.78
9	MAINT. ROAD/ TOE	N: 412961.58 E: 235030.72	7059.00
10	MAINT. ROAD	N: 412945.77 E: 235016.91	7057.94
11	MAINT. ROAD	N: 412949.16 E: 235016.18	7058.03
12	MAINT. ROAD	N: 412960.63 E: 235016.07	7058.18
13	MAINT. ROAD	N: 412940.71 E: 235032.40	7057.93
14	MAINT. ROAD	N: 412940.67 E: 235054.44	7057.75
15	MAINT. ROAD	N: 412936.85 E: 235068.09	7057.48
16	MAINT. ROAD	N: 412931.96 E: 235076.18	7057.43
17	TOE/ FOREBAY	N: 412960.53 E: 235003.03	7057.77
18	TOE/ FOREBAY	N: 412963.85 E: 234993.66	7059.32
19	TOE	N: 412963.02 E: 234986.36	7057.82
20	TOE	N: 412952.80 E: 234991.86	7057.60
21	TOE	N: 412933.89 E: 234999.48	7057.42
22	TOE	N: 412884.67 E: 235002.69	7058.59
23	TOE	N: 412849.84 E: 234997.90	7059.68
24	TOE	N: 412850.60 E: 235005.67	7059.60

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
25	TOE	N: 412878.55 E: 235017.84	7058.63
26	TOE	N: 412888.10 E: 235029.68	7058.27
27	TOE	N: 412908.06 E: 235066.61	7057.42
28	TOE	N: 412913.13 E: 235069.01	7057.31
29	TOE/ MAINT. ROAD	N: 412918.83 E: 235072.45	7057.03
30	TOE/ MAINT. ROAD	N: 412920.07 E: 235073.11	7057.06
31	TOE/ MAINT. ROAD	N: 412923.54 E: 235074.01	7057.17
32	TOE	N: 412953.18 E: 235081.66	7058.09
33	TOE	N: 412963.35 E: 235076.91	7058.34
34	TOE	N: 412964.13 E: 235068.52	7058.26
35	TOP	N: 412981.68 E: 234981.40	7063.00
36	TOP	N: 412963.19 E: 234966.91	7063.00
37	TOP	N: 412930.96 E: 234979.31	7063.00
38	TOP	N: 412884.63 E: 234985.87	7063.00
39	TOP	N: 412846.21 E: 234986.40	7063.00
40	TOP	N: 412838.32 E: 234994.50	7063.00
41	TOP	N: 412838.50 E: 235008.42	7063.00
42	TOP	N: 412842.11 E: 235017.31	7063.00
43	TOP	N: 412858.28 E: 235025.21	7063.00
44	TOP	N: 412870.14 E: 235037.50	7063.00
45	TOP	N: 412896.66 E: 235092.13	7063.00
46	TOP	N: 412904.02 E: 235096.88	7063.00
47	TOP	N: 412974.14 E: 235096.72	7063.00
48	TOP	N: 412981.94 E: 235091.53	7063.00

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
49	SPILLWAY/ TOP	N: 412872.28 E: 235042.31	7063.00
50	SPILLWAY/ TOP	N: 412863.15 E: 235046.38	7063.00
51	SPILLWAY/ TOP	N: 412883.55 E: 235092.20	7063.00
52	SPILLWAY/ TOP	N: 412894.52 E: 235087.32	7063.00
53	SPILLWAY CREST	N: 412880.82 E: 235044.07	7061.73
54	SPILLWAY CREST	N: 412876.18 E: 235046.14	7061.73
55	SPILLWAY CREST	N: 412865.21 E: 235051.02	7061.73
56	SPILLWAY	N: 412860.57 E: 235053.09	7061.73
57	SPILLWAY	N: 412876.85 E: 235089.63	7061.73
58	SPILLWAY CREST	N: 412881.49 E: 235087.56	7061.73
59	SPILLWAY CREST	N: 412892.45 E: 235082.68	7061.73
60	SPILLWAY CREST	N: 412897.09 E: 235080.61	7061.73
61	BERM	N: 412958.89 E: 234955.70	7063.04
62	BERM	N: 412927.92 E: 234967.82	7062.99
63	BERM	N: 412883.70 E: 234973.88	7063.01
64	BERM	N: 412846.05 E: 234974.40	7063.01
65	BERM	N: 412826.37 E: 234992.70	7062.99
66	BERM	N: 412826.50 E: 235008.58	7063.00
67	BERM	N: 412835.27 E: 235024.87	7063.00
68	BERM	N: 412853.89 E: 235034.19	7063.00
69	BERM	N: 412861.00 E: 235041.57	7063.00
70	BERM	N: 412904.01 E: 235108.88	7063.00
71	BERM	N: 412973.24 E: 235108.73	7063.02

