

MEMORANDUM

DATE: March 6, 2018

TO: Kari Parsons, PCD-Project Manager

FROM: Jeff Rice, PCD-Engineering

SUBJECT: CDR-18-003 – Lorson East – Fontaine Blvd.
First Submittal

General

1. Note: This review is for the purposes of Fontaine Blvd. and Lamprey Drive north as a standalone construction plan.
 - a. Details in the drainage report not specific to these construction drawings were reviewed as informational for the purpose of overall drainage system sizing and function only. The drainage report will be reviewed in its entirety with the Lorson Ranch East Filing No. 1 submittal. *RE: noted*
 - b. Design and construction of the detention/water quality basin(s) serving these roads needs to be completed prior to paving of these roads in accordance with private detention basin/BMP agreements. *RE: noted. We intend to construct all roads at the same time. We just need to get the water/storm in for the VA*
 - c. Deeding of the rights-of-way, as well as an as-built survey (showing property lines, easements and improvements) need to occur prior to County acceptance of the roads if requested prior to platting of Lorson Ranch East Filing No. 1. *RE: roads to be platted in first plat for Lorson Ranch East.*
 - d. Collateral will be covered under the Lorson East early grading permit until the time of platting or request for preliminary acceptance of the improvements in these plans and acceptance of deed(s) conveying the rights-of-way. *RE: noted*
2. Note: The portions of existing and proposed easements (utility, access, etc.) that overlap proposed/future public road rights-of-way, if any, need to be vacated/terminated prior to platting and County acceptance of the proposed roads. Address this situation specifically in the letter of intent. *RE: noted*

Transportation / Roundabout Design Report

1. Provide Rodel analysis with updated width values from CDs and Phi entry angle revisions. *RE: updated*
2. See report redlines. See CD redlines and comments regarding associated issues. Additional comments may be generated based on the extent of revisions required.

Final Drainage Report / Drainage Plans

1. Address the 4-Step process described in ECM Section I.7.2.A/DCM2 Section 4.1. *RE: 4 step process included.*
2. The following items are informational for this review but will be needed with the Lorson Ranch East Filing 1 Final Drainage Report:
 - a. Provide inlet ponding depths (available depth vs. calculated) with an inundation exhibit for all of the inlets on Clarion Drive. *RE: flow rates at inlets updated. Inlet*

capacity is due to downstream HGL elevations which don't allow inlet to capture more runoff. The runoff not captured flows west to an inlet at a low point in Lamine.

- b. Provide entrance headwater calculations for the upstream pipe stubs that will not be plugged and are intended to capture offsite flows. *RE: headwater calculated for three pipes.*
3. See electronic redlines for additional comments and further minor revisions.

Construction Plans / Geotechnical Issues

1. The east side of the Fontaine/Stingray/Old Glory intersection needs to be adjusted to add a through-lane split further east, then the turn lane splits where shown (see redlines). *RE: lane added*
2. Note: Review of the roundabout and signing/stripping plans will also be referred to EPC DPW Traffic Staff on the next submittal. *RE: noted*
3. The 18-inch water line crossing at the east end of Fontaine appears to be too close to the proposed storm drain; verify whether or not revisions to the water line or storm drain pipe are necessary. *RE: that crossing is a WWSD design. Notes put on plan*
4. Note: The Wisconsin DOT Facilities Development Manual (FDM), FDM 11-26 section is referenced where County criteria and the NCHRP Report 672 (Roundabouts: An Informational Guide) are lacking in detailed criteria. Roundabout design procedures and criteria in the FDM, including design procedures, details, signing and striping recommendations and lines of sight, should be utilized to the extent practicable. <http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/design.aspx>
Regarding roundabout lighting, reference <http://wisconsindot.gov/Pages/doing-bus/local-gov/traffic-ops/manuals-and-standards/tgm/11.aspx> / <http://wisconsindot.gov/dtsdManuals/traffic-ops/manuals-and-standards/teops/11-04.pdf> for guidance. Please discuss any conflicting or redundant criteria with Staff. *RE: report updated. Lighting is done by MVEA*
5. Revise the roundabout entry angles, which should be between 20° and 30°, as appropriate. *RE: entry angles recalculated*
6. See electronic redlines for additional comments and further revisions. *RE: noted*

Grading and Erosion Control Plan / SWMP

1. Note; the previously approved Early Grading GEC Plan was submitted; any revisions to the SWMP may be handled in the field. As submitted, this project will be under the same ESQCP permit and GEC collateral as the early grading project. *RE: noted*

Forms/FAE/Other

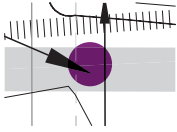
1. Note: a detailed review of the FAE will be provided with the next submittal. *RE: noted*
2. Provide as-built drawings line, to include plans, road survey and pond certifications. *RE: added*
3. Note: A private detention basin/BMP agreement will be required with the first of either preliminary acceptance of these roads or approval of the Filing 1 plat. *RE: noted*


Attachments/Electronic Files

1. Roundabout Report Redlines
2. Final Drainage Report Redlines
3. CD Redlines
4. FAE Redlines
5. Engineering Final Submittal Checklist

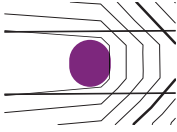
Markup Summary

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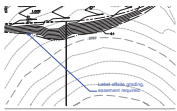
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12 (2)




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Label offsite grading, easement required.

we will get a letter
from wsd 3 for entire
site



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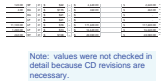
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Note: values were not checked in detail because CD revisions are necessary.

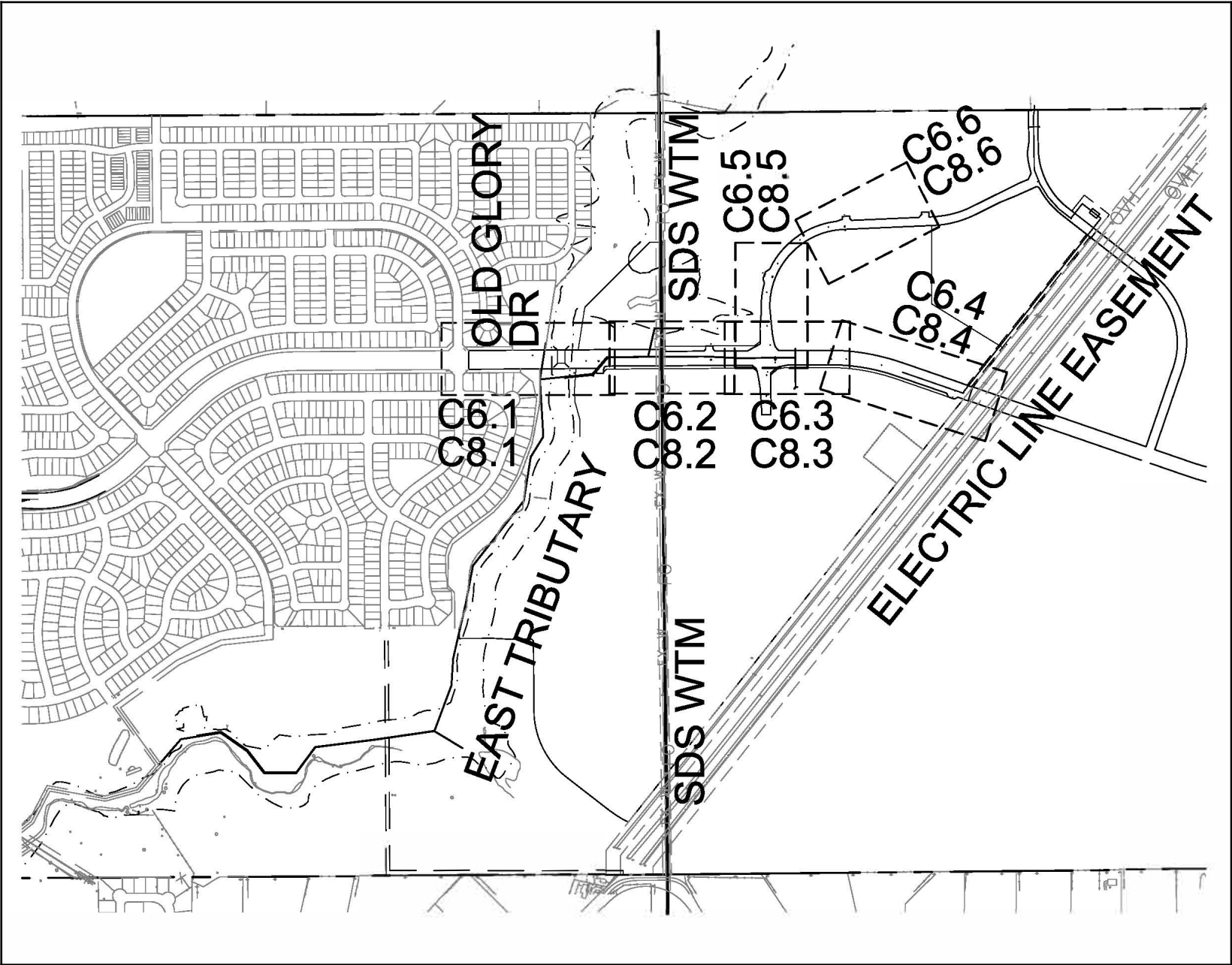


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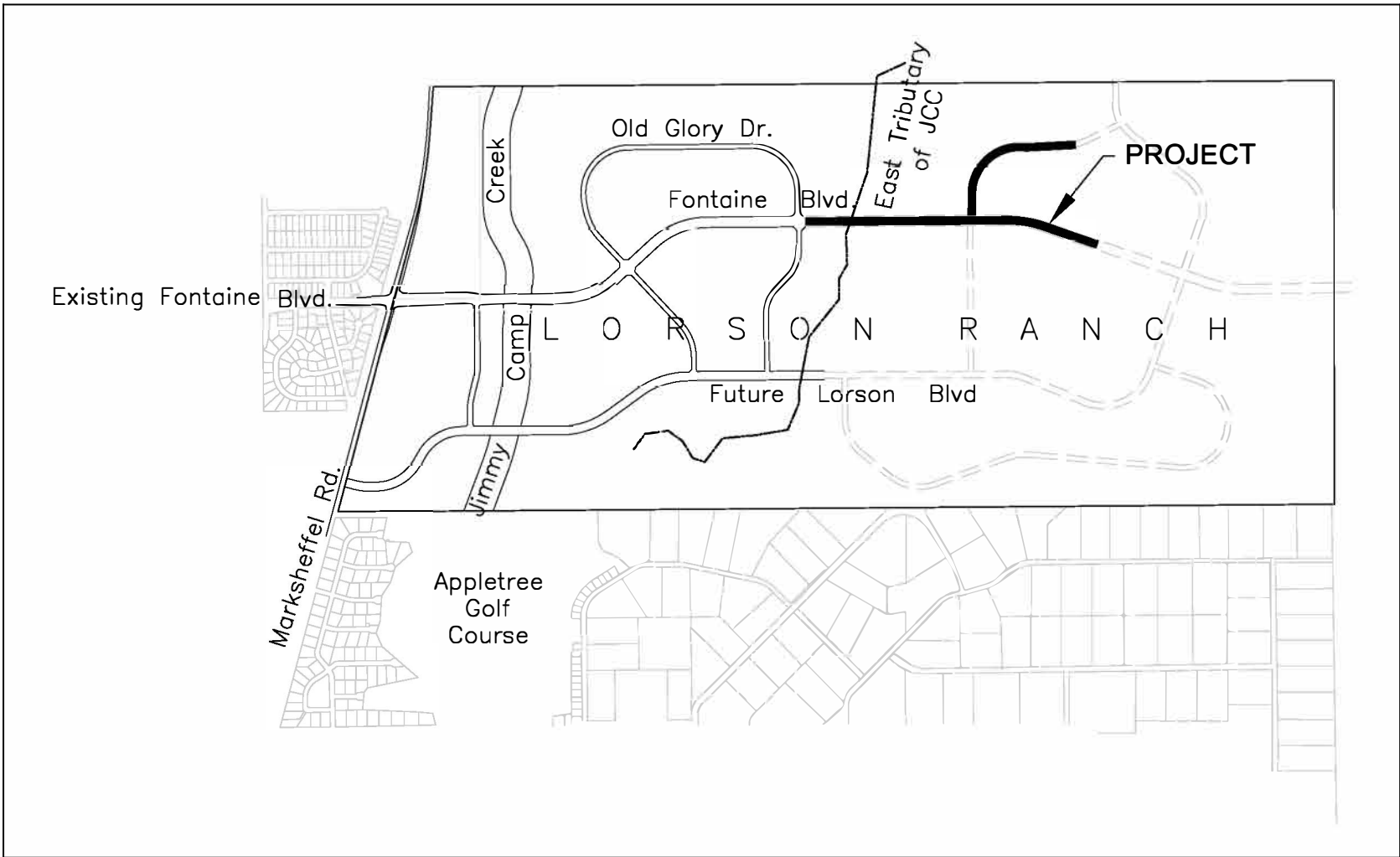
Reference Lorson Ranch East EGP ESQCP number.

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CONSTRUCTION PLANS
FOR
FONTAINE BOULEVARD & LAMPREY DRIVE
WITHIN LORSON RANCH EAST
STREET, STORM SEWER,
AND WATERMAIN CONSTRUCTION PLANS



KEY MAP
SCALE: 1"=1000'



VICINITY MAP
NO SCALE

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE., SUITE 301
COLORADO SPRINGS, CO 80903
719-635-3200
CONTACT: JEFF MARK

PREPARED BY:
CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
719-570-1100
CONTACT: RICHARD L. SCHINDLER P.E.

WATER / SANITARY
WIDEFIELD WATER AND SANITATION
DISTRICT
8495 FONTAINE BLVD.
COLORADO SPRINGS, CO 80925
719-390-7111

CABLE
COMCAST
P.O. BOX 173838
DENVER, CO 80217
970-641-4774

ELECTRIC
MOUNTAIN VIEW ELECTRIC
11140 E. WOODMEN RD.
COLORADO SPRINGS, CO 80831
719-495-2283

**SECURITY FIRE PROTECTION
DISTRICT**
400 SECURITY BOULEVARD
SECURITY, CO 80911
719-392-7121

TELEPHONE
CENTURYLINK
7925 INDUSTRY ROAD
COLORADO SPRINGS, CO 80939
719-278-4651

GAS
BLACK HILLS ENERGY
7060 ALLEGRE ST.
FOUNTAIN, CO 80817
719-393-6639

EL PASO COUNTY
PLANNING AND COMMUNITY
DEVELOPMENT
2880 INTERNATIONAL CIRCLE
COLORADO SPRINGS, CO 80910
719-520-6300

BASIS OF BEARING

BEARINGS ARE BASED ON THE SOUTH LINE OF THE NORTH HALF OF SECTION 23, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN AS BEING SOUTH 89°41'52" WEST. THE EAST QUARTER CORNER OF SAID SECTION 23 IS A FOUND 3-1/2" ALUMINUM CAP MONUMENT AND THE WEST QUARTER CORNER OF SAID SECTION 23 IS A FOUND 2-1/2" ALUMINUM CAP MONUMENT

BENCHMARK

FIMS MONUMENT F204 LOCATED AT THE NORTHWEST CORNER OF FONTAINE BLVD AND COTTONWOOD GROVE DR. ELEVATION 5724.072 (N.G.V.D. 09)

TRAFFIC CONTROL NOTE

THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL DEVICES AND MONITORING NECESSARY TO SAFELY COMPLETE THE WORK SHOWN IN THESE CONSTRUCTION DOCUMENTS IN CONFORMANCE WITH M.U.T.C.D. GUIDELINES. THE CONTRACTOR SHALL COMPLETE ALL NECESSARY WORK FOR PLAN REVIEW, PERMITS AND PROCESSING. TRAFFIC CONTROL WILL NOT BE PAID SEPARATELY BUT IS INCLUDED IN THE COST OF THE PROJECT.

DISTRICT APPROVAL (WATER)

THE WIDEFIELD WATER AND SANITATION DISTRICT RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN. THE WIDEFIELD WATER AND SANITATION DISTRICT HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

WIDEFIELD WATER AND SANITATION DISTRICT
WATER DESIGN APPROVAL

DATE _____ BY _____

PROJECT NO. _____

IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT THE STANDARDS AS DEFINED IN THE "RULES AND REGULATIONS FOR INSTALLATION OF WATER MAINS AND SERVICES" SHALL RULE.

APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL

DISTRICT APPROVAL (WASTEWATER)

THE WIDEFIELD WATER AND SANITATION DISTRICT RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN. THE WIDEFIELD WATER AND SANITATION DISTRICT HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

WIDEFIELD WATER AND SANITATION DISTRICT
WASTEWATER DESIGN APPROVAL

DATE _____ BY _____

PROJECT NO. _____

IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT THE STANDARDS AS DEFINED IN THE "RULES AND REGULATIONS FOR INSTALLATION OF WATER MAINS AND SERVICES" SHALL RULE.

APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL



Know what's below.
Call before you dig.

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

SHEET INDEX	
SHEET NO.	SHEET DESCRIPTION
C1.1	COVER SHEET
C1.2	NOTES
C1.3	TYPICAL STREET SECTIONS
C2.1	HORIZONTAL CONTROL PLAN
C5.1-C5.3	SIGNING AND STRIPING PLAN
C6.1-C6.9	STREET/STORM PLAN AND PROFILE
C7.1	STORM SEWER LATERAL CONSTRUCTION
C8.1-C8.9	WATERMAIN CONSTRUCTION
C9.1-C9.3	ROUNDBABOUT CONSTRUCTION
C10.1-C10.3	STREET/STORM DETAILS
S1	STRUCTURAL DETAILS
C12.1	WATERMAIN DETAILS

DEVELOPER'S STATEMENT

THE UNDERSIGNED OWNER/DEVELOPER HAS READ AND WILL COMPLY WITH ALL THE REQUIREMENTS SPECIFIED IN THESE CONSTRUCTION PLANS AND THE ACCOMPANYING DRAINAGE REPORT.

BUSINESS NAME LORSON, LLC

BY _____ DATE _____

TITLE _____

ADDRESS 212 N. WAHSATCH AVE. SUITE 301
COLORADO SPRINGS, CO 80903

**COLORADO SPRINGS UTILITIES
WATER PLAN DESIGN APPROVAL**

APPROVED BY: _____

DATE: _____

PROJECT NUMBER: 2017--

WORK ORDER NUMBER:

CSU SHEET ____ OF ____

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

CONSTRUCTION APPROVAL

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 MANUALS VOLUME 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED. CONSTRUCTION DOCUMENTS WILL BE VALID FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER.

JENNIFER IRVINE, COUNTY ENGINEER/ECM ADMINISTRATOR DATE
CONDITIONS:

ENGINEER'S APPROVAL

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

RICHARD L. SCHINDLER, P.E. # 33997
FOR AND ON BEHALF OF CORE ENGINEERING GROUP

**CORE
ENGINEERING GROUP**

15004 1ST AVENUE S.
BURNSVILLE, MN 55306
719-570-1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceng.com

DATE _____
DESCRIPTION _____
NO. _____
PROJECT: **FONTAINE BLVD IN
LORSON RANCH EAST**
212 N. WAHSATCH AVE. SUITE 301
COLORADO SPRINGS, COLORADO 80903
CONTACT: JEFF MARK

DRAWN: **RLS**
DESIGNED: **RLS**
CHECKED: **RLS**

**FONTAINE BLVD STREET/STORM AND
WATER/SEWER CONSTRUCTION
LORSON RANCH EAST**

DATE:
DECEMBER 20, 2017

PROJECT NO.
100.041

SHEET NUMBER
C1.1
TOTAL SHEETS: 34

CONSTRUCTION NOTES			WIDEFIELD WATER AND SANITATION DISTRICT GENERAL NOTES		
<div><div>1. ALL WORK SHALL COMPLY WITH THE CODES AND POLICIES FOR EL PASO COUNTY.</div><div>2. EXISTING TOPOGRAPHIC INFORMATION SHOWN ON THIS GRADING PLAN WAS OBTAINED FROM DREXEL, BARRELL & CO., JULY, 2005. THE CONTRACTOR SHALL BE RESPONSIBLE TO EXAMINE THE SITE AND BE FAMILIAR WITH THE EXISTING CONDITIONS.</div><div>3. DEPTH OF MOISTURE–DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS: BASE OF ALL CUTS AND FILLS – 12 INCHES, FULL DEPTH OF ALL EMBANKMENTS</div><div>4. THE CONTRACTOR IS RESPONSIBLE FOR THE RE–ESTABLISHMENT OF ALL SURVEY MONUMENTS DISTURBED WITHIN THE PROJECT LIMITS.</div><div>5. THE CONTRACTOR SHALL PROTECT ALL WORK AREAS AND FACILITIES FROM FLOODING AT ALL TIMES. AREAS AND FACILITIES SUBJECTED TO FLOODING, REGARDLESS OF THE SOURCE OF WATER, SHALL BE PROMPTLY DEWATERED AND RESTORED.</div><div>6. PRIOR TO PAVING OPERATIONS, THE ENTIRE SUBGRADE SHALL BE PROOF–ROLLED WITH A LOADED 988 FRONT–END LOADER OR SIMILAR HEAVY RUBBER TIRED VEHICLE (GVW OF 50,000 POUNDS WITH 18 KIP PER AXLE AT TIRE PRESSURES OF 90 PSI) TO DETECT ANY SOFT OR LOOSE AREAS. IN AREAS WHERE SOFT OR LOOSE SOILS, PUMPING OR EXCESSIVE MOVEMENT IS OBSERVED, THE EXPOSED MATERIALS SHALL BE OVER–EXCAVATED TO A MINIMUM DEPTH OF TWO FEET BELOW PROPOSED FINAL GRADE OR TO A DEPTH AT WHICH SOILS ARE STABLE. AFTER THIS HAS BEEN COMPLETED, THE EXPOSED MATERIALS SHALL BE SCARIFIED TO A DEPTH OF 12 INCHES AND MOISTURE CONDITIONED. THE SUBGRADE SHALL THEN BE UNIFORMLY COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTMM D–698) AT 0 TO +4.0% OF OPTIMUM MOISTURE CONTENT FOR A–6 AND A–7–6 SOILS ENCOUNTERED. OTHER SUBGRADE TYPES SHALL BE UNIFORMLY COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR DENSITY (ASTM D–1557) AT PLUS OR MINUS 2.0% OF OPTIMUM MOISTURE CONTENT. AREAS WHERE STABLE NATURAL SOILS ARE ENCOUNTERED AT PROPOSED SUBGRADE ELEVATION SHALL ALSO BE SCARIFIED (18 INCHES FOR A–7–6 SOILS BELOW FULL–DEPTH ASPHALT CONCRETE) AND COMPACTED AS OUTLINED ABOVE PRIOR TO PAVING OPERATIONS. <u>SUBGRADE FULL SHALL BE PLACED IN SIX–INCH LIFTS AND UNIFORMLY COMPACTED, MEETING THE REQUIREMENTS AS PREVIOUSLY DESCRIBED.</u></div><div>7. SUBGRADE MATERIALS DEEMED UNSUITABLE BY THE ENGINEER SHALL BE EXCAVATED, DISPOSED OF AND REPLACED WITH APPROVED MATERIALS.</div><div>8. FILL SHALL BE PLACED IN 8–INCH MAXIMUM LOOSE LIFTS AND SHALL BE COMPACTED PRIOR TO SUCCESSIVE LIFTS.</div><div>9. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING AND CONTROLLING EROSION DURING CONSTRUCTION ACTIVITIES AT ALL TIMES DURING GRADING AND CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING EROSION AND SEDIMENT CONTROL MEASURES:<div><div>– HAY BALE BARRIERS WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.</div><div>– SILT FENCE WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.</div><div>– TEMPORARY SEDIMENTATION BASINS WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.</div><div>– MULCHING AND SEEDING OF EXCESSIVE SLOPED AREAS AS NEEDED OR AS DIRECTED BY THE ENGINEER.</div><div>– TEMPORARY VEHICLE TRACKING CONTROL AS NEEDED AND/OR DIRECTED BY THE ENGINEER.</div><div>– CONCRETE WASH AREAS.</div><div>– INLET PROTECTION.</div></div>THESE AND ALL EROSION CONTROL BEST MANAGEMENT PRACTICES AS SHOWN IN THE GRADING AND EROSION CONTROL PLANS SHALL BE STRICTLY ADHERED TO.</div><div>10. FINISHED CONTOURS/SPOT ELEVATIONS SHOWN HEREON REPRESENT FINISHED GRADES. ALL GRADING SHALL CONFORM TO THE GEOTECHICAL RECOMMENDATIONS FOR LORSON RANCH EAST PREPARED BY RMG, "PRELIMINARY SOILS AND GEOLOGY FOR LORSON RANCH EAST", DATED SEPTEMBER 7, 2016.</div></div>			<div><div>1. ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT WIDEFIELD WATER AND SANITATION DISTRICT SPECIFICATIONS. COMPACTION REQUIREMENTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE WIDEFIELD WATER AND SANITATION DISTRICT OR A HIGHER STANDARD IS IMPOSED BY ANOTHER AGENCY HAVING RIGHT–OF–WAY JURISDICTION.</div><div>2. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE WIDEFIELD WATER AND SANITATION DISTRICT. THE WIDEFIELD WATER AND SANITATION DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.</div><div>3. THE DEVELOPER OR HIS ENGINEER HAS LOCATED ALL FIRE HYDRANTS AND FUTURE SERVICE STUBS. ANY REQUIRED REALIGNMENT, EITHER HORIZONTAL OR VERTICAL, SHALL BE AT THE EXPENSE OF THE DEVELOPER.</div><div>4. ALL DUCTILE IRON PIPE, TO INCLUDE FITTINGS, VALVES AND FIRE HYDRANTS WILL BE WRAPPED WITH POLYETHYLENE TUBING, BONDED AT EACH JOINT AND ELECTRICALLY ISOLATED.</div><div>5. ALL DUCTILE IRON PIPE SHALL BE DOUBLE BONDED. DIP SHALL HAVE CATHODIC PROTECTION USING NO. 6 WIRE WITH 17 LB. MAGNESIUM ANODES EVERY 400 FEET.</div><div>6. PVC MAIN LINES SHALL BE INSTALLED WITH COATED NO. 12 TRACER WIRE.</div><div>7. ALL FITTINGS SHALL BE DUCTILE IRON –MECHANICAL JOINT AND HAVE 1 LB. MAGNESIUM ANODES AT EVERY FITTING.</div><div>8. THE CONTRACTOR IS REQUIRED TO NOTIFY THE WIDEFIELD WATER AND SANITATION DISTRICT (390–7111) A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY COMPANIES 48 HOURS PRIOR TO CONSTRUCTION ADJACENT TO THE KNOWN UTILITY LINES.</div><div>9. THE LOCATION OF ALL UTILITIES AS SHOWN ON THESE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE VERIFIED PRIOR TO CONSTRUCTION BY THE CONTRACTOR.</div><div>10. THE CONTRACTOR SHALL FIELD EXCAVATE AND VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF ALL TIE–INS. CONTRACTOR SHALL NOTIFY THE WIDEFIELD WATER AND SANITATION DISTRICT AND THE ENGINEER OF THE FIELD VERIFIED INFORMATION PRIOR TO CONSTRUCTION.</div><div>11. ALL BENDS SHALL BE FIELD STAKED PRIOR TO CONSTRUCTION.</div><div>12. ANY WATER UTILITY MATERIAL REMOVED AND NOT REUSED SHALL BE RETURNED TO THE WIDEFIELD WATER AND SANITATION DISTRICT IF THE DISTRICT SO REQUESTS.</div><div>13. THE CONTRACTOR SHALL AT HIS EXPENSE SUPPORT AND PROTECT ALL UTILITY MAINS SO THAT THEY WILL FUNCTION CONTINUOUSLY DURING CONSTRUCTION. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT WILL BE REPLACED IMMEDIATELY BY EITHER THE CONTRACTOR OR THE WIDEFIELD WATER AND SANITATION DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR.</div><div>14. ANY PUMPING OR BYPASS OPERATIONS MUST BE REVIEWED AND APPROVED PRIOR TO EXECUTION BY BOTH THE WIDEFIELD WATER AND SANITATION DISTRICT AND THE ENGINEER.</div><div>15. DISINFECTION SHALL BE ACCOMPLISHED BY GLUING TABLETS TO THE TOP OF THE LINE. POWDER OR GRANULER HTH SHALL NOT BE USED. SEE WIDEFIELD SPECS FOR FURTHER DEFINITION OF DISINFECTION TECHNIQUES.</div><div>16. CONTRACTOR MUST REPLACE OR REPAIR ANY DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, CURB AND GUTTER AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.</div><div>17. ALL WATER LINES 6" AND LARGER, AND ALL SEWER LINES 8" AND LARGER, SHALL HAVE AS "AS–BUILT" PLANS PREPARED AND APPROVED PRIOR TO FINAL ACCEPTANCE BY THE WIDEFIELD WATER AND SANITATION DISTRICT.</div><div>18. PRIOR TO CONSTRUCTION, A PRE–CONSTRUCTION CONFERENCE IS REQUIRED A MINIMUM OF 72 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. TO SET THE PRE–CONSTRUCTION CONFERENCE, CONTACT BRANDON BERNARD–WATER SUPERINTENDENT (464–2051) AND/OR MARK MCCORMICK, WASTEWATER SUPERINTENDENT OF THE WIDEFIELD WATER AND SANITATION DISTRICT FOR A TIME. <u>NO PRE–CONSTRUCTION CONFERENCE TIMES WILL BE SET UNTIL 4 SETS OF SIGNED DRAWINGS ARE RECEIVED BY THE WIDEFIELD W & S DISTRICT. PRE–CONSTRUCTION DATE /INITIALS_____.</u></div></div>		
EL PASO COUNTY STANDARD CONSTRUCTION NOTES:			WIDEFIELD WATER AND SANITATION DISTRICT UTILITY CONSTRUCTION NOTES		
<div><div>1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.</div><div>2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).</div><div>3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:<div><div>a. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)</div><div>b. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2</div><div>c. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION</div><div>d. CDOT M & S STANDARDS</div></div></div><div>4. 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. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER–THE–FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.</div><div>5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.</div><div>6. CONTRACTOR SHALL SCHEDULE A PRE–CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD) – INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.</div><div>7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS–ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.</div><div>8. CONTRACTOR SHALL NOT DEViate FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.</div><div>9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.</div><div>10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.</div><div>11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.</div><div>12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.</div><div>13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY PUBLIC WORK DEPARTMENT AND MUTCD CRITERIA.</div><div>14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY PWD, INCLUDING WORK WITHIN THE RIGHT–OF–WAY AND SPECIAL TRANSPORT PERMITS.</div><div>15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF–SITE DISTURBANCE, GRADING, OR CONSTRUCTION.</div></div>			<div><div>1. ALL DUCTILE IRON PIPE AND FITTINGS SHALL HAVE CATHODIC PROTECTION AND 1 LB MAGNESIUM ANODES AT EVERY FITTING.</div><div>2. ALL FIRE HYDRANTS SHALL BE MEULLER SUPER CENTURION 200 OR AMERICAN AVK SERIES 2700, (MODERN)</div></div>		
CORE ENGINEERING GROUP 15004 1ST AVE. SUITE 300 DENVER, CO 80202 PHONE: 719.570.1100 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@eg1.com			DATE: _____ DESCRIPTION: _____ NO. _____ PREPARED FOR: LORSON, LLC 212 N. WAHSATCH AVE. SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635–3200 CONTACT: JEFF MARK		
DRAWN: RLS DESIGNED: RLS CHECKED: RLS			PROJECT: FONTAINE BLVD IN LORSON RANCH EAST FONTAINE BLVD.–OLD GLORY DR COLORADO SPRINGS, COLORADO		
FONTAINE BLVD STREET/STORM AND WATER/SEWER CONSTRUCTION NOTES			DATE: DECEMBER 20, 2017		
PROJECT NO. 100.041			SHEET NUMBER C1.2		
TOTAL SHEETS: 34					