LAYER LINETYPE LEGEND



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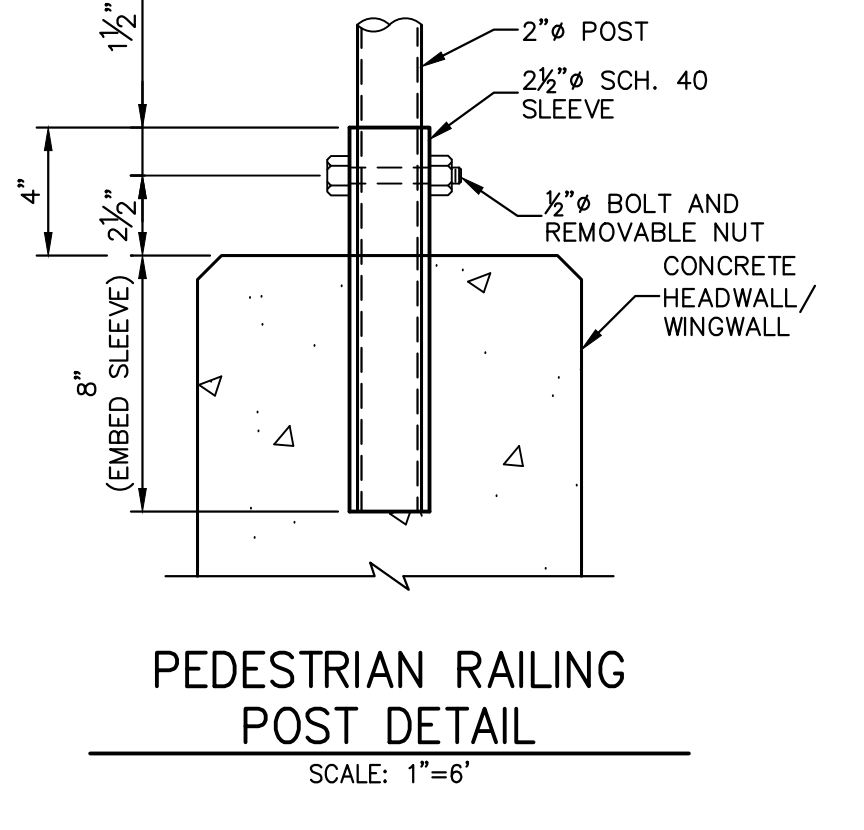
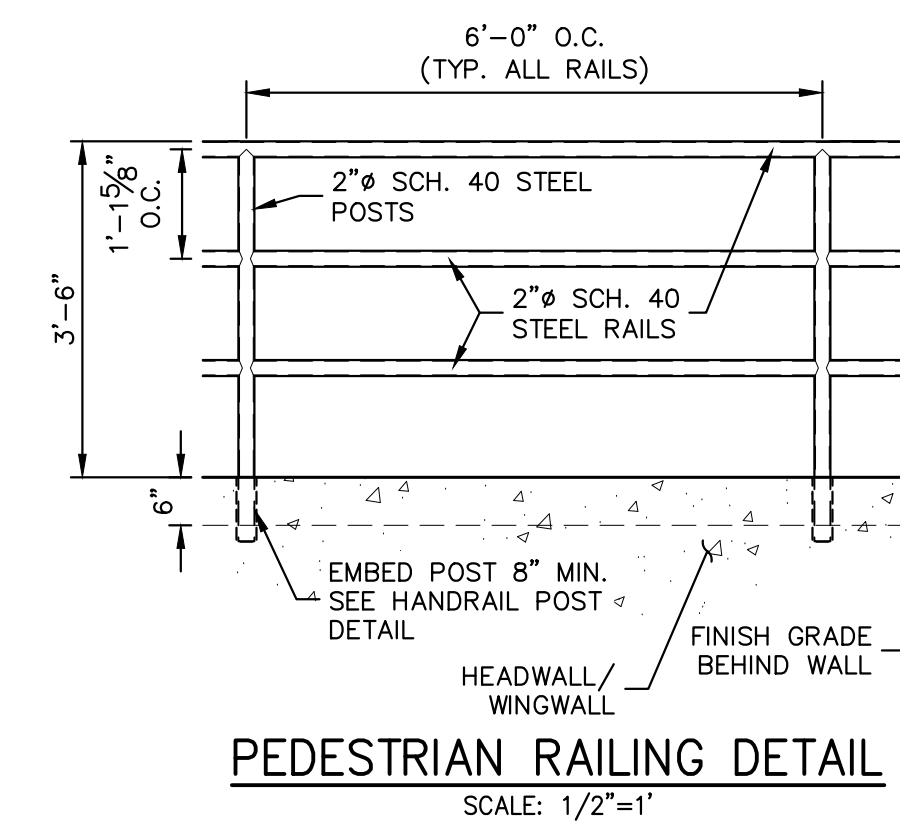
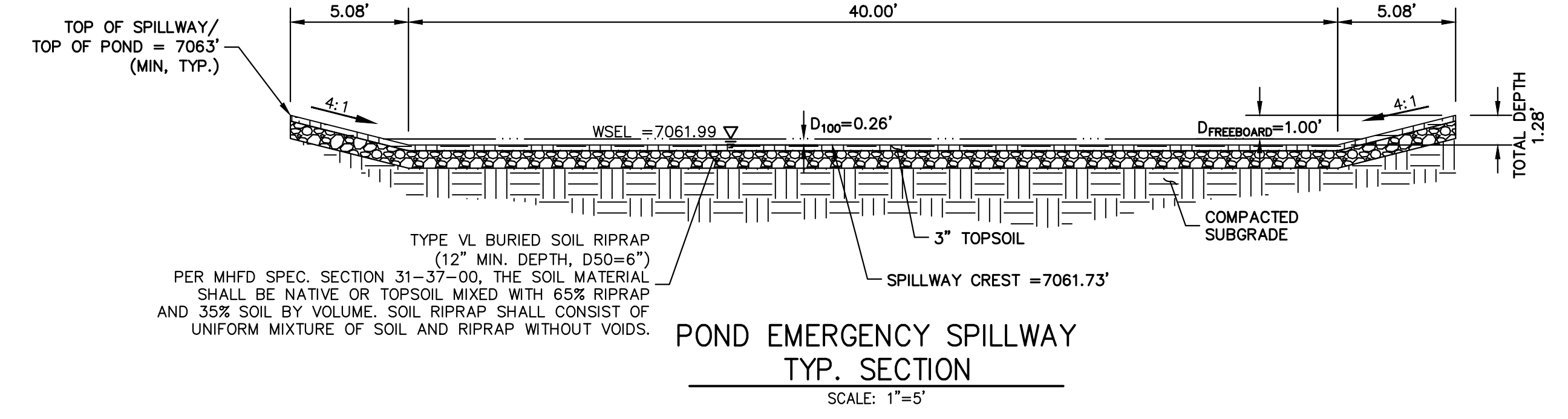
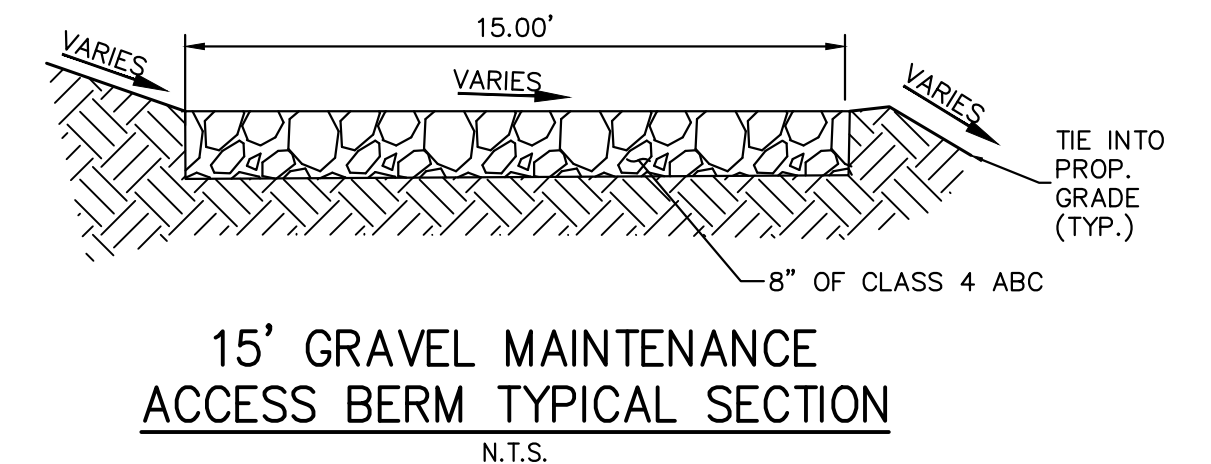
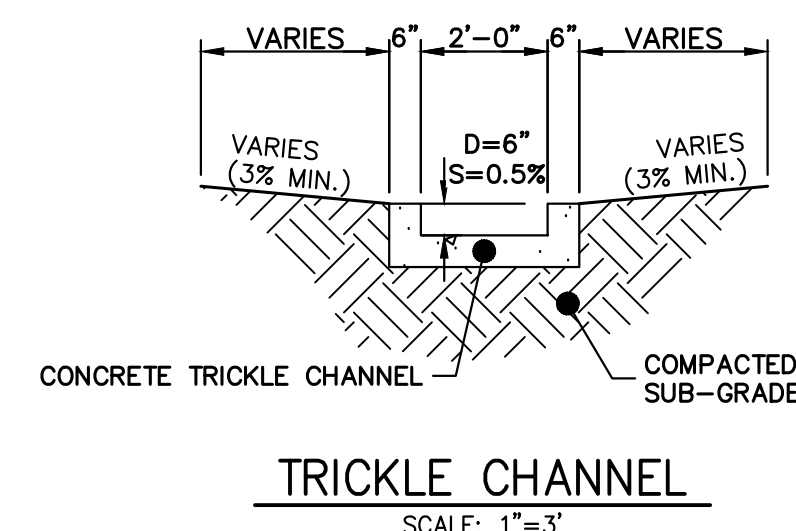
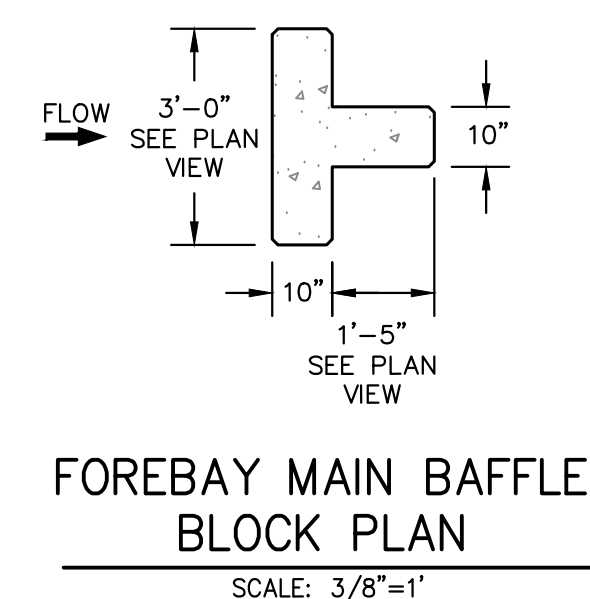
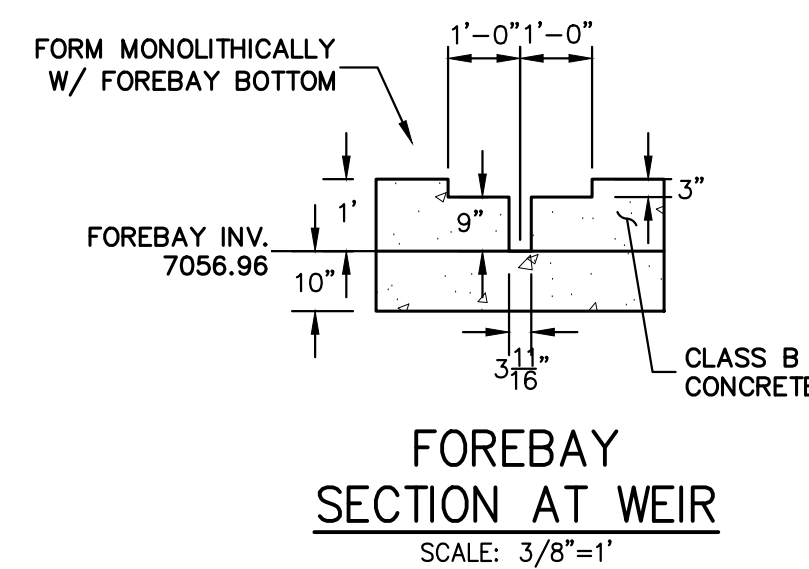
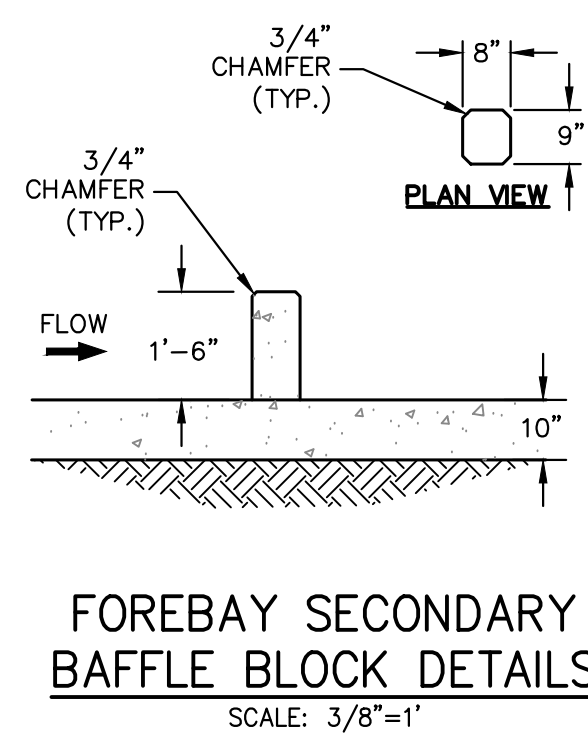
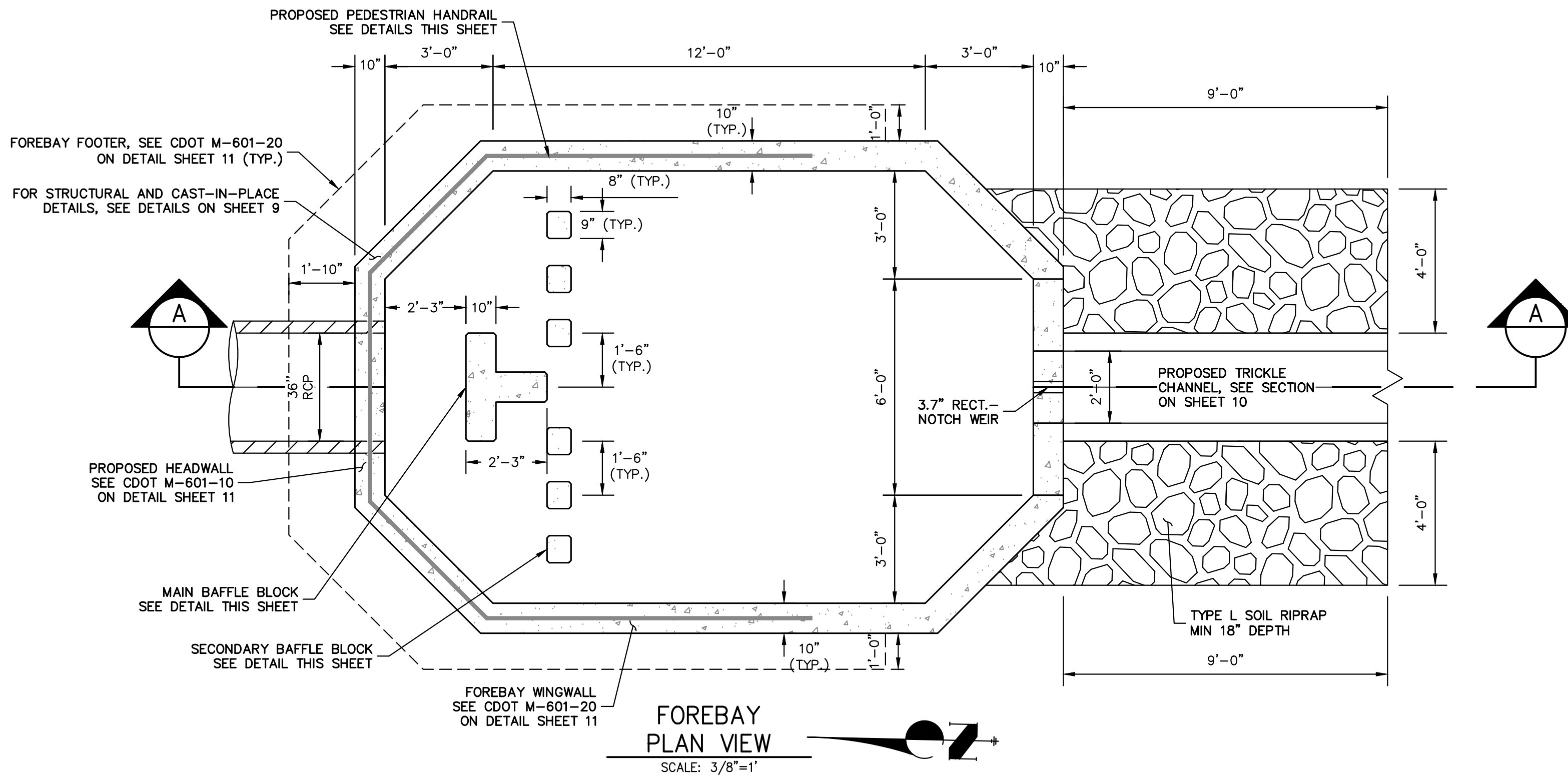
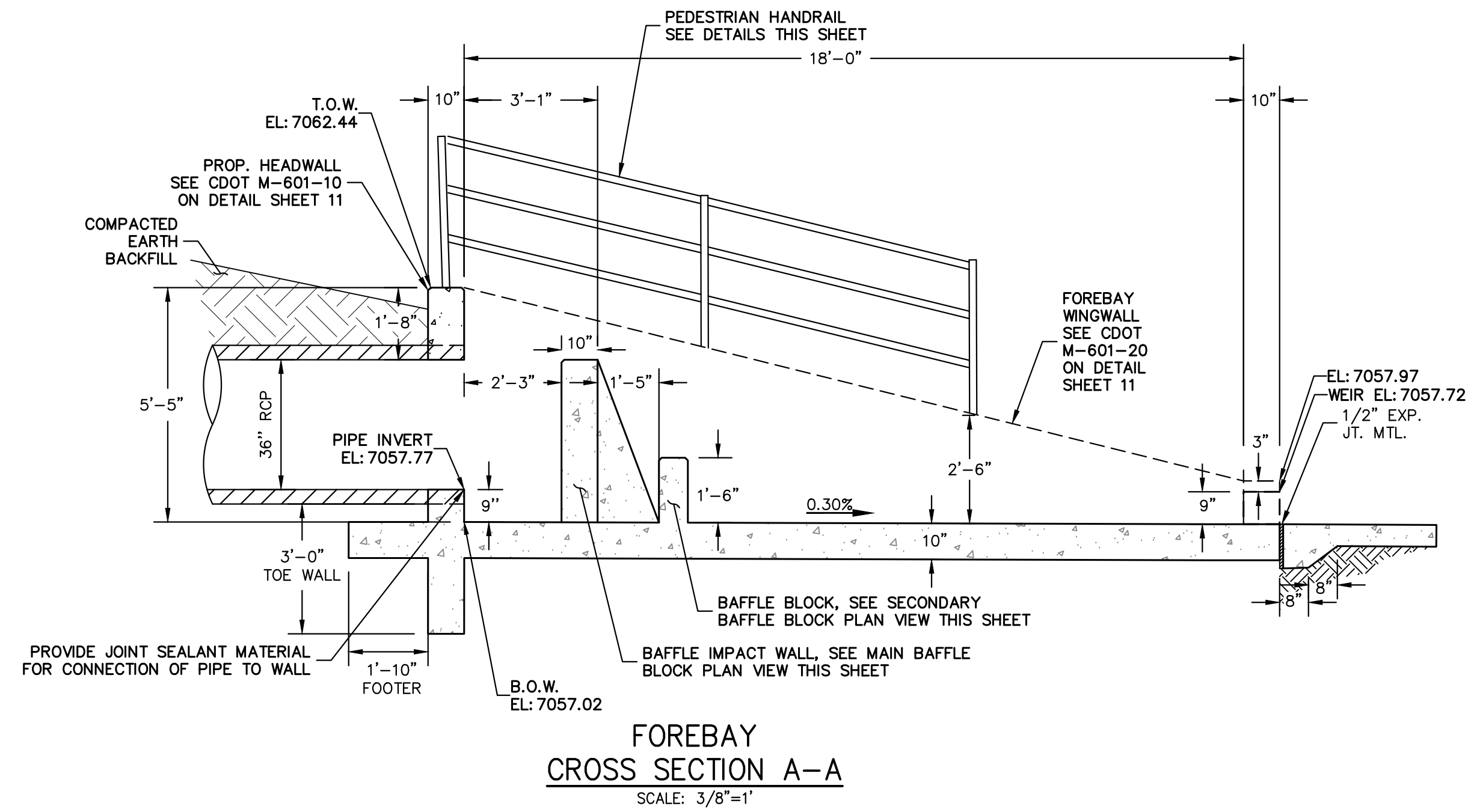
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SHEET 7 OF 13
JOB NO. 25251.00