text removed

Full-depth asphalt is not allowed.

WORK WITHIN CSU SOUTHERN DELIVERY SYSTEM EASEMENT CONSTRUCTION NOTES

1. CONTRACTOR SHALL COMPLY WITH CSU LESS 2.6.H.8 "CROSSING RAW WATER TRANSMISSION MAINS" FOR ALL WORK WITHIN THE CSU WATERMAIN EASEMENT

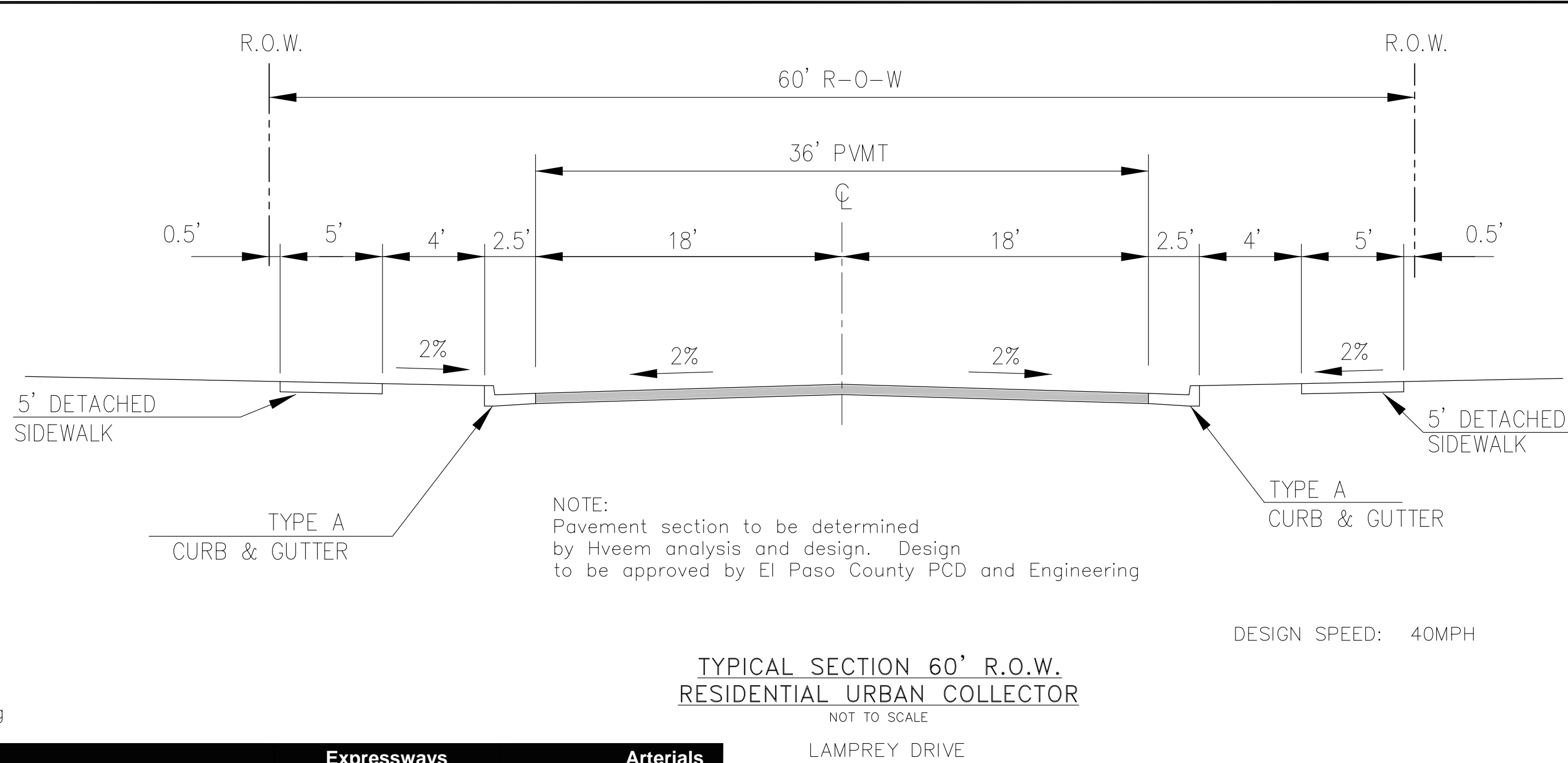
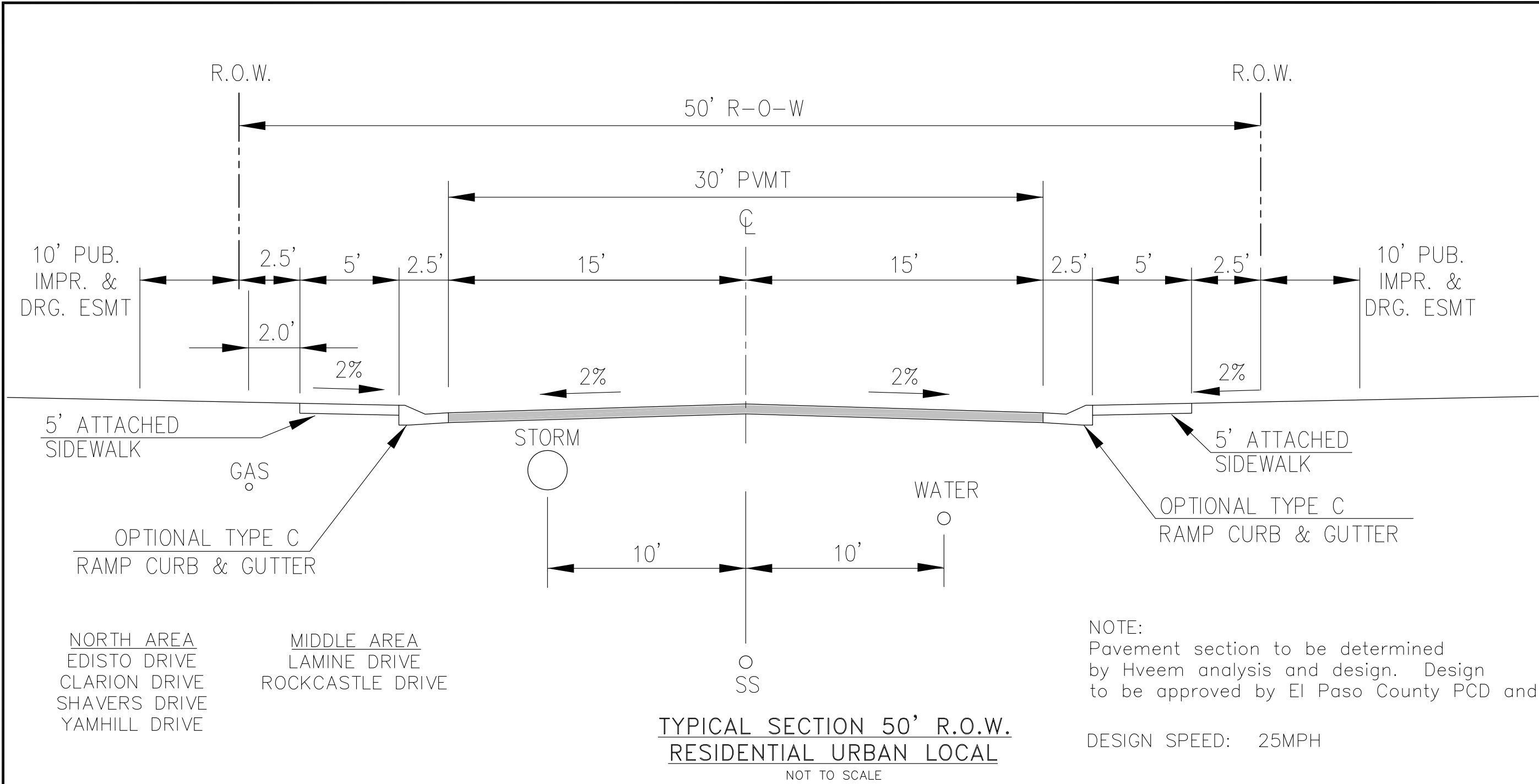
2. UTILITIES CROSSING OVER THE SDS WATERMAIN MUST BE POTHOLED WITH HYDRO–VAC AT EVERY CROSSING TO OBTAIN VISUAL VERIFICATIN OF THE WATERMAIN ELEVATION.

3. A COLORADO SPRINGS UTILITIES WATER INSPECTOR SHALL BE NOTIFIED, 719–668–4658, AND PRESENT BEFORE AND DURING CONSTRUCTION ACTIVITIES WITHIN THE SDS EASEMENT

4. CONTACT WAYNE RUST, 719–668–3996, COLORADO SPRINGS UTILITIES, FOR ADDITIONAL INFORMATION REGARDING THE SDS FIBER LINE.