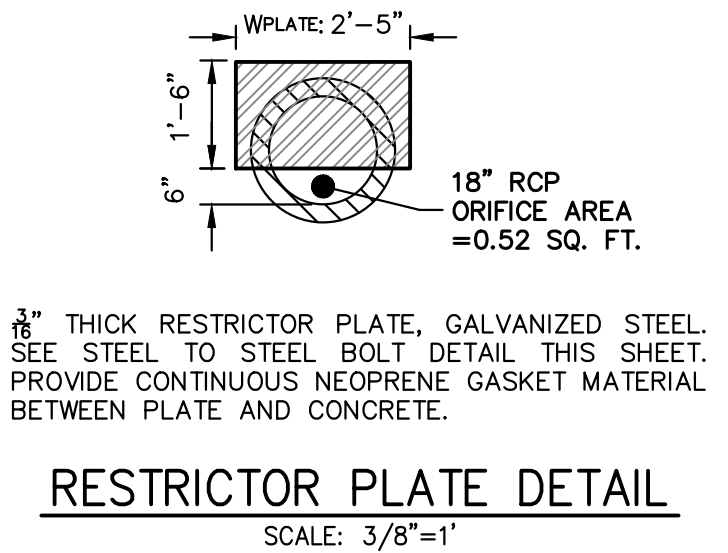
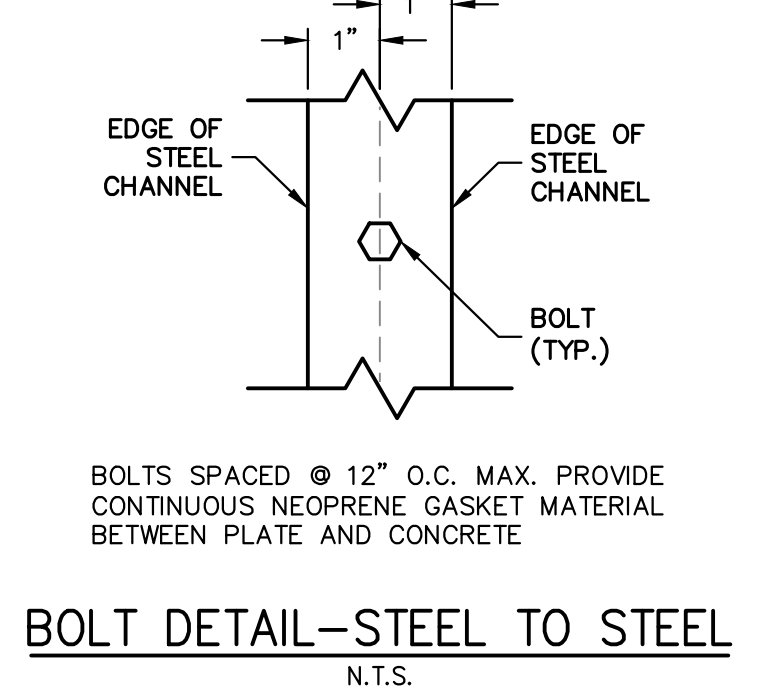
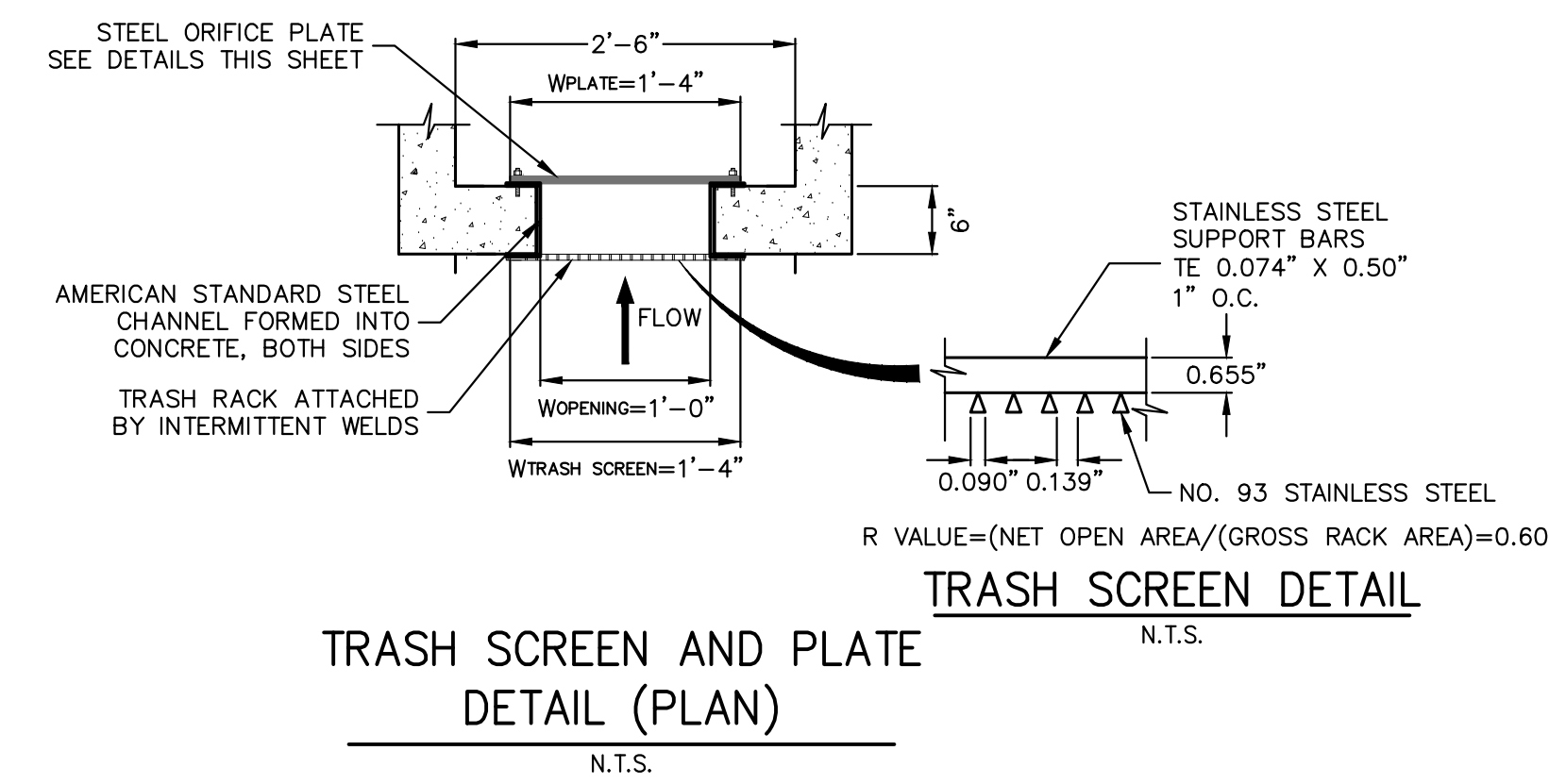
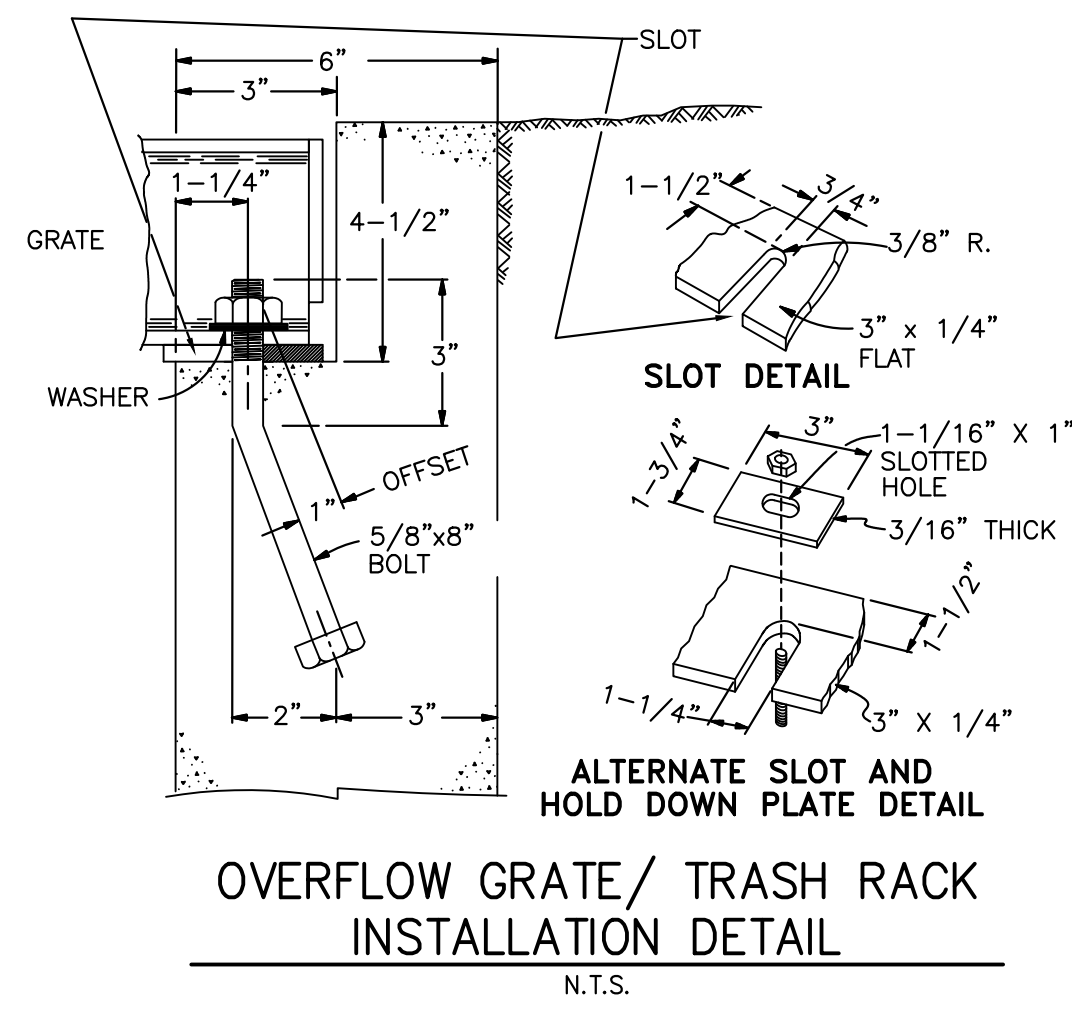
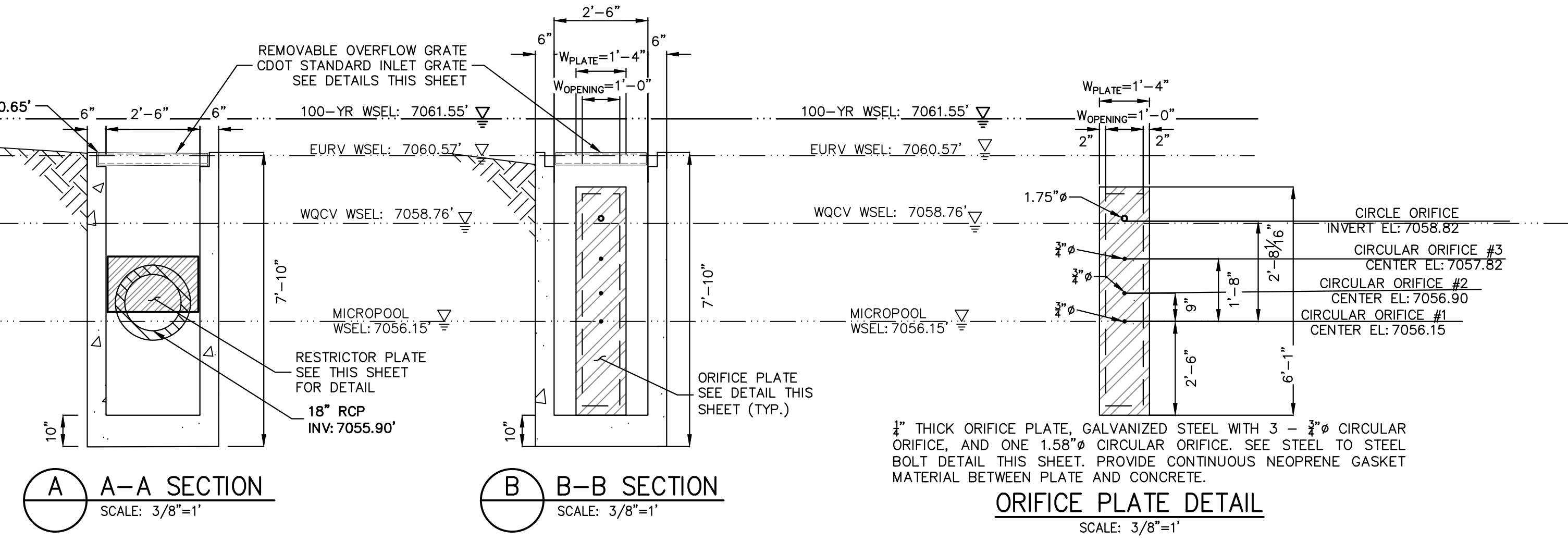
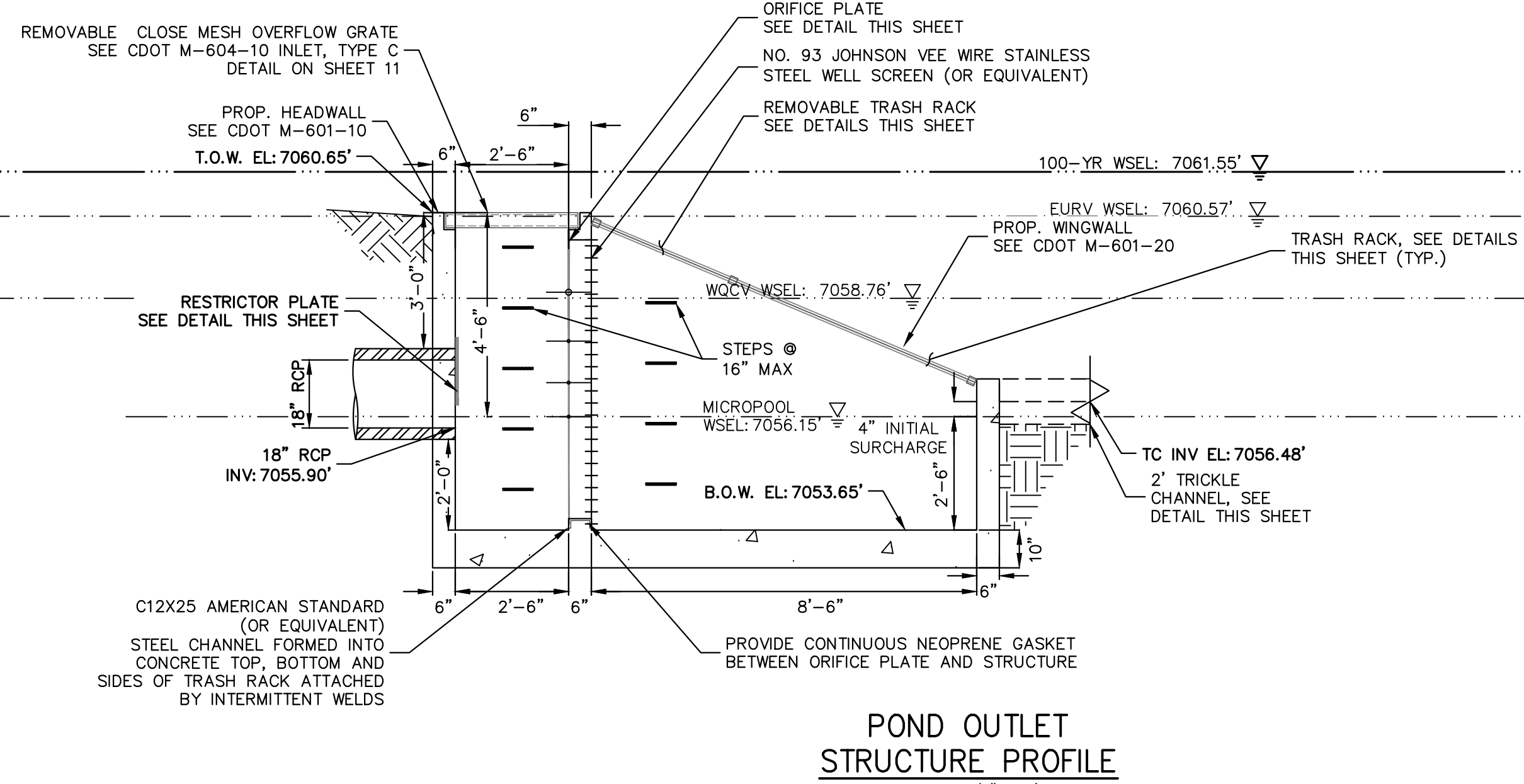
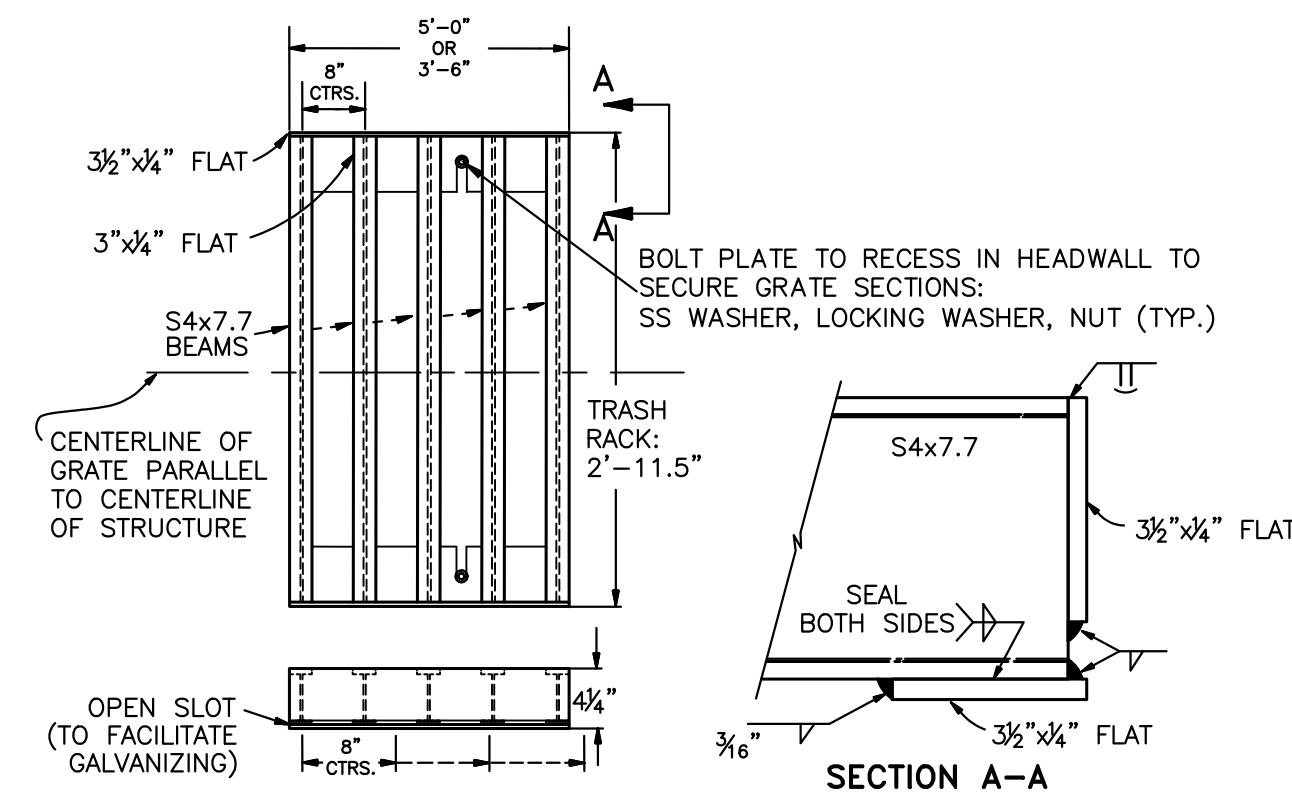
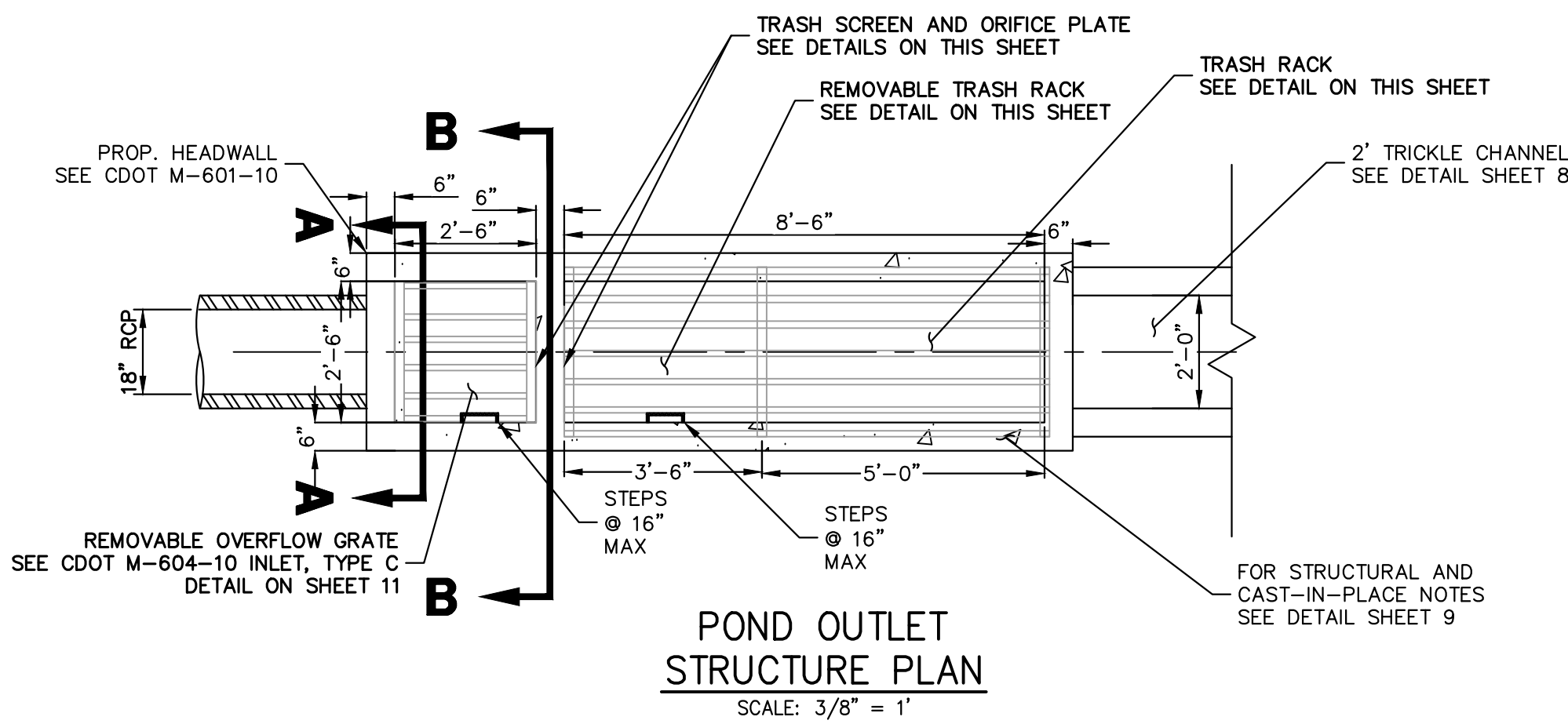
Know what's below.
Call before you dig.