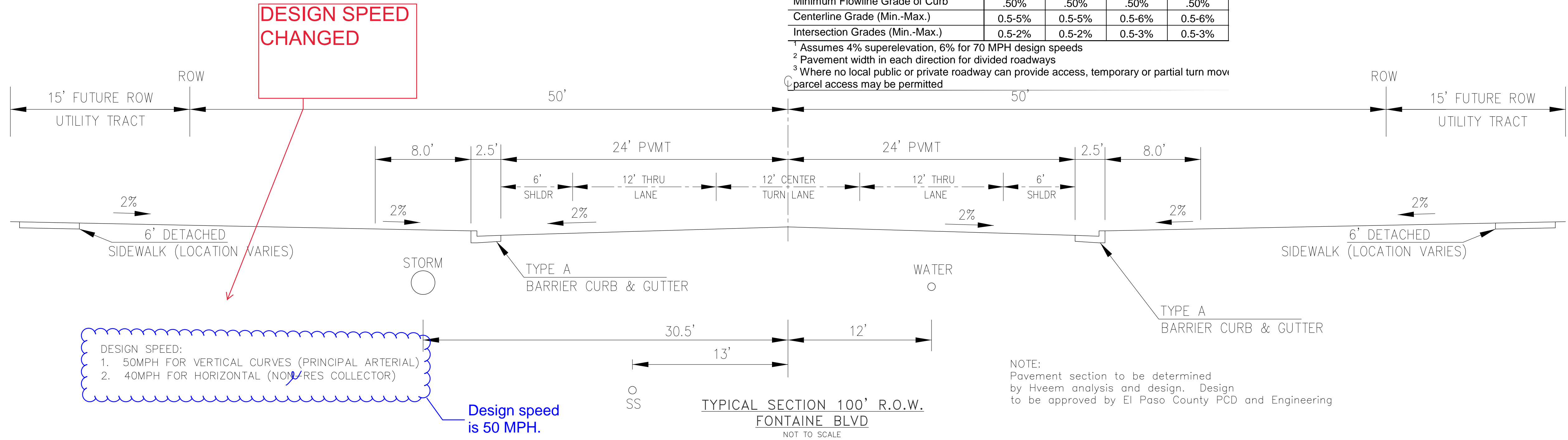
5. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 5' OF COVER OVER THE SDS WATERMAIN.

6. CONTRACTOR SHALL SALVAGE AND REPLACE ALL CARSONITE WATER MARKERS OVER THE WATERMAIN AFTER CONSTRUCTION.



Criteria	Expressways		Arterials	
	6 Lane	4 Lane	6 Lane Principal	4 Lane Principal
Design Speed / Posted Speed (MPH)	60 / 55	60 / 55	50 / 45	50 / 45
Clear Zone	30'	30'	20'	20'
Minimum Centerline Curve Radius	1,505 ¹	1,505 ¹	930 ¹	930 ¹
Number of Through Lanes	6	4	6	4
Lane Width	12'	12'	12'	12'
Right-of-Way	160'	140'	160'	130'
Paved Width (Excluding Gutter Pan)	48 ²	36 ²	48 ²	36 ²
Median Width (Including Curb & Gutter)	31'	23'	31'	19'
Shoulder Width (Ext., Excluding Gutter)	8'	8'	8'	8'
Shoulder Width (Int., Excluding Gutter)	4'	4'	4'	4'
Required Curb/ Gutter Type	6" ramp	6" ramp	6" vertical	6" vertical
Sidewalk Width (@ FL)	6' detached	6' detached	6' detached	6' detached
Design ADT	48,000	48,000	40,000	40,000
Design Vehicle	WB-67	WB-67	WB-67	WB-67
Bike Lanes Permitted	No	No	Yes	Yes
Access Permitted	No	No	No	No
Access Spacing	n/a	n/a	n/a	n/a
Intersection Spacing	1 mile	1 mile	½ mile	½ mile
Parking	No	No	No	No
Minimum Flowline Grade of Curb	.50%	.50%	.50%	.50%
Centerline Grade (Min.-Max.)	0.5-5%	0.5-5%	0.5-6%	0.5-6%
Intersection Grades (Min.-Max.)	0.5-2%	0.5-2%	0.5-3%	0.5-3%

¹ Assumes 4% superelevation, 6% for 70 MPH design speeds
² Pavement width in each direction for divided roadways
³ Where no local public or private roadway can provide access, temporary or partial turn movement or parcel access may be permitted



CORE

ENGINEERING GROUP

15004 1ST AVENUE S.
DENVER, CO 80202
PHONE: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

DATE:

DESCRIPTION:

NO:

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
FONTAINE BLVD IN
LORSON RANCH EAST
FONTAINE BLVD - OLD GLORY DR
COLORADO SPRINGS, COLORADO