ENGINEER'S STATEMENT
THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

Ryan E. Burns
RYAN E. BURNS, P.E.
COLORADO P.E. 0054412
FOR AND ON BEHALF OF JR ENGINEERING

0054412
1/16/24

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE AGENCIES, OR ENGINEERING APPROVES THEIR USE DESIGNATED BY WRITTEN AUTHORIZATION.	
PREPARED FOR	BELKNAP VENTURES LLC 3603 FIRST LIGHT DRIVE CASTLE ROCK, CO 80109 (719)-322-3556 SCOTT.BELKNAP@YAHOO.COM ATTN: SCOTT BELKNAP
BY	J.R. ENGINEERING A Westman Company Central 303-740-9888 • Colorado Springs 719-583-2583 Fort Collins 970-491-9888 • www.jrengineering.com
DATE	
REVISION	
NO.	
VARIABLES	
H-SCALE	
V-SCALE	
DATE	01/15/24
DESIGNED BY	APL
DRAWN BY	APL
CHECKED BY	
VOLLMER RV STORAGE	POND DETAILS
SHEET 8	OF 13
JOB NO.	25251.00



ENGINEER'S STATEMENT

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[Signature]
 RYAN E. BURNS, P.E.
 COLORADO P.E. 0054412
 FOR AND ON BEHALF OF JR ENGINEERING

COLOrado REGISTeRED PROFESSIONAL ENGINEER
 0054412
 DATE 1/16/24

UNLIT SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE AGENCIES, OR ENGINEERING APPROVES THEIR USE. DESIGNATED BY WRITTEN AUTHORIZATION.	PREPARED FOR BELKNAP VENTURES LLC 3603 FIRST LIGHT DRIVE CASTLE ROCK, CO 80109 (719)-322-3556 SCOTT.BELKNAP@YAHOO.COM ATTN: SCOTT BELKNAP	J.R. ENGINEERING A Westman Company Central 303-740-9888 • Colorado Springs 719-583-2583 Fort Collins 970-491-9888 • www.jrengineering.com	BY	DATE
			BY	DATE
No.	REVISION			
H-SCALE	V-SCALE	DESIGNED BY	APL	APL
		DATE	01/15/24	
		DRAWN BY		
		CHECKED BY		
VOLLMER RV STORAGE		POND DETAILS		
SHEET 9 OF 13		JOB NO. 25251.00		



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GENERAL STRUCTURE NOTES:

ALL WORK SHALL BE DONE IN ACCORDANCE WITH CITY OR COUNTY STANDARD CONSTRUCTION SPECIFICATIONS. EXCEPT AS SHOWN IN THE PLANS, STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH CDOT M-206-1, AND M-206-2 EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213

THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO A 1-800-922-1987 AT LEAST 2 DAYS (NOT INCLUDING THE DAY OF NOTIFICATION) PRIOR TO ANY EXCAVATION OF OTHER.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DESIGNING AND PROVIDING ALL BRACING AND SHORING AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE EXCAVATION PROCEDURES INCLUDING ANY SHORING REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL METHODS AND MEANS OF CONSTRUCTION AS WELL AS ALL JOB SITE SAFETY & HEALTH PRECAUTIONS.

ALL SOILS WORK INCLUDING (BUT NOT LIMITED TO) PIER DRILLING AND CONSTRUCTION, SOILS EXCAVATION, FILL PLACEMENT, AND STRUCTURE BACKFILL SHALL BE IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT, UNLESS MORE STRINGENT REQUIREMENTS ARE PRINTED ON THE "IRRIGATION NOTES".

BACKFILL SHALL NOT BEGIN UNTIL CONCRETE WALLS REACH COMPRESSION STRENGTH AT LEAST 80 PERCENT OF THE REQUIRED 28 DAY STRENGTH, 0.8fc'.

REINFORCED CONCRETE:
CLASS D CONCRETE: fc=4,500 psi
REINFORCING STEEL: fy=60,000 psi
ALL CAST-IN-PLACE CONCRETE SHALL BE CLASS D UNLESS NOTED OTHERWISE.

REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 U.N.O.
REINFORCING BARS TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60.
ALL REINFORCING, EXCEPT PIER REINFORCING, SHALL BE EPOXY COATED AND SHALL CONFORM TO ASTM A775.
ALL REINFORCING SHALL HAVE 2" CONCRETE COVER, U.N.O. ON PLANS, 3" AGAINST GROUND (BOTTOM SLAB)
ALL REINFORCING SHALL BE HOOKED AROUND CORNERS AND LAPPED, SEE DETAILS.
ALL LAP SPICE LOCATIONS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

THE FOLLOWING TABLE GIVES THE MINIMUM CLASS B (STAGGERED) LAP SPICE LENGTH FOR EPOXY COATED REINFORCING BARS PLACE IN ACCORDANCE WITH SUBSECTION 602.06. THESE SPICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER. INCREASED BY 40% FOR HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE BELOW (TOP BARS.), AND INCREASED BY 75% IF BOTH CONDITIONS EXIST. THE INCREASES ABOVE FOR #6 THRU #11 BARS MAY BE 25%, 13%, AND 42% RESPECTIVELY.

#4	1'-3"	#5	1'-7"
#6	2'-5"	#7	2'-10"
#8	3'-8"	#9	4'-8"
#10	5'-11"	#11	7'-3"

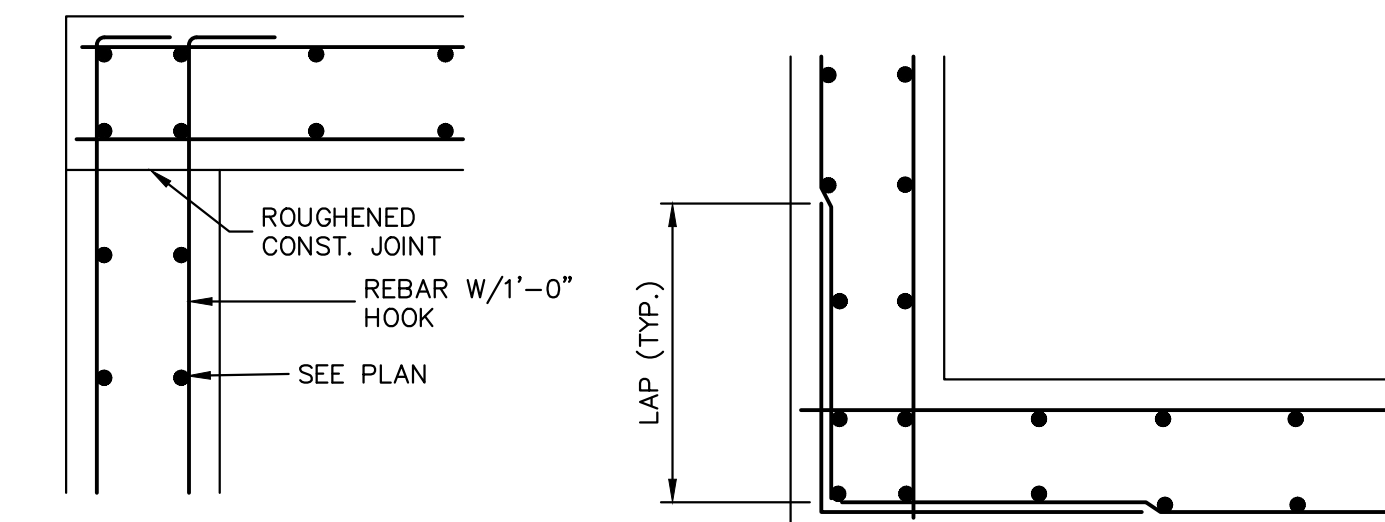
WHEN THE CONTRACTOR ELECTS TO SUBSTITUTE EPOXY COATED REINFORCEMENT FOR BLACK REINFORCING BARS. THE MINIMUM LAP SPICE SHALL BE AS DESCRIBED ABOVE.

STATIONS, ELEVATIONS, AND DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM A RECENT FIELD SURVEY. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.

THE CONTRACTOR SHALL SUBMIT REINFORCING STEEL PLACING DRAWINGS (PRIOR TO CONSTRUCTION) TO THE ENGINEER FOR REVIEW FOR CONFORMANCE WITH THE DESIGN DRAWINGS. THE DESIGN DRAWINGS SHALL GOVERN OVER PLACING DRAWINGS IN ALL CASES UNLESS MODIFICATIONS ARE APPROVED IN WRITING BY ENGINEER.

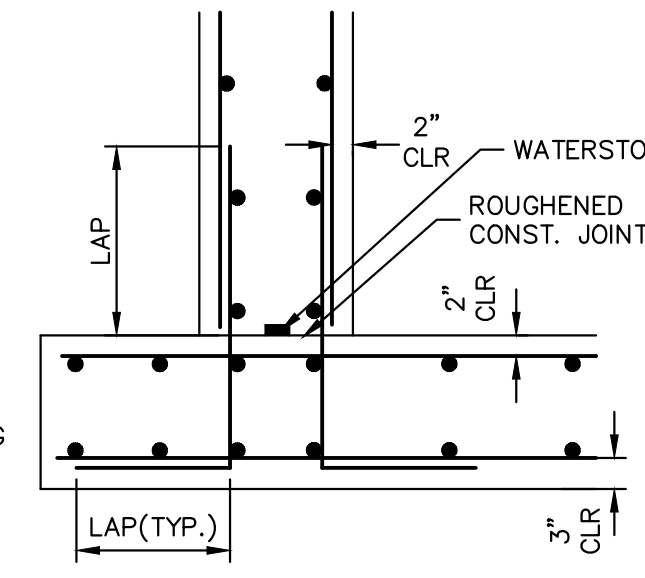
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.