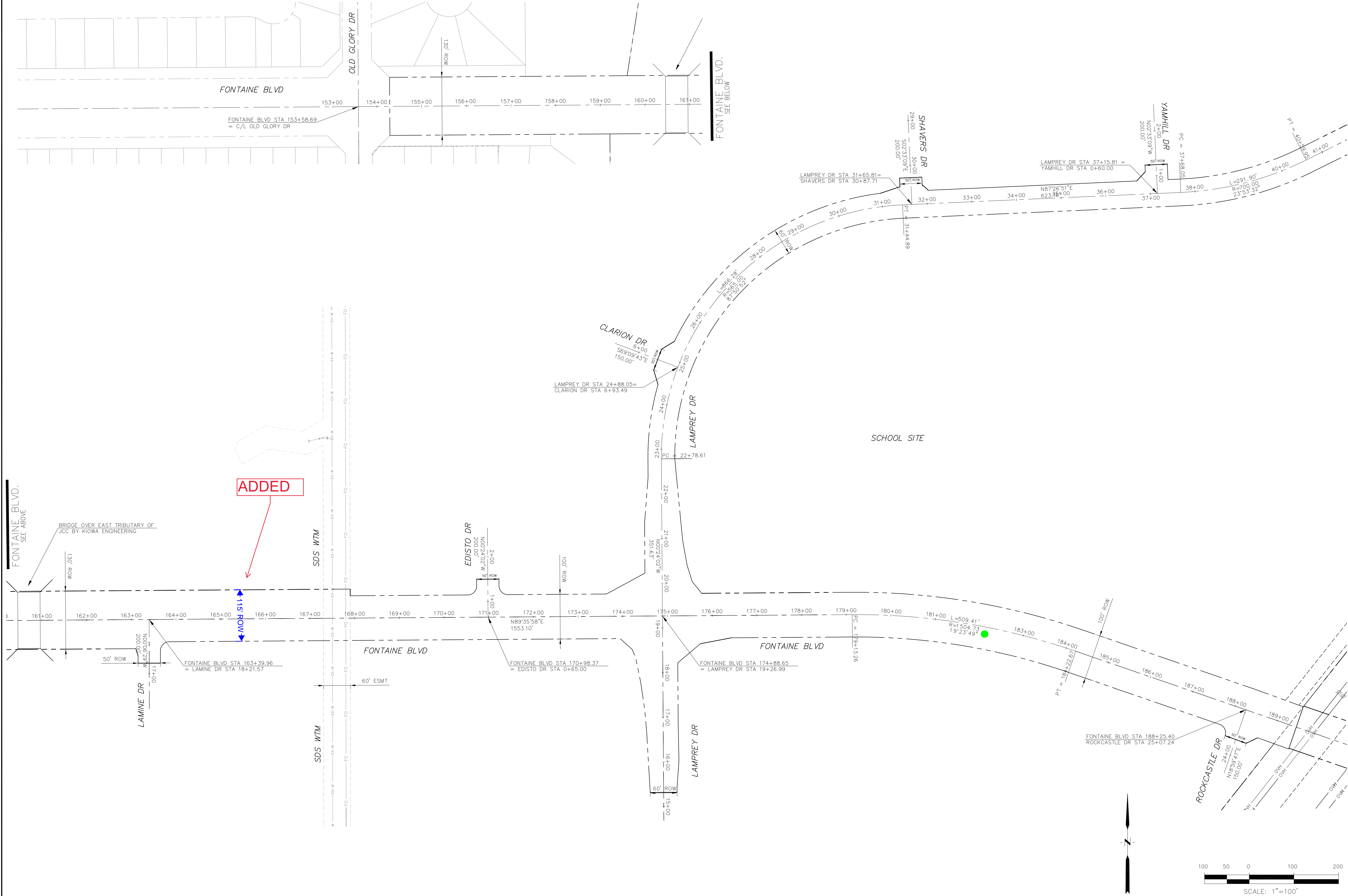
DATE:
DECEMBER 20, 2017

PROJECT NO.
100.041

SHEET NUMBER
C1.3

TOTAL SHEETS: 34

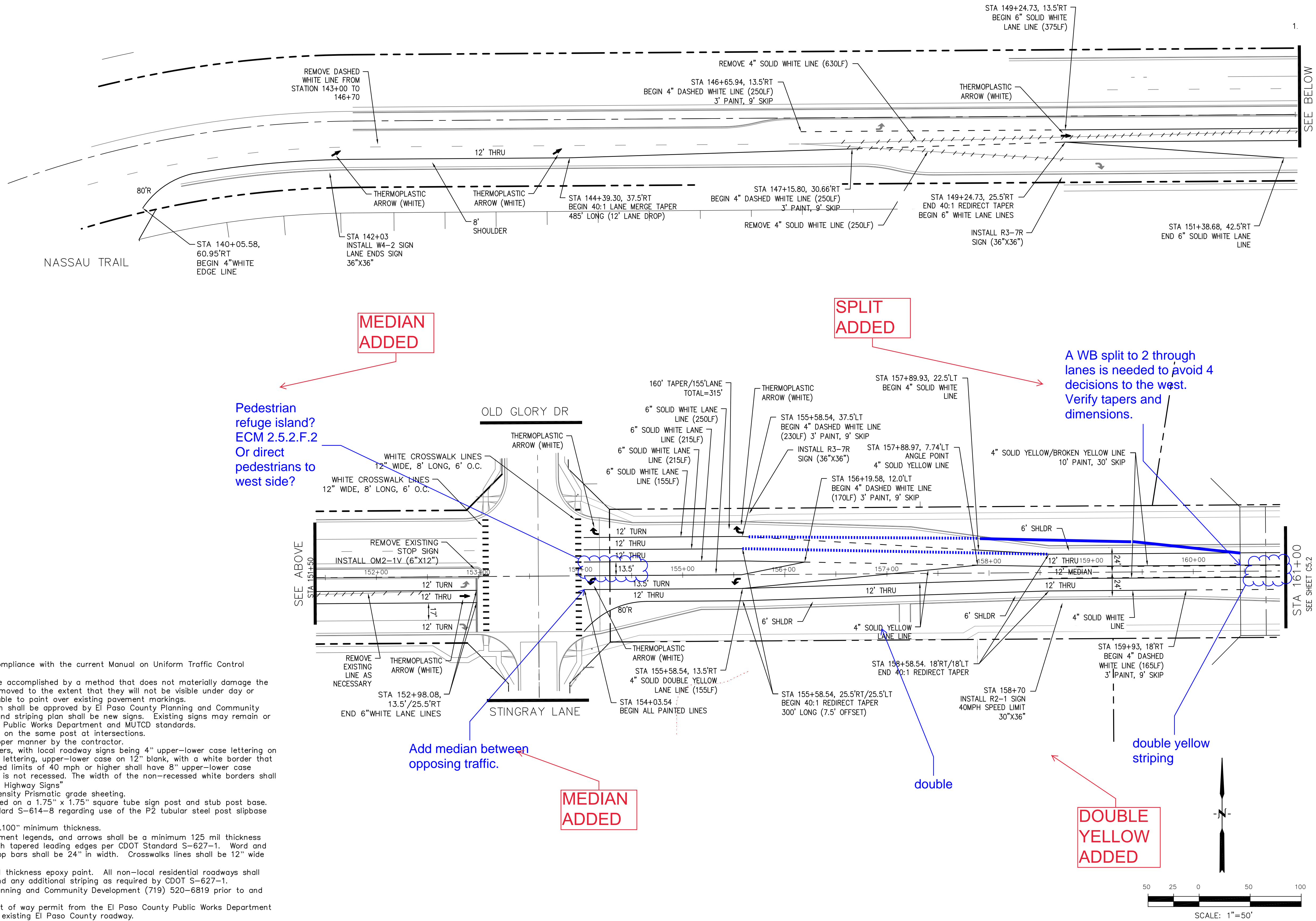
FONTAINE BLVD STREET/STORM AND
WATER/SEWER CONSTRUCTION
TYPICAL SECTIONS



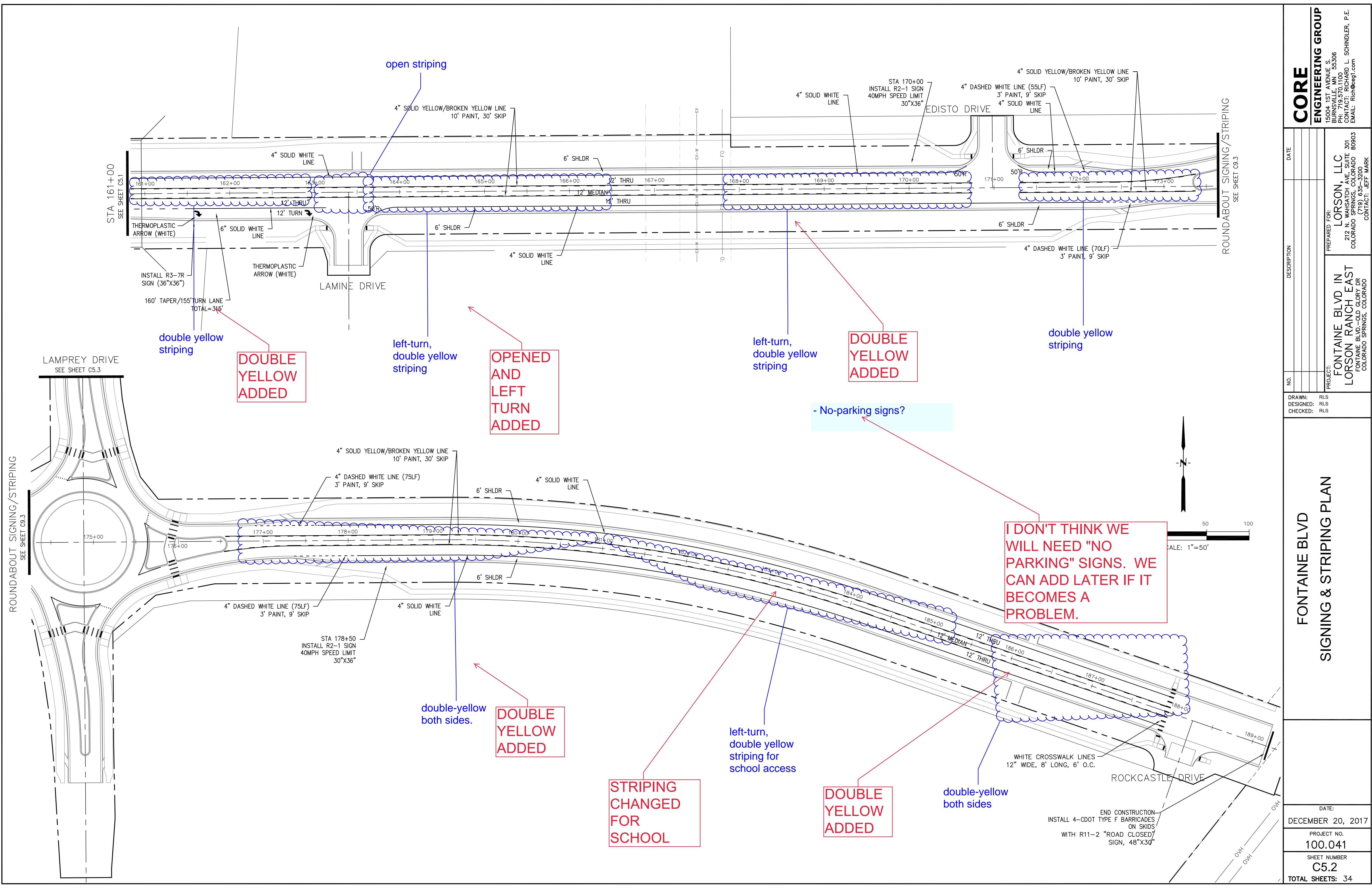
CORE ENGINEERING GROUP 15004 1ST AVENUE S. DENVER, CO 80232 PHONE: 303.750.1100 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@ceg1.com	
DATE	
DESCRIPTION	
NO.	
DRAWN: RLS DESIGNED: RLS CHECKED: RLS	
PROJECT: FONTAINE BLVD IN LORSON, LLC 212 N. WAHSATCH AVE. SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: JEFF MARK	
HORIZONTAL CONTROL PLAN	
DATE: DECEMBER 20, 2017	
PROJECT NO. 100.041	
SHEET NUMBER C2.1	
TOTAL SHEETS: 34	

Signing and Striping Notes:

1. All signs and pavement markings shall be in compliance with the current Manual on Uniform Traffic Control Devices (MUTCD).
2. Removal of existing pavement markings shall be accomplished by a method that does not materially damage the pavement. The pavement markings shall be removed to the extent that they will not be visible under day or night conditions. At no time will it be acceptable to paint over existing pavement markings.
3. Any deviation from the striping and signing plan shall be approved by El Paso County Planning and Community Development. All signs shown on the signing and striping plan shall be new signs. Existing signs may remain or be reused if they meet current El Paso County Public Works Department and MUTCD standards.
4. Street name and regulatory stop signs shall be on the same post at intersections.
5. All removed signs shall be disposed of in a proper manner by the contractor.
6. All street name signs shall have "D" series letters, with local roadway signs being 4" upper-lower case lettering on 8" blank and non-local roadway signs being 6" lettering, upper-lower case on 12" blank, with a white border that is not recessed. Multi-lane roadways with speed limits of 40 mph or higher shall have 8" upper-lower case lettering on 18" blank with a white border that is not recessed. The width of the non-recessed white borders shall match page 255 of the 2012 MUTCD "Standard Highway Signs".
7. All traffic signs shall have a minimum High Intensity Prismatic grade sheeting.
8. All local residential street signs shall be mounted on a 1.75" x 1.75" square tube sign post and stub post base. For other applications, refer to the CDOT Standard S-614-8 regarding use of the P2 tubular steel post slipbase design.
9. All signs shall be single sheet aluminum with 0.100" minimum thickness.
10. All limit lines/stop lines, crosswalk lines, pavement legends, and arrows shall be a minimum 125 mil thickness preformed thermoplastic pavement markings with tapered leading edges per CDOT Standard S-627-1. Word and symbol markings shall be the narrow type. Stop bars shall be 24" in width. Crosswalks lines shall be 12" wide and 8' long per CDOT S-627-1.
11. All longitudinal lines shall be a minimum 15mil thickness epoxy paint. All non-local residential roadways shall include both right and left edge line striping and any additional striping as required by CDOT S-627-1.
12. The contractor shall notify El Paso County Planning and Community Development (719) 520-6819 prior to and upon completion of signing and striping.
13. The contractor shall obtain a work in the right of way permit from the El Paso County Public Works Department prior to any signage or striping work within an existing El Paso County roadway.



CORE		ENGINEERING GROUP	
DATE		15004 1ST AVENUE S. BURNING WOOD, MO 65506 PROJECT NO. 100.041 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@ceg.com	
DESCRIPTION		PREPARED FOR: LORSON, LLC 212 N. WAHSATCH AVE. SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: JEFF MARK	
NO.		PROJECT: FONTAINE BLVD IN FORSON RANCH EAST FONTAINE BLVD.-OLD GLORY DR COLORADO SPRINGS, COLORADO	
DRAWN: RLS		DESIGNED: RLS	
CHECKED: RLS		SHEET NUMBER C5.1	
DATE: DECEMBER 20, 2017		TOTAL SHEETS: 34	



CORE

ENGINEERING GROUP

15004 1ST AVENUE S.
BURNING WOOD, MO 63306
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg.com

DATE

DESCRIPTION

NO.

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

PROJECT NO.

100.041

SHEET NUMBER

C5.2

TOTAL SHEETS: 34

PREPARED FOR:

LORSON, LLC

212 N. WAHSATCH AVE. SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:

FONTAINE BLVD IN
LORSON RANCH EAST
FONTAINE BLVD.-OLD GLORY DR
COLORADO SPRINGS, COLORADO

DATE:

DECEMBER 20, 2017

PROJECT NO.

100.041

SHEET NUMBER

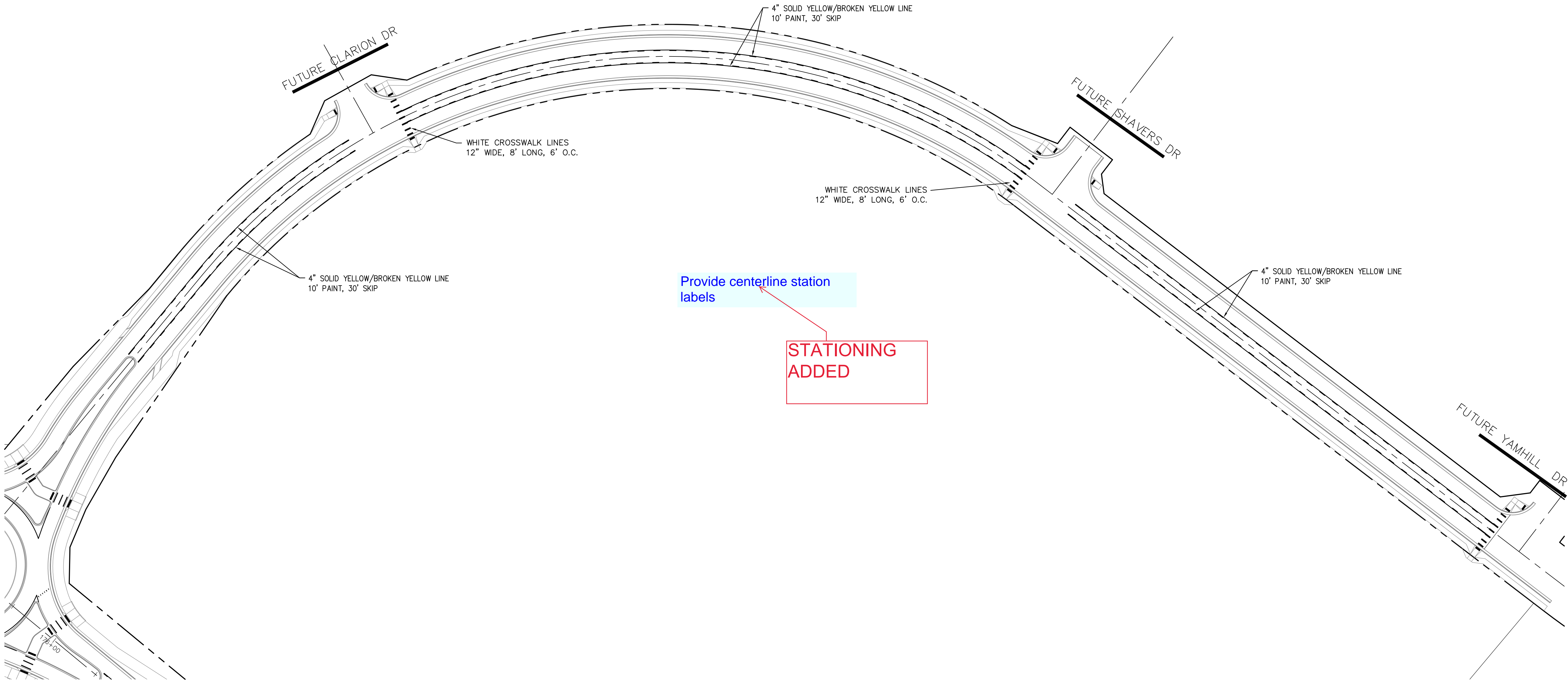
C5.2

TOTAL SHEETS: 34

FONTAINE BLVD

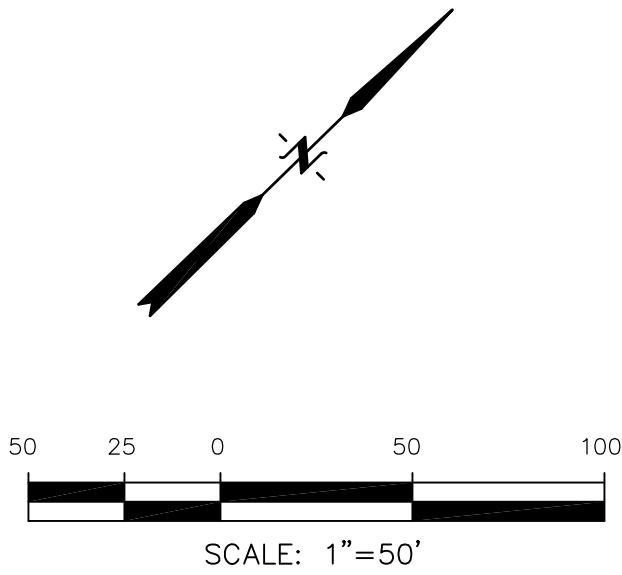
SIGNING & STRIPING PLAN

ROUNDABOUT SIGNING/STRIPING
SEE SHEET C5.3



Provide centerline station
labels

STATIONING
ADDED

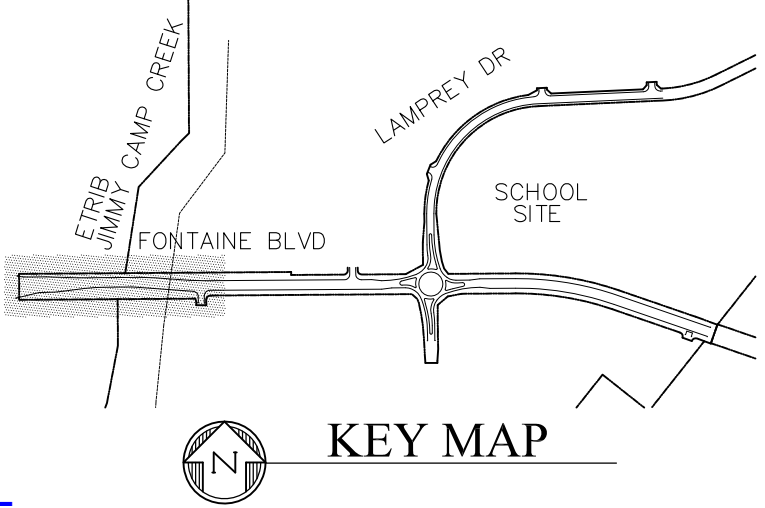


CORE ENGINEERING GROUP 15004 1ST AVENUE S. BURNSTED, MO 65506 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@ceg1.com	
DATE	
DESCRIPTION	
NO.	
PROJECT:	FOR: LORSON, LLC 212 N. WAHSATCH AVE. SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: JEFF MARK
DRAWN: RLS DESIGNED: RLS CHECKED: RLS	PROJECT: FONTAINE BLVD IN LORSON RANCH EAST FONTAINE BLVD.-OLD GLORY DR COLORADO SPRINGS, COLORADO
LAMPREY DRIVE SIGNING & STRIPING PLAN	
DATE: DECEMBER 20, 2017	
PROJECT NO. 100.041	
SHEET NUMBER C5.3	
TOTAL SHEETS: 34	