E.F. = EACH FACE	O.F. = OUTSIDE FACE
F.E. = FAR FACE	T.&B. = TOP AND BOTTOM
N.F. = NEAR FACE	T.F. = TOP FACE
I.F. = INSIDE FACE	B.F. = BOTTOM FACE
T.W. = TWO WAY	T.F. = TWO FACES
E.S. = EACH SIDE	Lp = LAP LENGTH

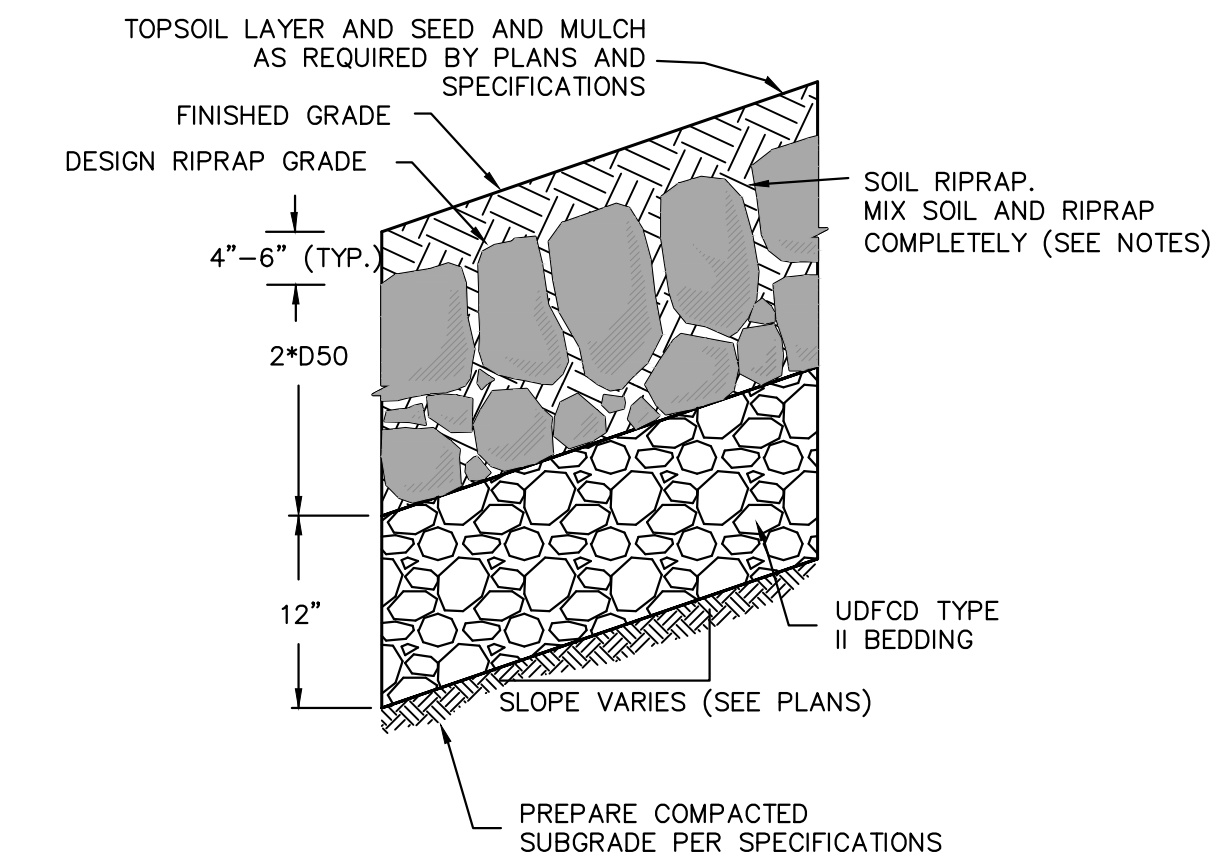


TYPICAL TOP CORNER WALL SECTION DETAIL

TYPICAL WALL CORNER PLAN VIEW



TYPICAL BOTTOM CORNER WALL SECTION DETAIL



SOIL RIPRAP EMBANKMENT PROTECTION WITH BEDDING TYP. SECTION

N.T.S.

TYPE VL RIPRAP

INTERMEDIATE ROCK DIMENSION (IN.)	PERCENT PASSING (%)
12	70-100
9	50-70
6	35-50
2	2-10

*TYPE VL RIPRAP D50=6".
D50 = MEAN PARTICLE SIZE (INTERMEDIATE DIMENSION) BY WEIGHT.

TYPE L RIPRAP

INTERMEDIATE ROCK DIMENSION (IN.)	PERCENT PASSING (%)
15	70-100
12	50-70
9	35-50
3	2-10

*TYPE L RIPRAP D50=9".
D50 = MEAN PARTICLE SIZE (INTERMEDIATE DIMENSION) BY WEIGHT.

RIPRAP NOTES:

- SOIL RIPRAP DETAILS ARE APPLICABLE TO SLOPED AREAS. REFER TO THE SITE PLAN ACTUAL LOCATION AND LIMITS.
- MIX UNIFORMLY 65% RIPRAP BY VOLUME WITH 35% OF APPROVED SOIL BY VOLUME PRIOR TO PLACEMENT.
- PLACE STONE-SOIL MIX TO RESULT IN SECURELY INTERLOCKED ROCK AT THE DESIGN THICKNESS AND GRADE. COMPACT AND LEVEL TO ELIMINATE ALL VOIDS AND ROCKS PROJECTING ABOVE DESIGN RIPRAP TOP GRADE.
- CRIMP OR TACKIFY MULCH OR USE APPROVED HYDROMULCH AS CALLED FOR IN THE PLANS AND SPECIFICATIONS.
- ROCK SHALL BE HARD, DURABLE, ANGULAR IN SHAPE, AND FREE FROM CRACKS, OVERBURDEN, SHALE, AND ORGANIC MATTER.
- NEITHER BREADTH NOR THICKNESS OF A SINGLE STONE SHOULD BE LESS THAN ONE-THIRD ITS LENGTH, AND ROUNDED STONE SHOULD BE AVOIDED.
- THE ROCK SHOULD SUSTAIN A LOSS OF NOT MORE THAN 40% AFTER 500 REVOLUTIONS IN AN ABRASION TEST (LOS ANGELES MACHINE ASTM C-535-69) AND SHOULD SUSTAIN A LOSS OF NOT MORE THAN 10% AFTER 12 CYCLES OF FREEZING AND THAWING (AASHTO TEST 103 FOR LEDGE ROCK PROCEDURE A).
- ROCK HAVING A MINIMUM SPECIFIC GRAVITY OF 2.65 IS PREFERRED; HOWEVER, IN NO CASE SHOULD ROCK HAVE A SPECIFIC GRAVITY LESS THAN 2.50.



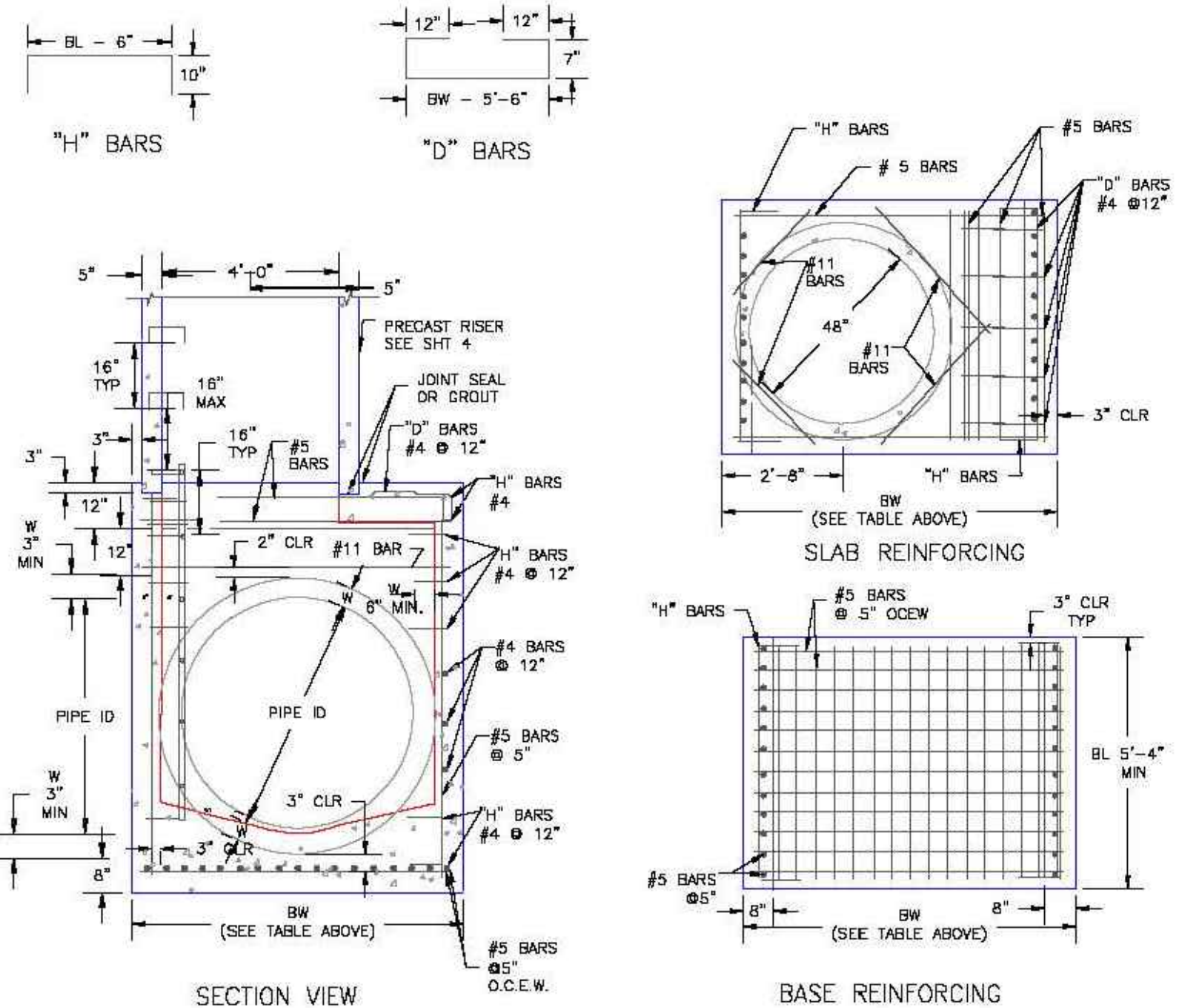
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[Signature]
RYAN E. BURNS, P.E.
COLORADO P.E. 0054412
FOR AND ON BEHALF OF JR ENGINEERING

COLORED REGISTERED PROFESSIONAL ENGINEER
0054412
DATE 1/16/24



PIPE ID	BW
48" AND SMALLER	6'-4"
54"	6'-10"
60" AND LARGER	OD + 16"

- NOTES
- TYPE I MANHOLE SHALL BE USED WHEN APPROPRIATE AND TYPICALLY FOR PIPE SIZES LARGER THAN 30 INCHES I.D..
 - VIEW AND DETAILS SHOWN ARE TYPICAL FOR STRAIGHT THROUGH DESIGN ONLY. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.
 - EITHER LADDER OR STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". LOWEST STEP SHALL BE BE A MAXIMUM OF 16" ABOVE THE FLOOR.
 - FLOOR OF THE MANHOLE SHALL BE TROWELLED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1 MAX., 1/2" PER FT. MIN). FLOOR SHALL BE SHAPED AND CHANNELLED; SEE SD_3-2 FOR TYPICAL CHANNEL DETAILS.

SCALE: NOT TO SCALE

7/9/09
DATE APPROVED: André Brackin
DEPARTMENT OF TRANSPORTATION

Storm Sewer Manhole Detail
Type I
Standard Drawing

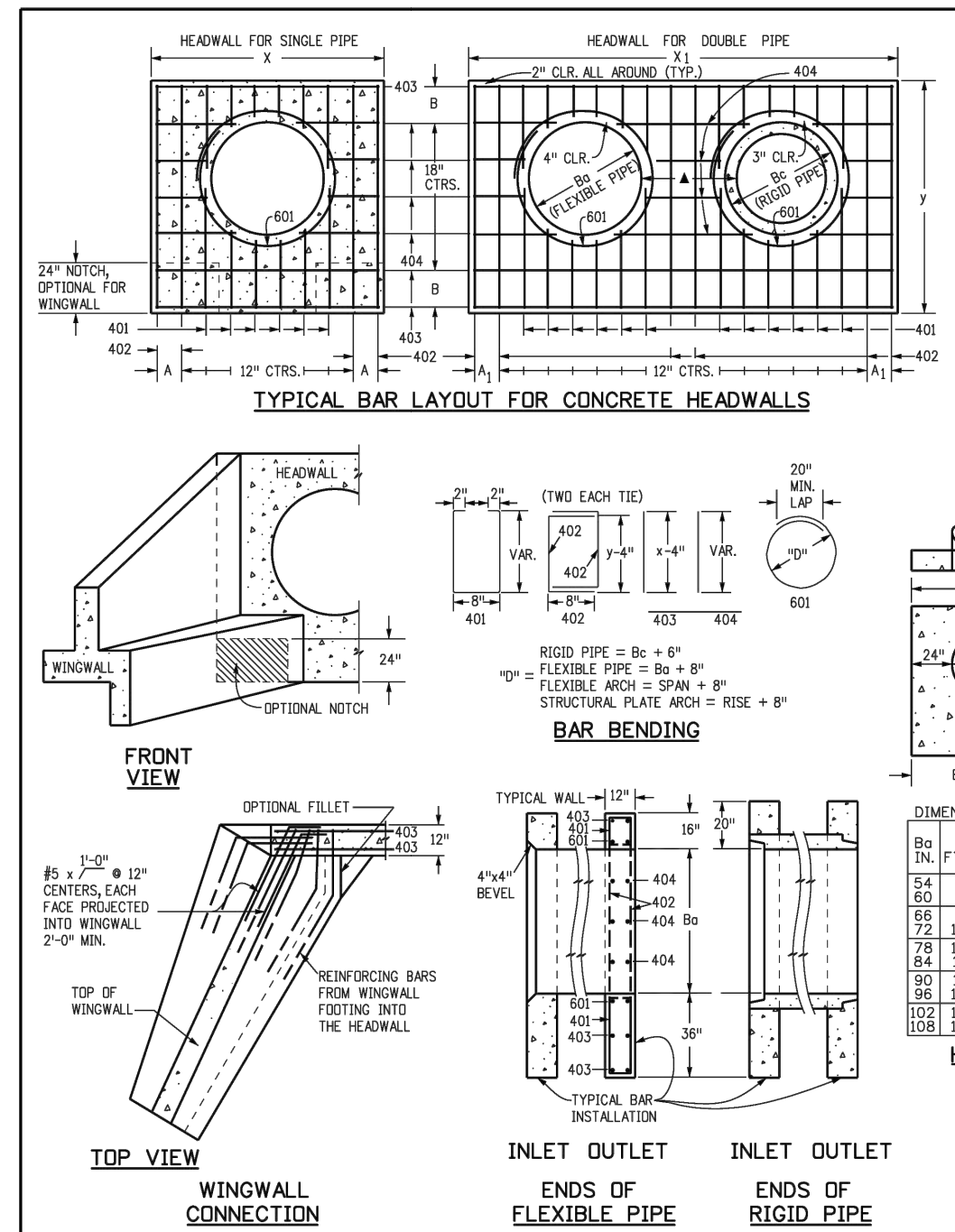
REVISION DATE: 7/9/09
FILE NAME: SD_3-1

PREPARED FOR
BELKNAP VENTURES LLC
3603 FIRST LIGHT DRIVE
CASTLE ROCK, CO 80109
(719)-322-3556
SCOTT.BELKNAP@YAHOO.COM
ATTN: SCOTT BELKNAP

J.R. ENGINEERING
A Westman Company
Central 303-740-9888 • Colorado Springs 719-588-2583
Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	NO.	REVISION	H-SCALE	V-SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
				VARIES	VARIES	APL	APL	
						APL	APL	

VOLLMER RV STORAGE
POND DETAILS
SHEET 10 OF 13
JOB NO. 25251.00

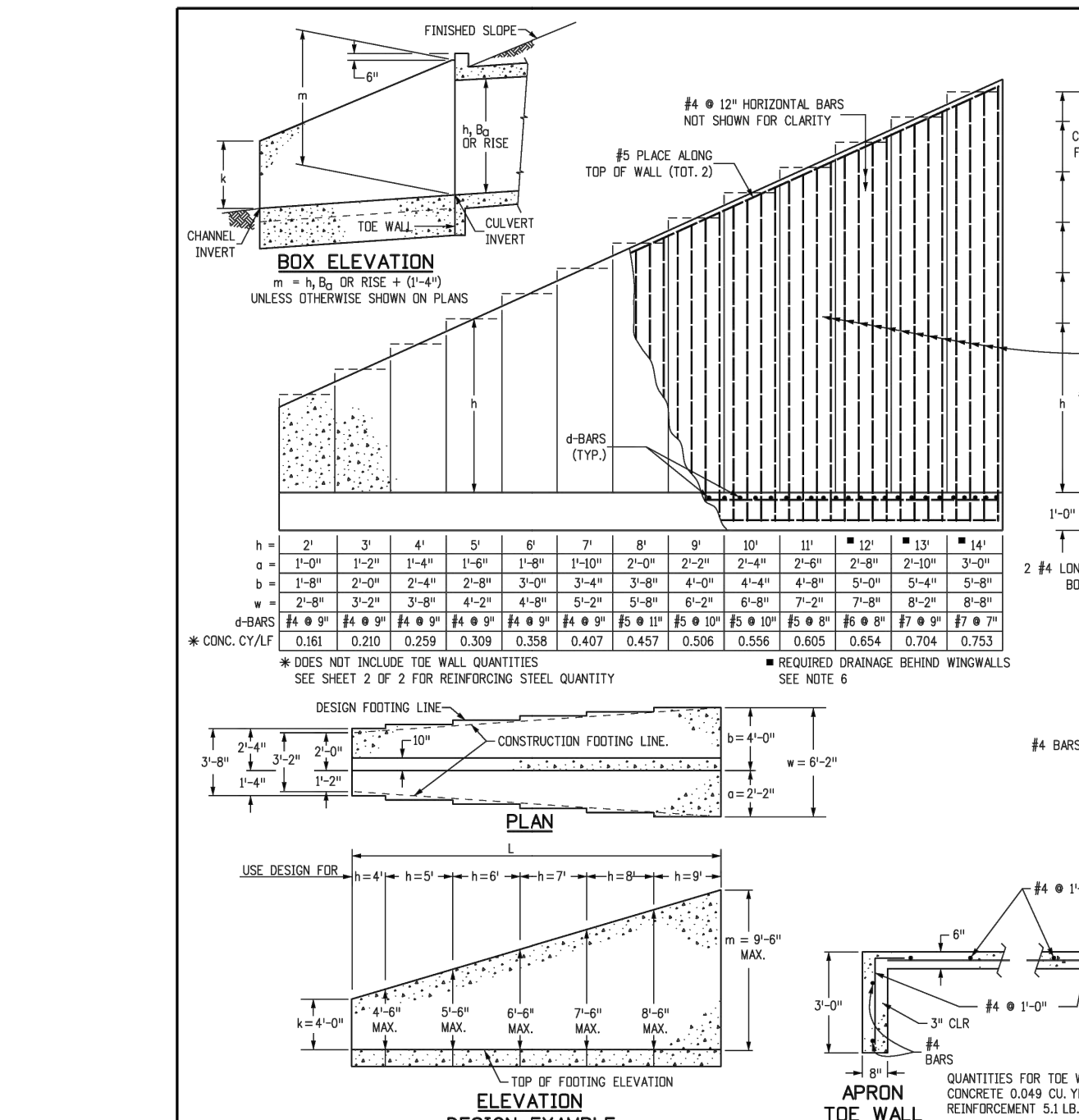


GENERAL NOTES

- CONCRETE SHALL BE PERPENDICULAR TO THE PIPE & UNLESS OTHERWISE SHOWN ON THE PLANS, TABULATED DIMENSIONS AND QUANTITIES MUST BE ADJUSTED FOR SKEWED INSTALLATIONS.
- FOR WINGWALL DETAILS, SEE STANDARD PLAN M-601-20.
- VOLUME OCCUPIED BY PIPE HAS BEEN DEDUCTED FROM STEEL AND CONCRETE QUANTITIES.
- EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 1/4" IN.
- ALL REINFORCING BARS SHALL HAVE A 2" MINIMUM CLEARANCE.
- WHEN TWO OR MORE PIPES ARE LINED SIDE BY SIDE, THEY SHALL BE PLACED SO THAT THE ADJACENT PIPES WILL BE 1/2" INSIDE DIAMETER APART OR 1" INSIDE SPAN BARS OR 3" FT. APART INCLUDING WALL THICKNESS, WHICHEVER IS LESS.
- ADD 0.89 x (X OR Y) (LBS) WHEN APRON IS REQUIRED.

QUANTITIES

CONCRETE	STEEL	
	CONCRETE (CU. YD.)	STEEL (LBS.)
54	8.0	211
55	8.0	211
56	8.0	211
57	8.0	211
58	8.0	211
59	8.0	211
60	8.0	211
61	8.0	211
62	8.0	211
63	8.0	211
64	8.0	211
65	8.0	211
66	8.0	211
67	8.0	211
68	8.0	211
69	8.0	211
70	8.0	211
71	8.0	211
72	8.0	211
73	8.0	211
74	8.0	211
75	8.0	211
76	8.0	211
77	8.0	211
78	8.0	211
79	8.0	211
80	8.0	211
81	8.0	211
82	8.0	211
83	8.0	211
84	8.0	211
85	8.0	211
86	8.0	211
87	8.0	211
88	8.0	211
89	8.0	211
90	8.0	211
91	8.0	211
92	8.0	211
93	8.0	211
94	8.0	211
95	8.0	211
96	8.0	211
97	8.0	211
98	8.0	211
99	8.0	211
100	8.0	211



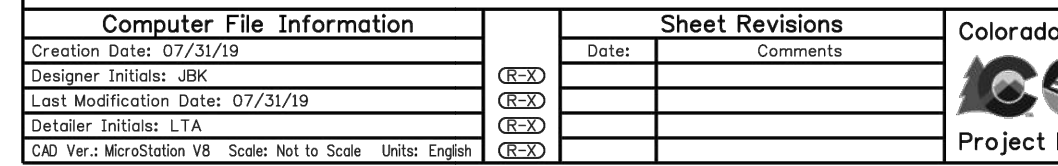
HEADWALL FOR RIGID ROUND PIPE

HEADWALL FOR FLEXIBLE ROUND PIPE

HEADWALL FOR STRUCTURAL PLATE ARCH

QUANTITIES

CONCRETE	STEEL	
	CONCRETE (CU. YD.)	STEEL (LBS.)
66	6.1	4.7
67	6.1	4.7
68	6.1	4.7
69	6.1	4.7
70	6.1	4.7
71	6.1	4.7
72	6.1	4.7
73	6.1	4.7
74	6.1	4.7
75	6.1	4.7
76	6.1	4.7
77	6.1	4.7
78	6.1	4.7
79	6.1	4.7
80	6.1	4.7
81	6.1	4.7
82	6.1	4.7
83	6.1	4.7
84	6.1	4.7
85	6.1	4.7
86	6.1	4.7
87	6.1	4.7
88	6.1	4.7
89	6.1	4.7
90	6.1	4.7
91	6.1	4.7
92	6.1	4.7
93	6.1	4.7
94	6.1	4.7
95	6.1	4.7
96	6.1	4.7
97	6.1	4.7
98	6.1	4.7
99	6.1	4.7
100	6.1	4.7



WINGWALL CONNECTION

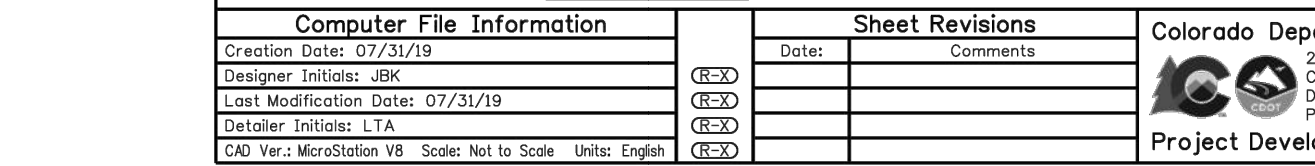
INLET/OUTLET ENDS OF FLEXIBLE PIPE

INLET/OUTLET ENDS OF RIGID PIPE

WHEN APRON IS REQUIRED

SKREW FACTOR TABLE

SKREW ANGLE (°)	90	85	80	75	70	65	60	55	50	45	40	35	30
1.000	1.004	1.015	1.035	1.064	1.103	1.155	1.222	1.305	1.414	1.556	1.743	2.000	



Computer File Information

Sheet Revisions

Colorado Department of Transportation

WINGWALLS FOR PIPE OR BOX CULVERTS

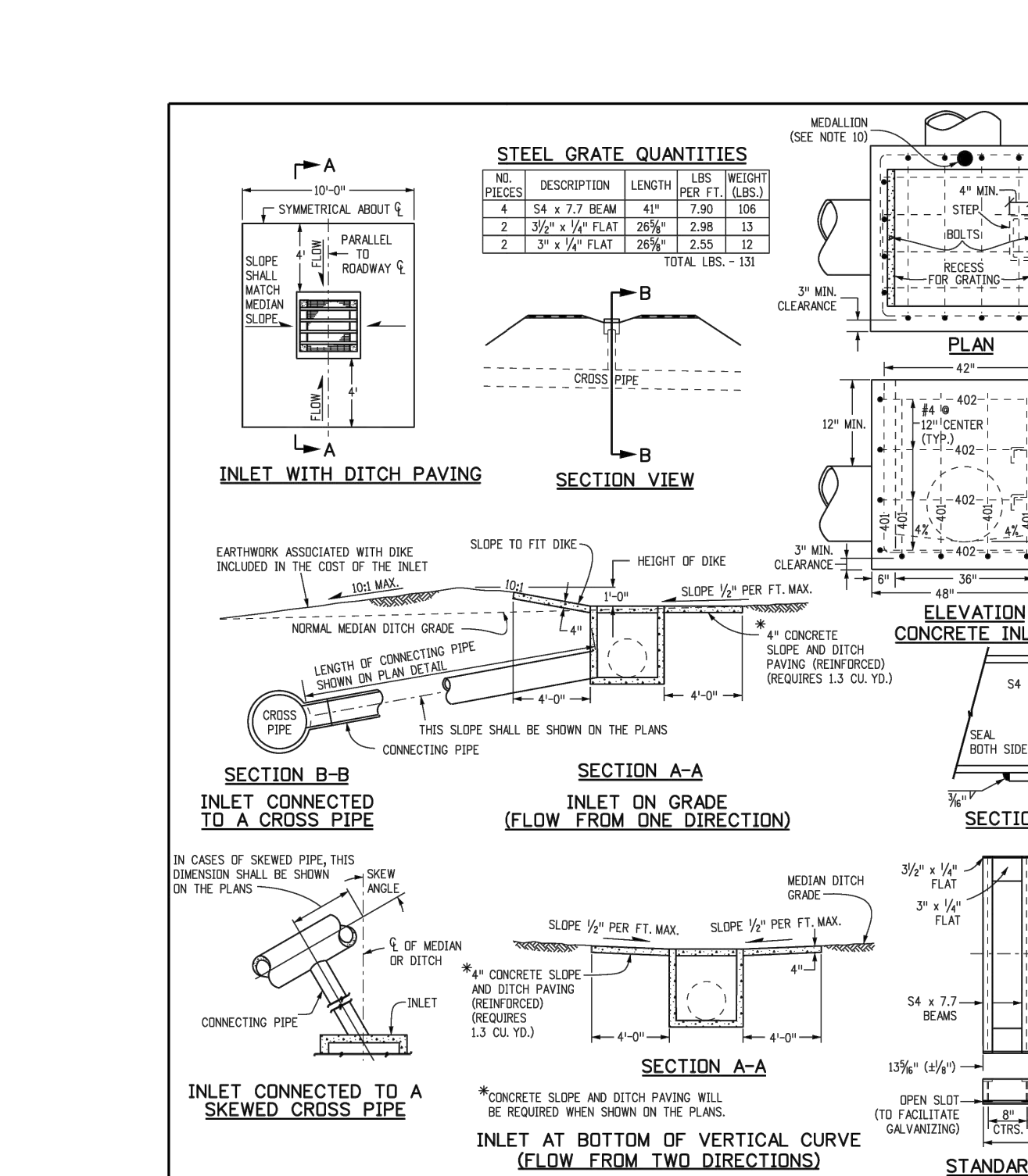
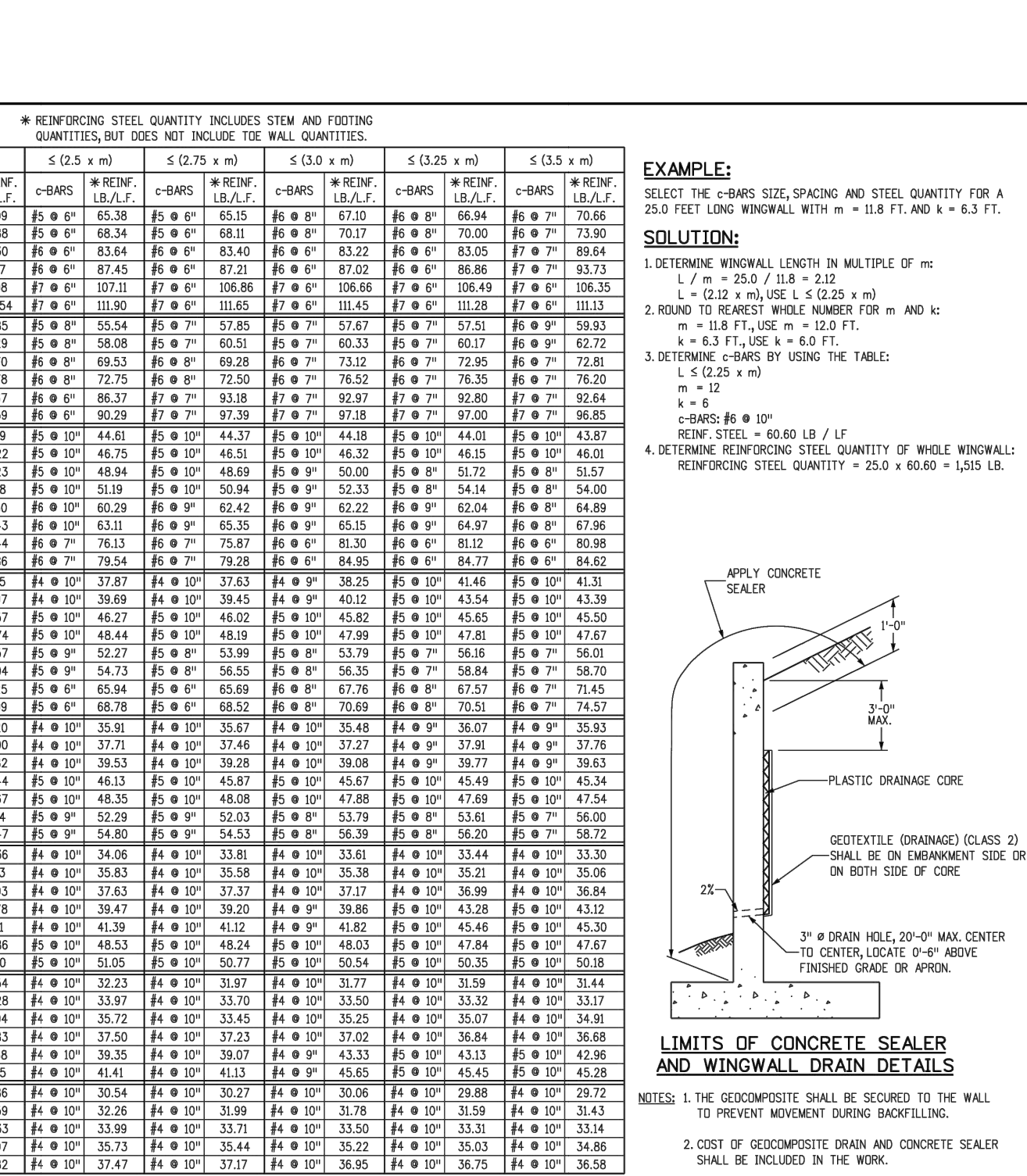
STANDARD PLAN NO. M-601-20

Standard Sheet No. 1 of 2

c-BARS AND REINFORCING STEEL QUANTITY (EXCLUDE THE WALL)

REINFORCING STEEL QUANTITY INCLUDES STEEL AND FITTING QUANTITIES, BUT DOES NOT INCLUDE THE WALL QUANTITIES.