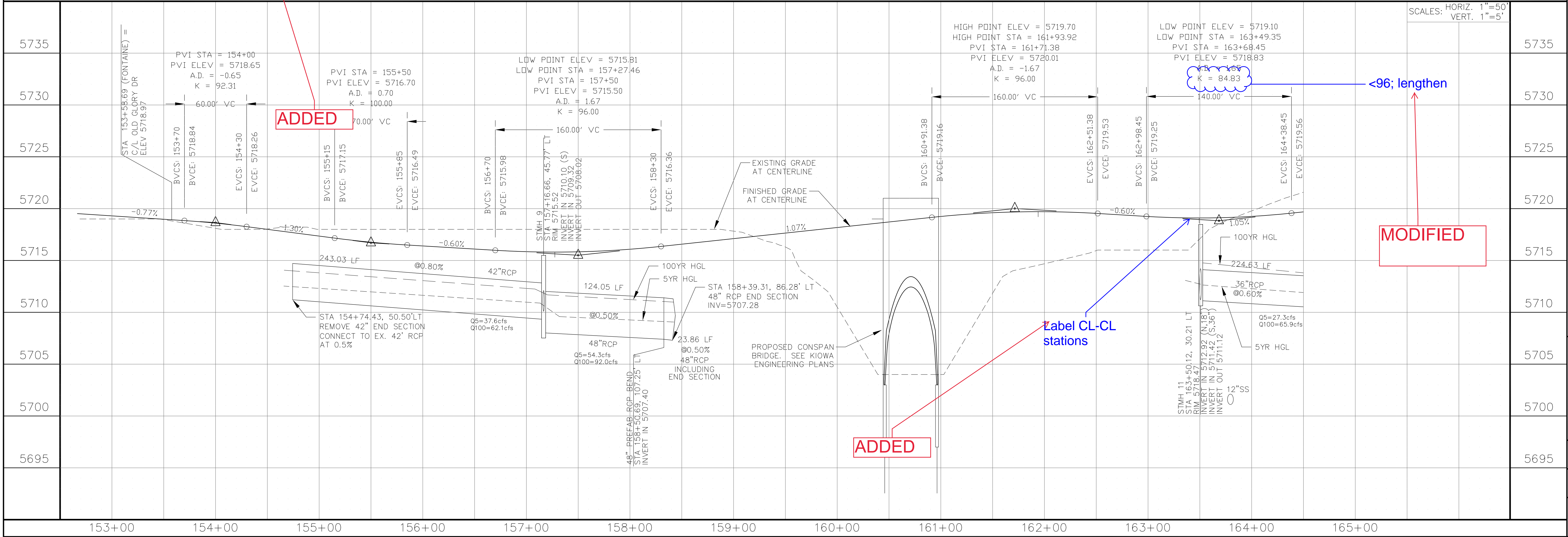
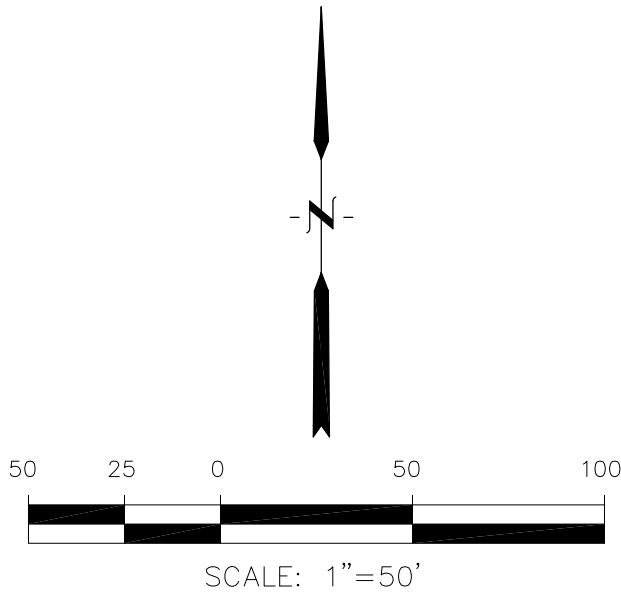
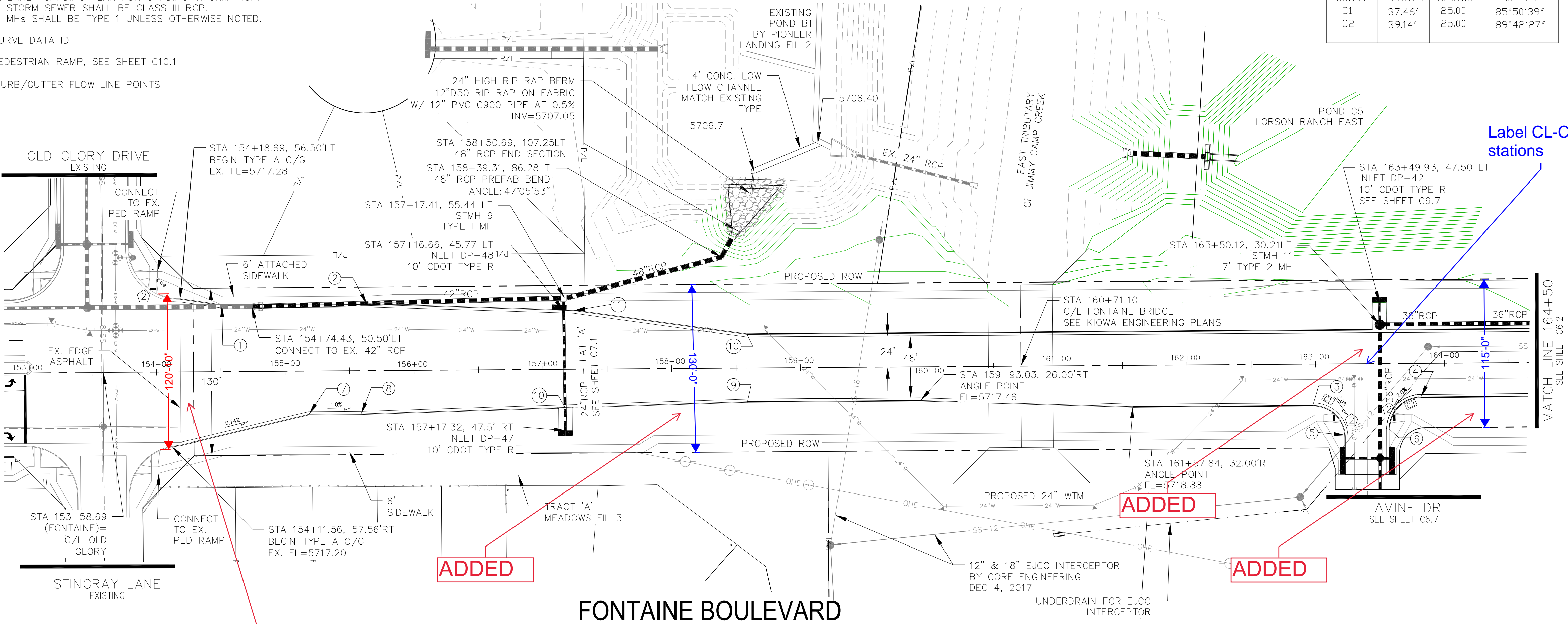
- NOTES
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
 2. SEE EARLY GRADING PLAN FOR GRADING INFORMATION.
 3. ALL STORM SEWER SHALL BE CLASS III RCP.
 4. ALL MHS SHALL BE TYPE 1 UNLESS OTHERWISE NOTED.

- 1 CURVE DATA ID
- 2 PEDESTRIAN RAMP, SEE SHEET C10.1
- 3 CURB/GUTTER FLOW LINE POINTS

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	37.46'	25.00	85°50'39"
C2	39.14'	25.00	89°42'27"



FL CURB/GUTTER TABLE		
POINT	STA/OFFSET	FLOWLINE
1	154+51.20, 51.50'LT	5716.84
2	155+63.99, 51.50'LT	5715.50
3	162+97.67, 32.00'RT	5718.49
4	163+81.70, 26.0'RT	5718.57
5	163+24.70, 56.08'RT	5717.74
6	163+56.87, 50.88'RT	5717.78
7	155+18.08, 33.50'RT	5716.33
8	155+58.64, 33.50'RT	5715.89
9	158+58.64, 26.00'RT	5716.02
10	157+17.19, 29.54'RT	5714.97
11	157+24.13, 45.49'LT	5714.78
12	158+58.68, 26.00'LT	5716.02



CORE

ENGINEERING GROUP

15004 1ST AVENUE S.
SUITE 100
DENVER, CO 80202
PHONE: 303.733.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: rich@ceg1.com

DATE: _____

DESCRIPTION: _____

NO: _____

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE. SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
**FONTAINE BLVD IN
FONTAN RANCH EAST
FONTAINE BLVD-OLD GLORY DR
COLORADO SPRINGS, COLORADO**

STREET & STORM SEWER PLAN/PROFILE

FONTAINE BOULEVARD

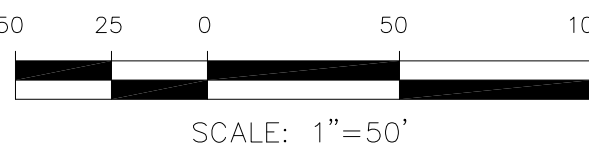
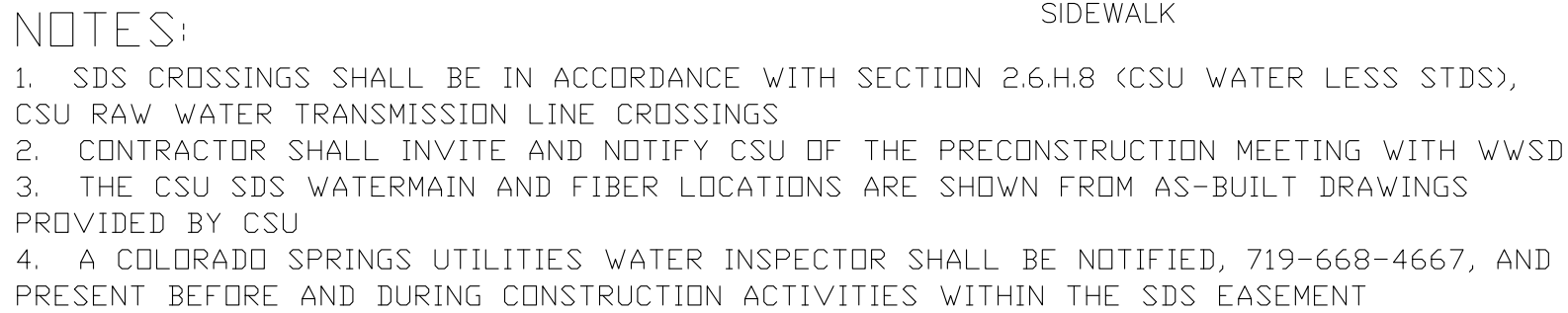
STA 153+00 TO 164+50