M (MULTIPLE OF) m (FT)	S (0.75 x m)				S (0.25 x m)				S (0.25 x m)				S (0.25 x m)				S (0.25 x m)			
	c-BARS	REINFC	c-BARS	REINFC	c-BARS	REINFC	c-BARS	REINFC	c-BARS	REINFC	c-BARS	REINFC	c-BARS	REINFC	c-BARS	REINFC	c-BARS	REINFC		
14	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
13	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
12	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
11	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
10	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
9	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
8	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
7	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		



Computer File Information

Sheet Revisions

Colorado Department of Transportation

WINGWALLS FOR PIPE OR BOX CULVERTS

STANDARD PLAN NO. M-601-20

Standard Sheet No. 2 of 2

Computer File Information

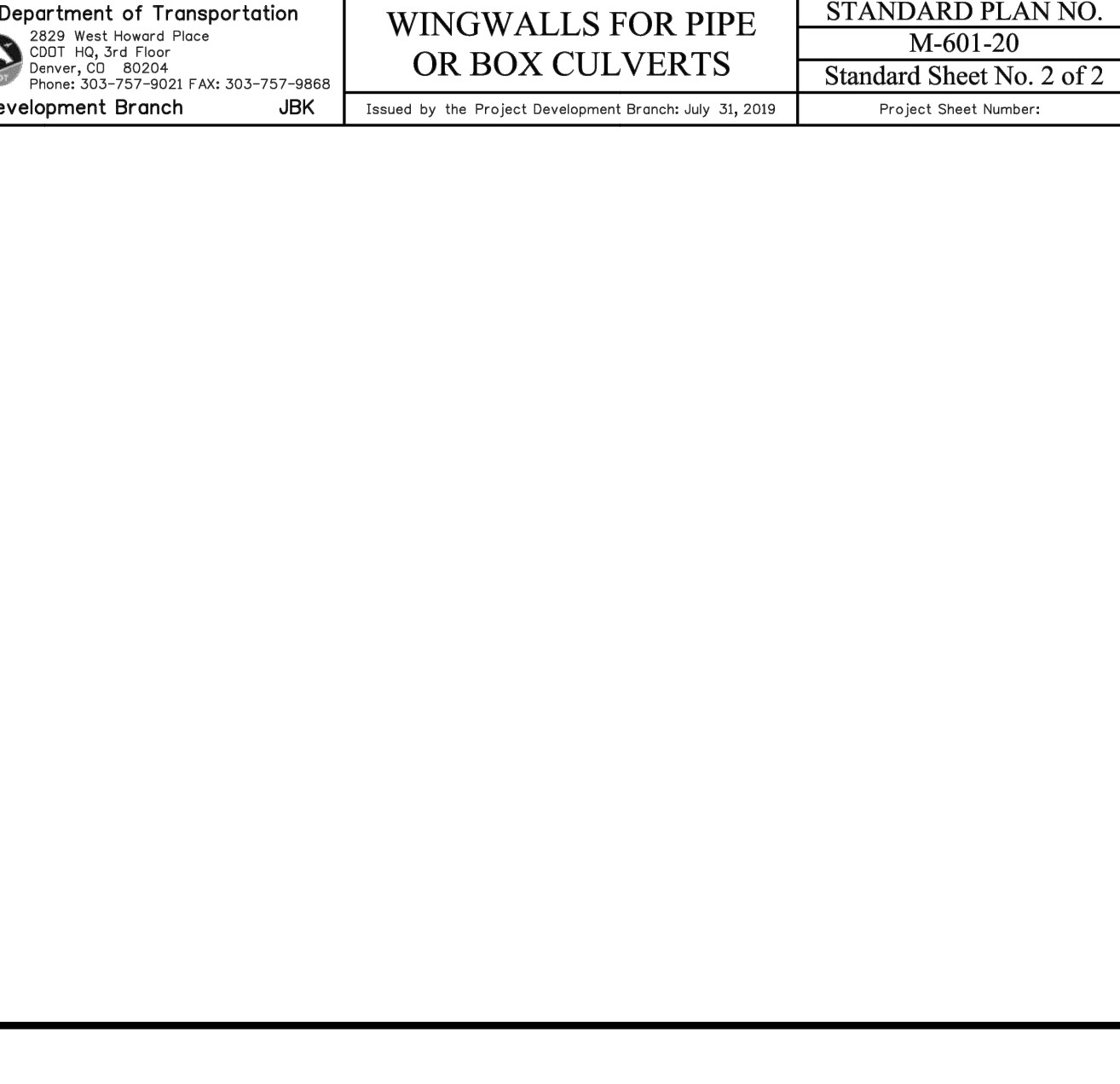
Sheet Revisions

Colorado Department of Transportation

WINGWALLS FOR PIPE OR BOX CULVERTS

STANDARD PLAN NO. M-601-20

Standard Sheet No. 2 of 2



Computer File Information

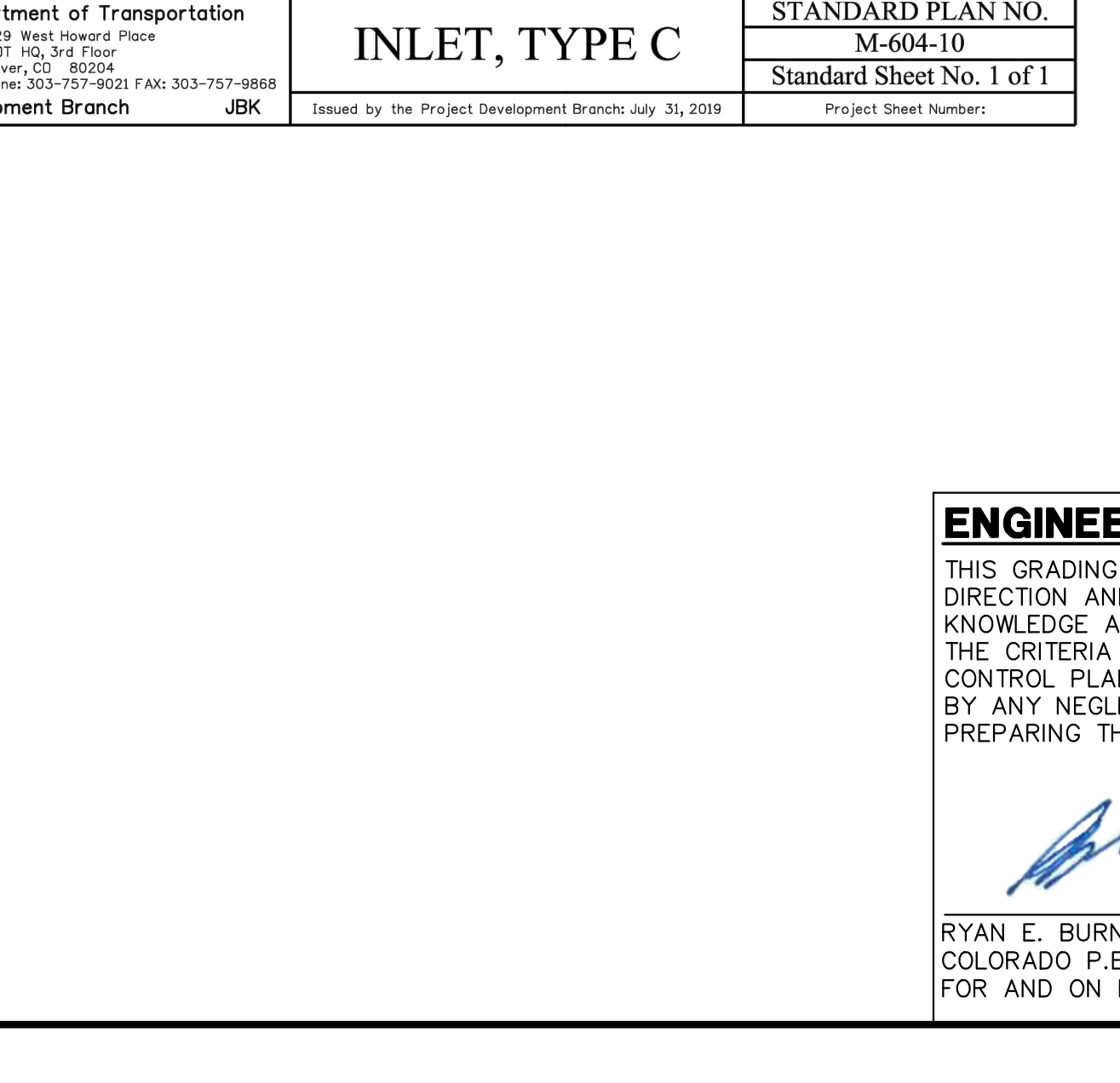
Sheet Revisions

Colorado Department of Transportation

WINGWALLS FOR PIPE OR BOX CULVERTS

STANDARD PLAN NO. M-601-20

Standard Sheet No. 1 of 1

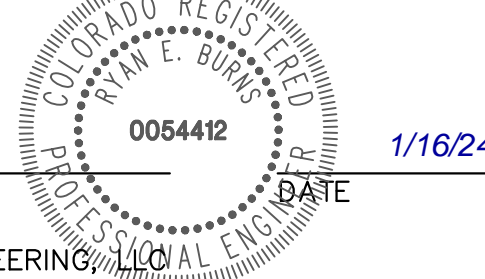


Know what's below. Call before you dig.

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RYAN E. BURNS, P.E.
 COLORADO P.E. 0054412
 FOR AND ON BEHALF OF JR ENGINEERING



PREPARED FOR: BELKNAP VENTURES LLC, 3603 FIRST LIGHT DRIVE, CASTLE ROCK, CO 80109, (719) 322-3556, SCOTT.BELKNAP@YAHOO.COM, ATTN: SCOTT BELKNAP

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

J.R. ENGINEERING, A Westman Company, Centennial 303-740-9888, Colorado Springs 719-588-2583, Fort Collins 970-491-9888, www.jrengineering.com

BY DATE: [Signature] [Date]

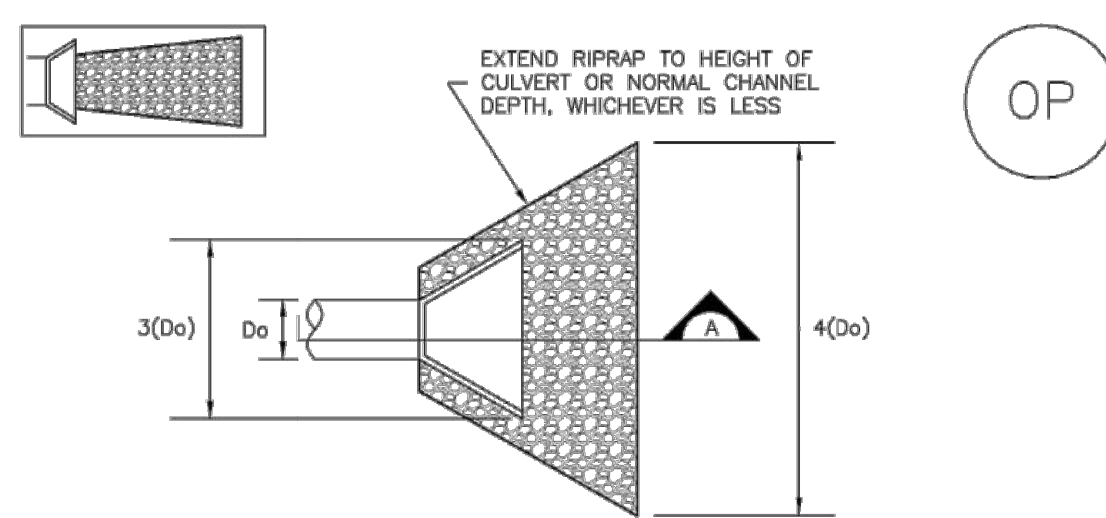
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VARIABLES: [Table]

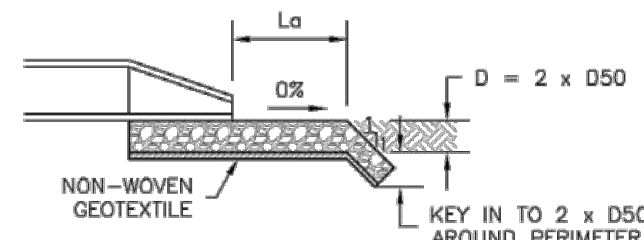
DESIGNED BY: APL, DRAWN BY: APL, CHECKED BY: [Signature]

VOLUME: RV STORAGE, POND DETAILS, SHEET 11 OF 13, JOB NO. 25251.00

EC-8 Temporary Outlet Protection (TOP)



TEMPORARY OUTLET PROTECTION PLAN



SECTION A

PIPE DIAMETER, D _o (INCHES)	DISCHARGE, Q (CFS)	APRON LENGTH, L _a (FT)	RIPRAP D50 MIN (INCHES)
8	2.5 5	5 10	4 6
12	5 10	10 13	4 6
18	10 20 30	10 16 22	6 9 12
24	40 50 60	16 26 30	9 12 16

OP-1. TEMPORARY OUTLET PROTECTION

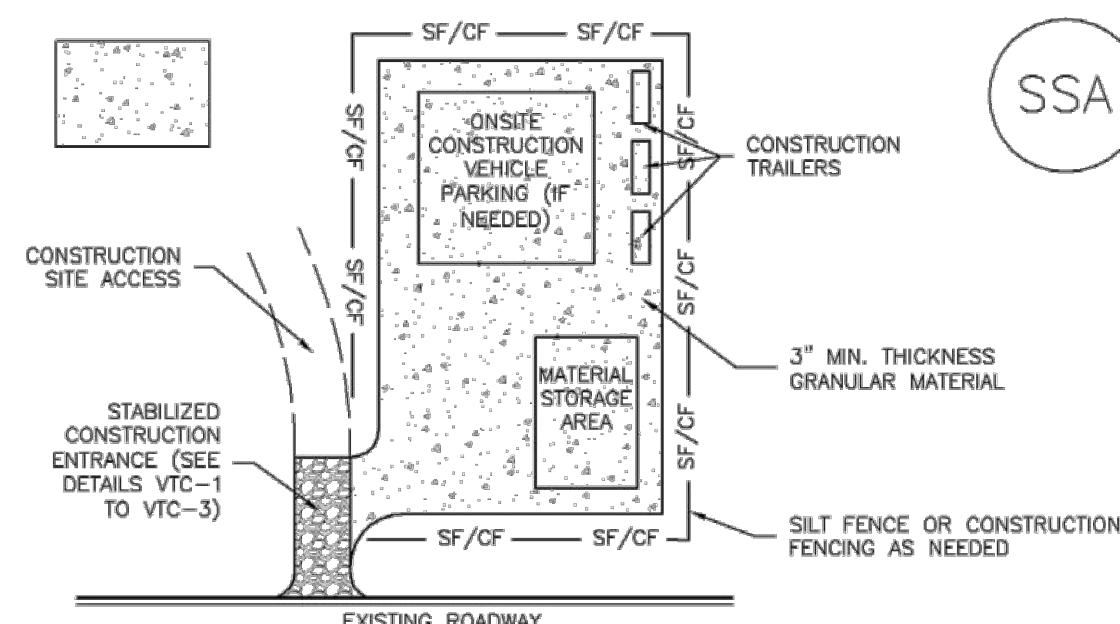
TOP-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Temporary Outlet Protection (TOP) EC-8