DATE:
DECEMBER 20, 2017

PROJECT NO.
100.041

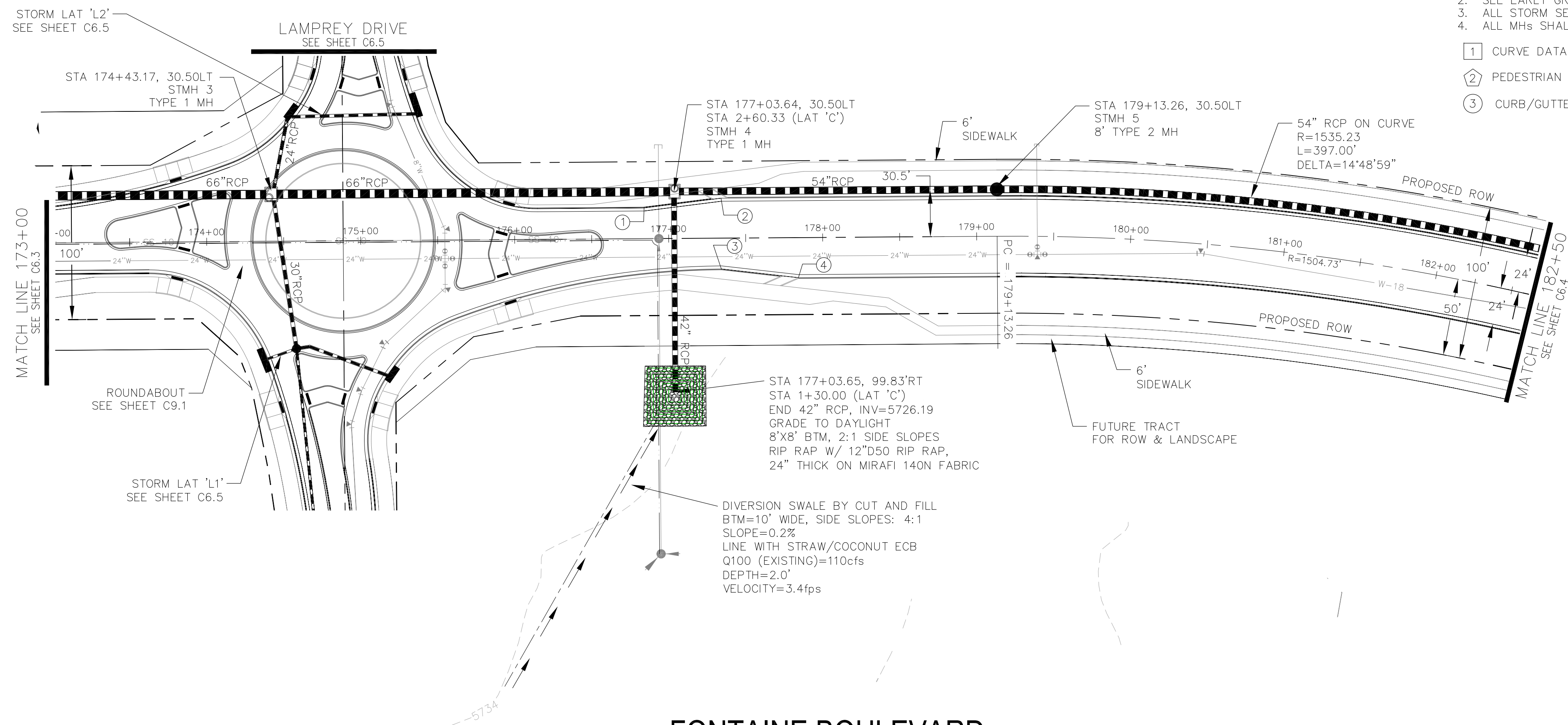
SHEET NUMBER
C6.1

TOTAL SHEETS: 34

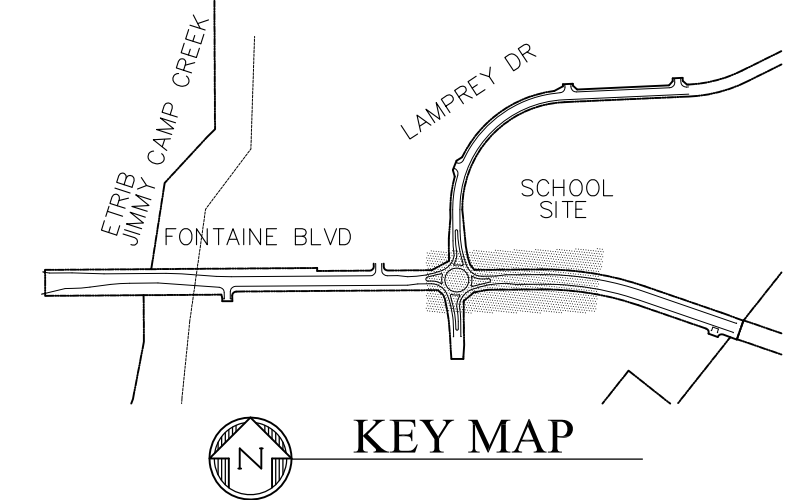


SCALES: HORIZ. 1"=50'
VERT. 1"=5'

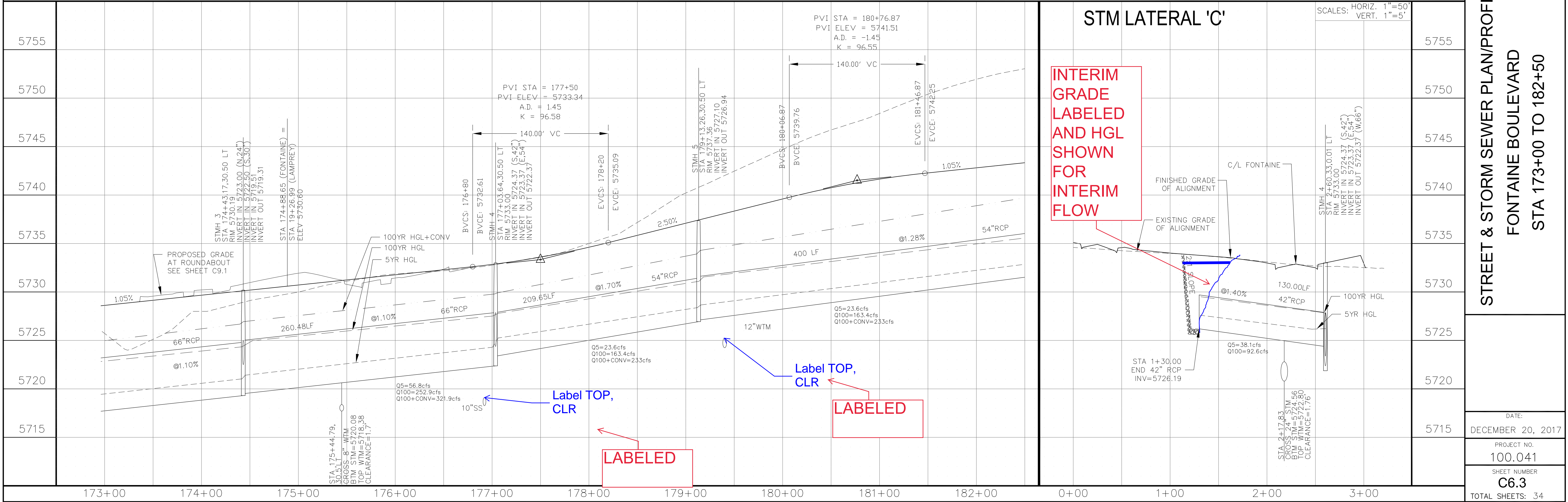
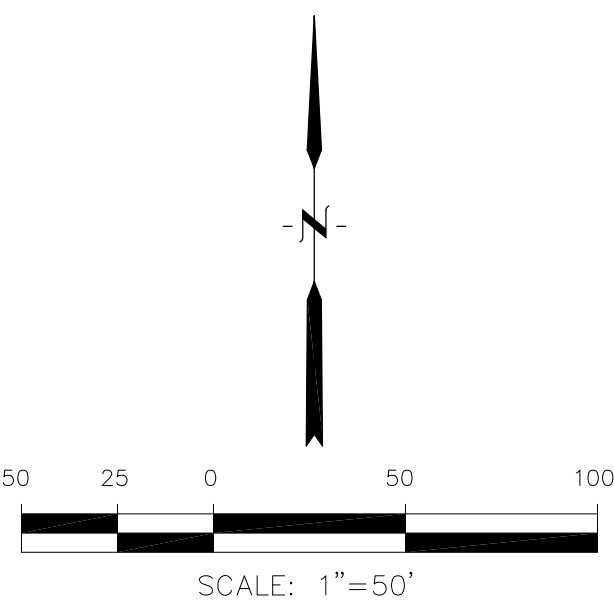
<div>STREET & STORM SEWER PLAN/PROFILE</div> <div>FONTAINE BOULEVARD</div> <div>STA 164+50 TO 173+00</div>		DATE:	
		DECEMBER 20, 2017	
		PROJECT NO.	
		100.041	
		SHEET NUMBER	
C6.2		TOTAL SHEETS: 34	
<div>CORE</div> <div>ENGINEERING GROUP</div> <div>15004 1ST AVENUE S.</div> <div>PHILADELPHIA, PA 19104-3506</div> <div>PH: 215.750.1100</div> <div>CONTACT: RICHARD L. SCHINDLER, P.E.</div> <div>EMAIL: Rlen@eg1.com</div>		NO.	
		DESCRIPTION	
		DATE	
		PROJECT:	
		PREPARED FOR:	
FONTAINE BLVD IN		LORSON, LLC	
LORSON RANCH EAST		212 N. WAHSATCH AVE. SUITE 301	
FONTAINE BLVD.-OLD GLORY DR		COLORADO SPRINGS, COLORADO 80903	
COLORADO SPRINGS, COLORADO		(719) 635-3200	
		CONTACT: JEFF MARK	
DRAWN: RLS		PROJECT:	
DESIGNED: RLS		FONTAINE BLVD IN	
CHECKED: RLS		LORSON RANCH EAST	



- NOTES**
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
 2. SEE EARLY GRADING PLAN FOR GRADING INFORMATION.
 3. ALL STORM SEWER SHALL BE CLASS III RCP.
 4. ALL MHS SHALL BE TYPE 1 UNLESS OTHERWISE NOTED.
- ① CURVE DATA ID
- ② PEDESTRIAN RAMP, SEE SHEET C10.1
- ③ CURB/GUTTER FLOW LINE POINTS

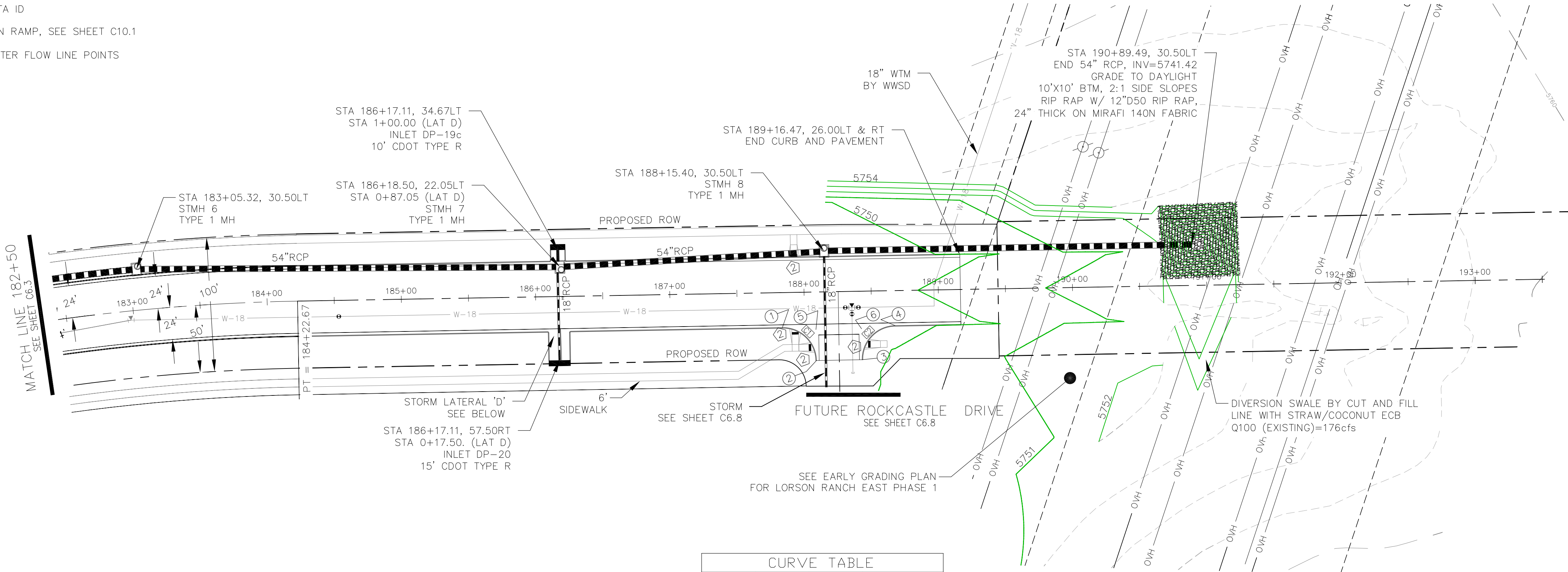


POINT	STA/OFFSET	FLOWLINE
1	176+84.17, 20.00'LT	5732.13
2	177+34.17, 26.00'LT	5732.69
3	177+34.06, 20.00'RT	5732.81
4	177+84.06, 26.00'RT	5733.62



- NOTES
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
 2. SEE EARLY GRADING PLAN FOR GRADING INFORMATION.
 3. ALL STORM SEWER SHALL BE CLASS III RCP.
 4. ALL MHS SHALL BE TYPE 1 UNLESS OTHERWISE NOTED.

- ① CURVE DATA ID
- ② PEDESTRIAN RAMP, SEE SHEET C10.1
- ③ CURB/GUTTER FLOW LINE POINTS



FL CURB/GUTTER TABLE		
POINT	STA/OFFSET	FLOWLINE
1	187+83.40, 26.00'RT	5748.29
2	188+08.40, 51.00'RT	5748.85
3	188+42.40, 51.00'RT	5749.10
4	188+67.40, 26.00'RT	5749.17
5	188+08.40, 28.00'RT	5748.55
6	188+42.40, 28.00'RT	5748.91

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	39.27'	25.00	90°00'00"
C2	39.27'	25.00	90°00'00"

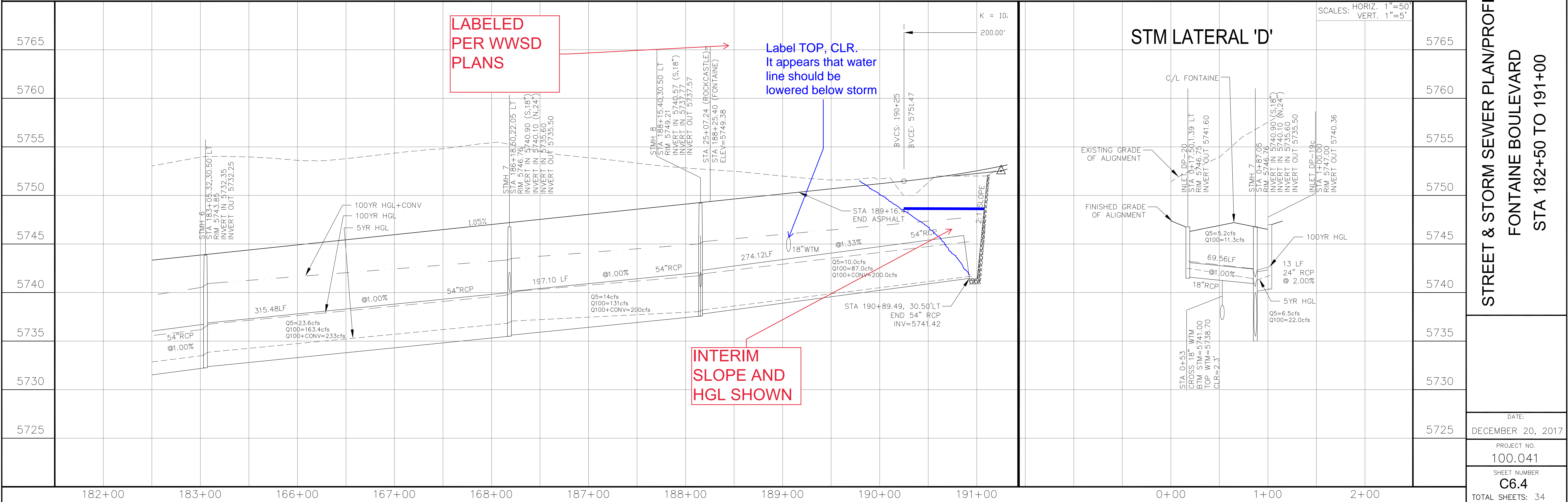
FONTAINE BOULEVARD

LABELED
PER WWSD
PLANS

Label TOP, CLR.
It appears that water
line should be
lowered below storm

INTERIM
SLOPE AND
HGL SHOWN

STM LATERAL 'D'



CORE

ENGINEERING GROUP

15004 1ST AVENUE S,
SUITE 100
DENVER, CO 80202
CONTACT: RICHARD L. SCHINDLER, P.E.
PHONE: 773.570.1100
EMAIL: rich@ceg1.com

DATE

DESCRIPTION

NO.