- TEMPORARY OUTLET PROTECTION INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION OF OUTLET PROTECTION.
 - DIMENSIONS OF OUTLET PROTECTION.
 - DETAIL IS INTENDED FOR PIPES WITH SLOPE $\leq 10\%$. ADDITIONAL EVALUATION OF RIPRAP SIZING AND OUTLET PROTECTION DIMENSIONS REQUIRED FOR STEEPER SLOPES.
 - TEMPORARY OUTLET PROTECTION INFORMATION IS FOR OUTLETS INTENDED TO BE UTILIZED LESS THAN 2 YEARS.
- TEMPORARY OUTLET PROTECTION INSPECTION AND MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- NOTE:** MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM AURORA, COLORADO AND PREVIOUS VERSION OF VOLUME 3, NOT AVAILABLE IN AUTOCAD)

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 TOP-3

Stabilized Staging Area (SSA) SM-6



SSA-1. STABILIZED STAGING AREA

- STABILIZED STAGING AREA INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION OF STAGING AREA(S).
 - CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
 - STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
 - STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
 - THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
 - UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
 - ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.
- STABILIZED STAGING AREA MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

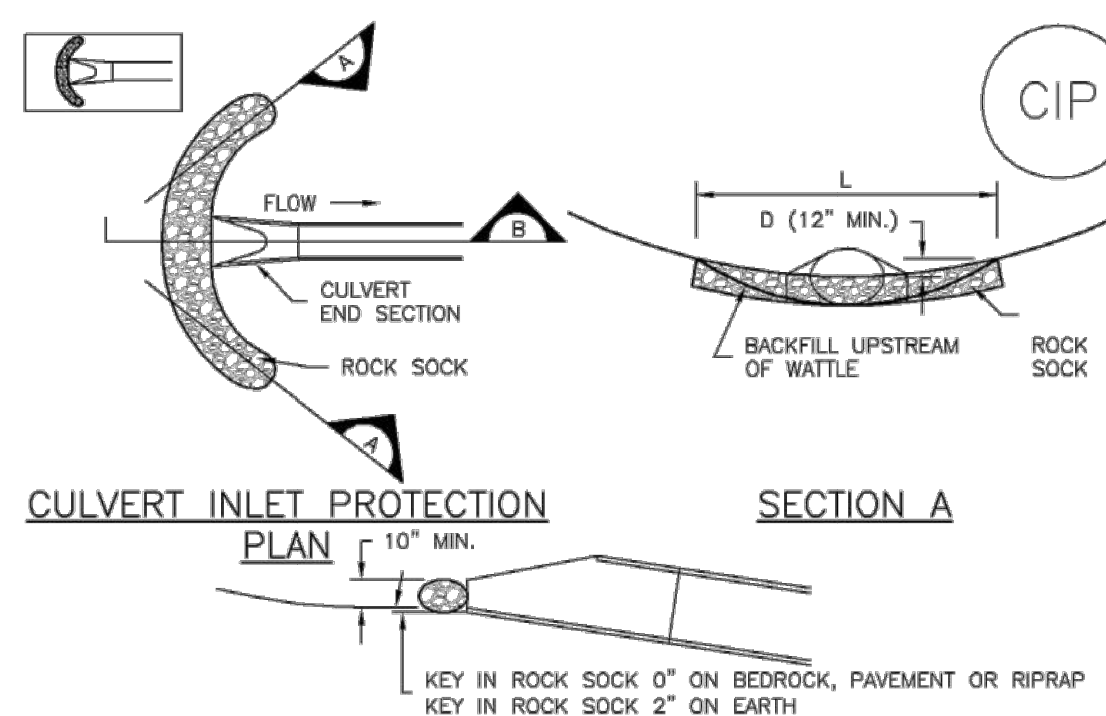
November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SSA-3

SM-6 Stabilized Staging Area (SSA)

- STABILIZED STAGING AREA MAINTENANCE NOTES**
- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
 - 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 COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.
- NOTE:** MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.
- NOTE:** MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

SSA-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Inlet Protection (IP) SC-6



CIP-1. CULVERT INLET PROTECTION

- CULVERT INLET PROTECTION INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION OF CULVERT INLET PROTECTION.
 - SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING DETAIL.
- CULVERT INLET PROTECTION MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS $\frac{1}{2}$ THE HEIGHT OF THE ROCK SOCK.
 - CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE:** MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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SC-6 Inlet Protection (IP)

- GENERAL INLET PROTECTION INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION OF INLET PROTECTION.
 - TYPE OF INLET PROTECTION (IP.1, IP.2, IP.3, IP.4, IP.5, IP.6)
 - INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.
 - MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- INLET PROTECTION MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS. TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR $\frac{1}{4}$ OF THE HEIGHT FOR STRAW BALES.
 - INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
 - WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
- (DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE:** MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- NOTE:** THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.
- NOTE:** SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.

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UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
BELKNAP VENTURES LLC
 3603 FIRST LIGHT DRIVE
 CASTLE ROCK, CO 80109
 (719) 322-3556
 SCOTT.BELKNAP@TAHOOC.COM
 ATTN: SCOTT BELKNAP

J.R. ENGINEERING
 A Westman Company
 Centennial 303-740-9888 • Colorado Springs 719-588-2583
 Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	NO.	REVISION

H-SCALE	N/A	V-SCALE	N/A	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
				01/15/24	APL	APL	

VOLLMER RV STORAGE
 GEC DETAILS



ENGINEER'S STATEMENT
 STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

[Signature]
 RYAN E. BURNS, P.E.
 COLORADO P.E. 0054412
 FOR AND ON BEHALF OF JR ENGINEERING

0054412
 1/16/24

SHEET 13 OF 13
 JOB NO. 25251.00

APPENDIX D – SWMP CHECKLIST



3275 Akers Drive
 Colorado Springs, CO 80922
 Phone 719-520-6460
 Fax 719-520-6879
 www.elpasoco.com

EL PASO COUNTY STORMWATER MANAGEMENT PLAN CHECKLIST

EPC Project Number: PPR-2245

Revised: October 2021

		Applicant	EPC
1. STORMWATER MANAGEMENT PLAN (in the "Applicant" column specify the page number for each item)			
1	Applicant (owner/designated operator), SWMP Preparer, Qualified Stormwater Manager, and Contractor Information. (On cover/title sheet)		
2	Table of Contents		
3	Site description and location to include: vicinity map with nearest street/crossroads description		
4	Narrative description of construction activities proposed (e.g., may include clearing and grubbing, temporary stabilization, road grading, utility / storm installation, final grading, final stabilization, and removal of temporary control measures)		
5	Phasing plan – may require separate drawings indicating initial, interim, and final site phases for larger projects. Provide "living maps" that can be revised in the field as conditions dictate		
6	Proposed sequence for major activities: Provide a construction schedule of anticipated starting and completion dates for each stage of land-disturbing activity depicting conservation measures anticipated, including the expected date on which the final stabilization will be completed		
7	Estimates of the total site area and area to undergo disturbance; current area of disturbance must be updated on the SWMP as changes occur		
8	Soil erosion potential and impacts on discharge that includes a summary of the data used to determine soil erosion potential		
9	A description of existing vegetation at the site and percent ground cover and method used to determine ground cover		
10	Location and description of all potential pollution sources including but not limited to: disturbed and stored soils; vehicle tracking; management of contaminated soils; loading and unloading operations; outdoor storage of materials; vehicle and equipment maintenance and fueling; significant dust generating process; routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc.; on-site waste management; concrete truck/equipment washing; dedicated asphalt, concrete batch plants and masonry mixing stations; non-industrial waste such as trash and portable toilets		
11	Material handling to include spill prevention and response plan and procedures		
12	Spill prevention and pollution controls for dedicated batch plants		
13	Other SW pollutant control measures to include waste disposal and off-site soil tracking		
14	Location and description of any anticipated allowable non-stormwater discharge (ground water, springs, irrigation, discharge covered by CDPHE Low Risk Guidance, etc.)		
15	Name(s) of ultimate receiving waters; size, type and location of stormwater outfall or storm sewer system discharge		
16	Description of all stream crossings located within the project area or statement that no streams cross the project area		



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EL PASO COUNTY STORMWATER MANAGEMENT PLAN CHECKLIST

EPC Project Number:

Revised: October 2021

		Applicant	EPC
17	SWMP Map to include:		
17a	construction site boundaries		
17b	flow arrows to depict stormwater flow directions		
17c	all areas of disturbance		
17d	areas of cut and fill		
17e	areas used for storage of building materials, soils (stockpiles) or wastes		
17f	location of any dedicated asphalt / concrete batch plants		
17g	location of all structural control measures		
17h	location of all non-structural control measures		
17i	springs, streams, wetlands and other surface waters, including areas that require maintenance of pre-existing vegetation within 50 feet of a receiving water		
18	Narrative description of all structural control measures to be used. Modifications to EPC standard control measures must meet or exceed County-approved details		
19	Description of all non-structural control measures to be used including seeding, mulching, protection of existing vegetation, site watering, sod placement, etc.		
20	Technical drawing details for all control measure installation and maintenance; custom or other jurisdiction's details used must meet or exceed EPC standards		
21	Procedure describing how the SWMP is to be revised		
22	Description of Final Stabilization and Long-term Stormwater Quality (describe nonstructural and structural measures to control SW pollutants after construction operations have been completed, including detention, water quality control measure etc.)		
23	Specification that final vegetative cover density is to be 70% of pre-disturbed levels		
24	Outline of permit holder inspection procedures to install, maintain, and effectively operate control measures to manage erosion and sediment		
25	Record keeping procedures identified to include signature on inspection logs and location of SWMP records on-site		
26	If this project relies on control measures owned or operated by another entity, a documented agreement must be included in the SWMP that identifies location, installation and design specifications, and maintenance requirements and responsibility of the control measure(s)		
Please note: all items above must be addressed. If not applicable, explain why, simply identifying "not applicable" will not satisfy CDPHE requirement of explanation.			
2. ADDITIONAL REPORTS/PERMITS/DOCUMENTS			
a	Grading and Erosion Control Plan (signed)		
b	Erosion and Stormwater Quality Control Permit (ESQCP) (signed)		



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EL PASO COUNTY STORMWATER MANAGEMENT PLAN CHECKLIST

EPC Project Number:

Revised: October 2021

		Applicant	EPC
3. APPLICANT COMMENTS			
a			
b			
c			
4. CHECKLIST REVIEW CERTIFICATIONS			
a	<p>Applicant: The Stormwater Management Plan was prepared under my direction and supervision and is correct to the best of my knowledge and belief. Said Plan has been prepared according to the criteria established by the County and State for Stormwater Management Plans.</p> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 10px;"> <div style="text-align: center;"> _____ Engineer of Record and/or Qualified Stormwater Manager Signature </div> <div style="text-align: center;"> 05/09/2023 _____ Date </div> </div>		
b	<p>Review Engineer: The Stormwater Management Plan was reviewed and found to meet the checklist requirements except where otherwise noted or allowed by an approved deviation request.</p> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 10px;"> <div style="text-align: center;"> _____ Review Engineer </div> <div style="text-align: center;"> _____ Date </div> </div>		

APPENDIX E – STORMWATER INSPECTION FORM

CONSTRUCTION STORMWATER SITE INSPECTION REPORT

Facility Name		Permittee					
Date of Inspection		Weather Conditions					
Permit Certification #		Disturbed Acreage					
Phase of Construction		Inspector Title					
Inspector Name							
Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	YES	NO	<input type="checkbox"/>	<input type="checkbox"/>
YES	NO						
<input type="checkbox"/>	<input type="checkbox"/>						

INSPECTION FREQUENCY					
Check the box that describes the minimum inspection frequency utilized when conducting each inspection					
At least one inspection every 7 calendar days	<input type="checkbox"/>				
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	<input type="checkbox"/>				
<ul style="list-style-type: none"> • This is this a post-storm event inspection. Event Date: _____ 	<input type="checkbox"/>				
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	<input type="checkbox"/>				
<ul style="list-style-type: none"> • Post-storm inspections at temporarily idle sites 	<input type="checkbox"/>				
<ul style="list-style-type: none"> • Inspections at completed sites/area 	<input type="checkbox"/>				
<ul style="list-style-type: none"> • Winter conditions exclusion 	<input type="checkbox"/>				
Have there been any deviations from the minimum inspection schedule? If yes, describe below.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	YES	NO	<input type="checkbox"/>	<input type="checkbox"/>
YES	NO				
<input type="checkbox"/>	<input type="checkbox"/>				

INSPECTION REQUIREMENTS*
i. Visually verify all implemented control measures are in effective operational condition and are working as designed in the specifications
ii. Determine if there are new potential sources of pollutants
iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges
iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action
*Use the attached Control Measures Requiring Routine Maintenance and Inadequate Control Measures Requiring Corrective Action forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED			
Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?			
	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions Inadequate Control Measures Requiring Corrective Action form
Construction site perimeter	<input type="checkbox"/>	<input type="checkbox"/>	
All disturbed areas	<input type="checkbox"/>	<input type="checkbox"/>	
Designated haul routes	<input type="checkbox"/>	<input type="checkbox"/>	
Material and waste storage areas exposed to precipitation	<input type="checkbox"/>	<input type="checkbox"/>	
Locations where stormwater has the potential to discharge offsite	<input type="checkbox"/>	<input type="checkbox"/>	
Locations where vehicles exit the site	<input type="checkbox"/>	<input type="checkbox"/>	
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	

REPORTING REQUIREMENTS

The permittee shall report the following circumstances orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall mail to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances. The division may waive the written report required if the oral report has been received within 24 hours.

All Noncompliance Requiring 24-Hour Notification per Part II.L.6 of the Permit		
a. Endangerment to Health or the Environment Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.6.a of the Permit) <i>This category would primarily result from the discharge of pollutants in violation of the permit</i>		
b. Numeric Effluent Limit Violations <ul style="list-style-type: none"> o Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.b of the Permit) o Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.c of the Permit) o Daily maximum violations (See Part II.L.6.d of the Permit) <i>Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.</i>		

Has there been an incident of noncompliance requiring 24-hour notification?	NO	YES	
	<input type="checkbox"/>	<input type="checkbox"/>	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Oral Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

After adequate corrective action(s) and maintenance have been taken, or where a report does not identify any incidents requiring corrective action or maintenance, the individual(s) designated as the Qualified Stormwater Manager, shall sign and certify the below statement:

"I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit."

Name of Qualified Stormwater Manager

Title of Qualified Stormwater Manager

Signature of Qualified Stormwater Manager

Date

Notes/Comments