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

PROJECT: LORSON, LLC
212 N. WAHSATCH AVE. SUITE 301
COLORADO SPRINGS, COLORADO 80903
CONTACT: JEFF MARK

STREET & STORM SEWER PLAN/PROFILE
FONTAINE BOULEVARD
STA 182+50 TO 191+00

DATE:
DECEMBER 20, 2017

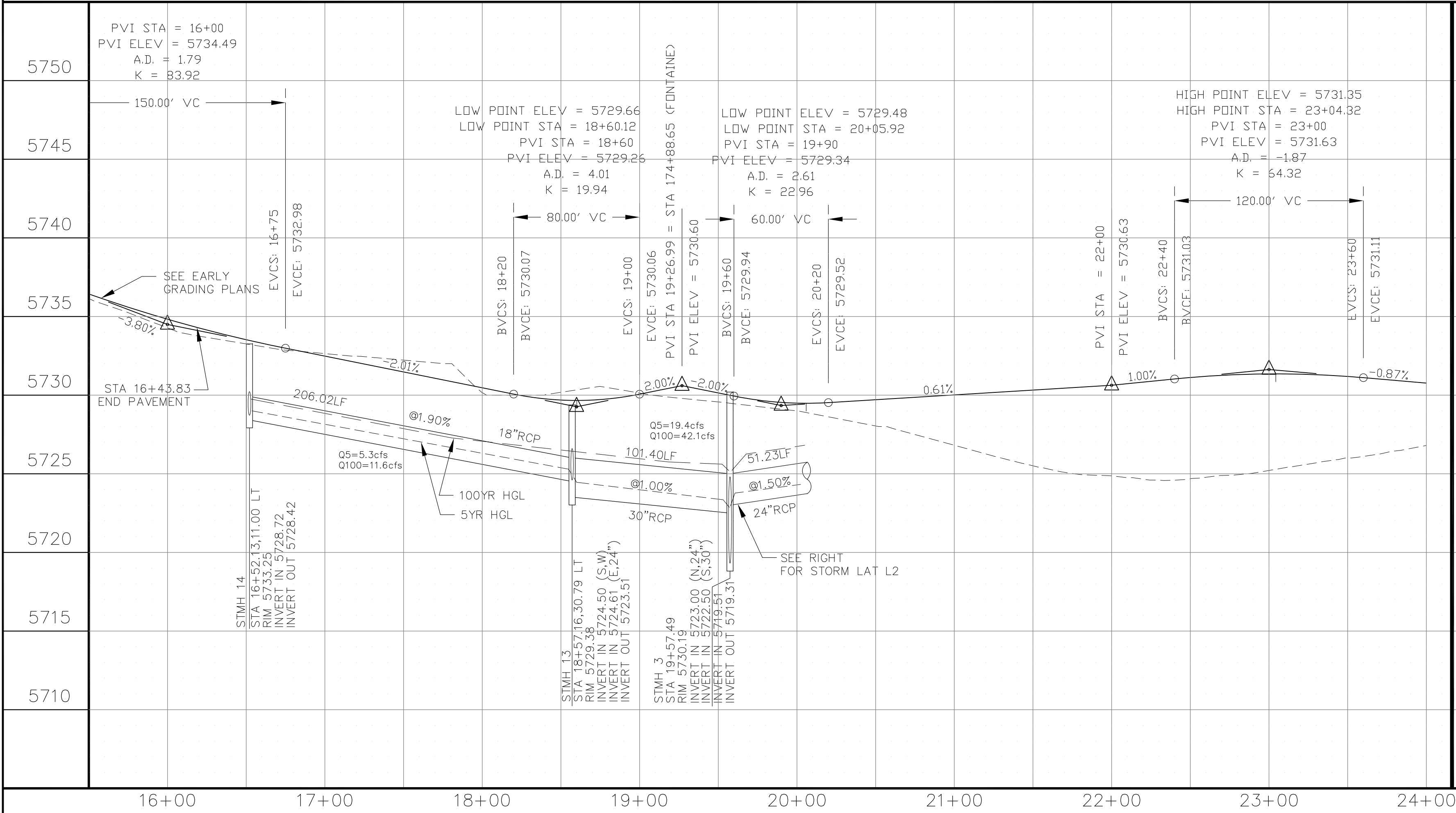
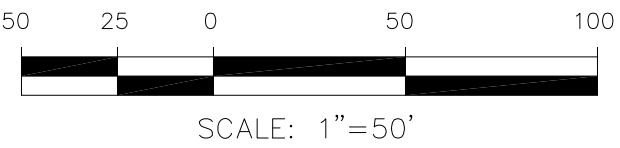
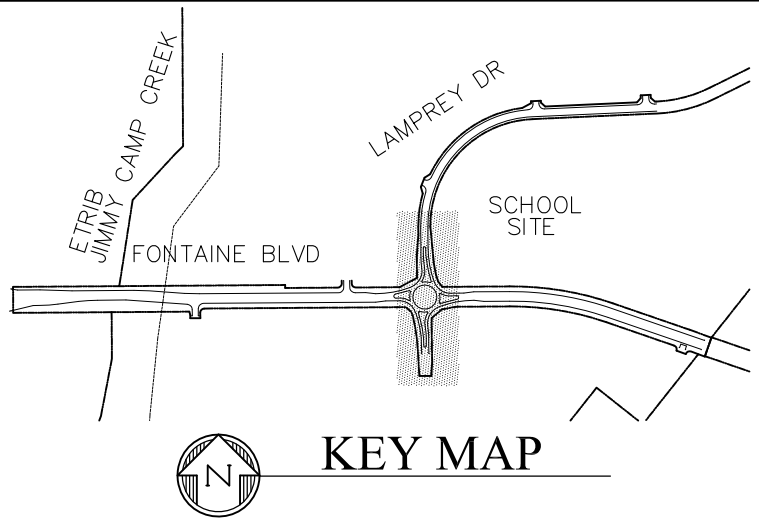
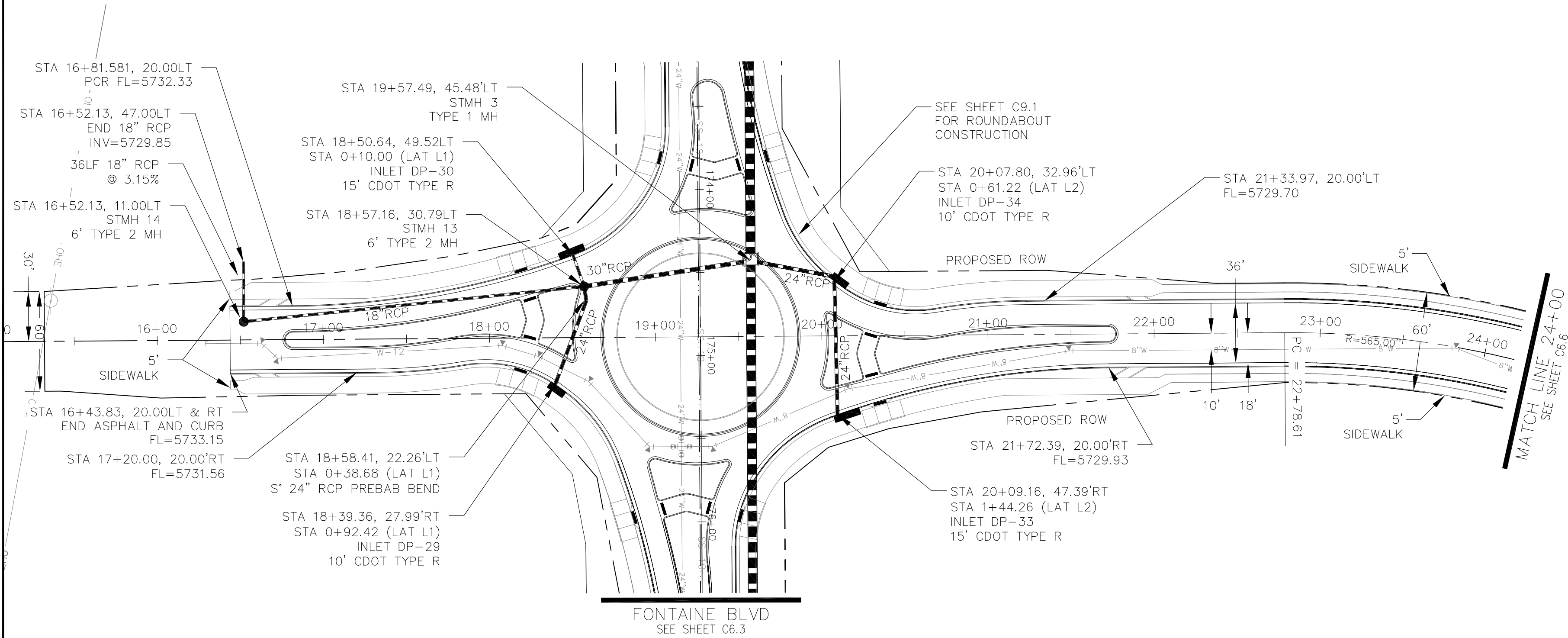
PROJECT NO.
100.041

SHEET NUMBER
C6.4

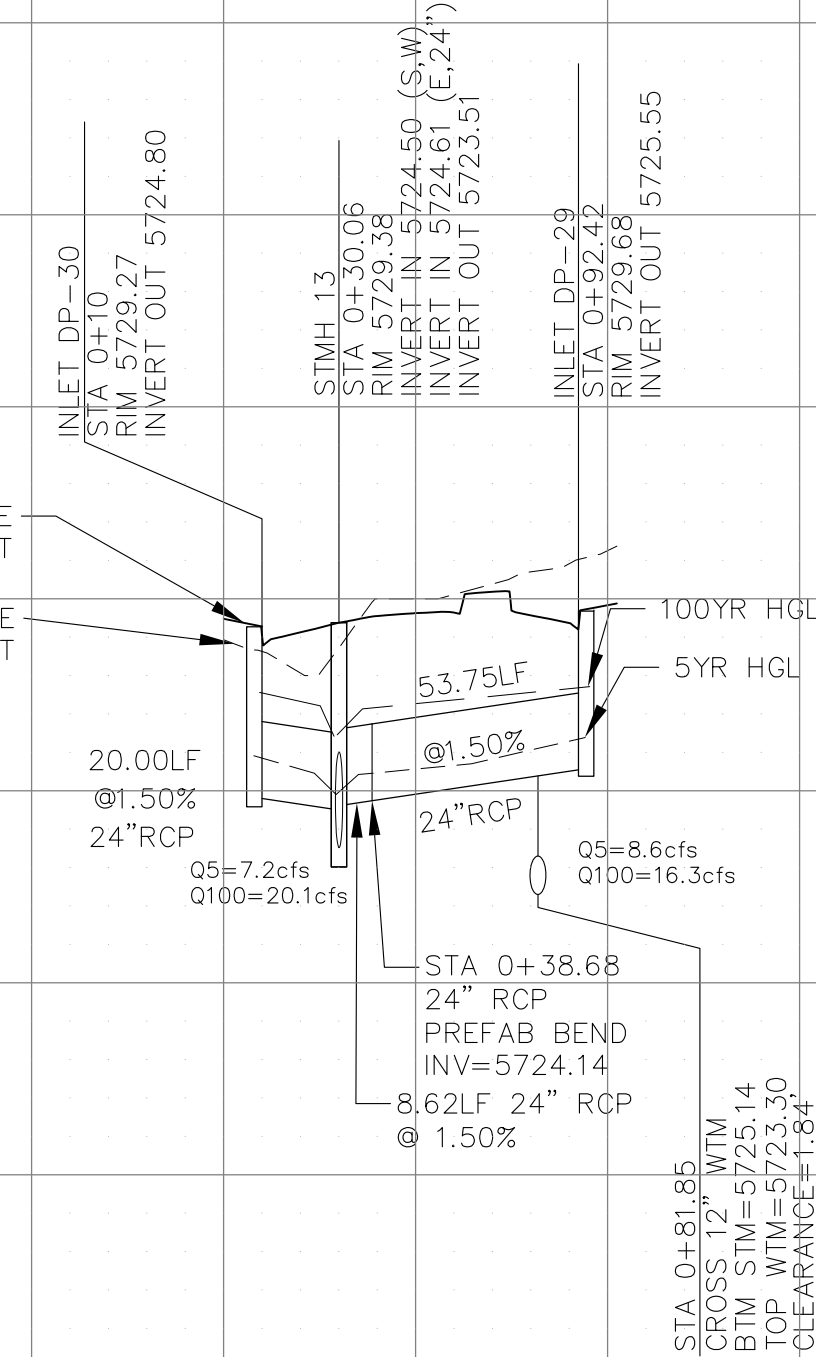
TOTAL SHEETS: 34

- NOTES
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
 2. SEE EARLY GRADING PLAN FOR GRADING INFORMATION.
 3. ALL STORM SEWER SHALL BE CLASS III RCP.
 4. ALL MHS SHALL BE TYPE 1 UNLESS OTHERWISE NOTED.

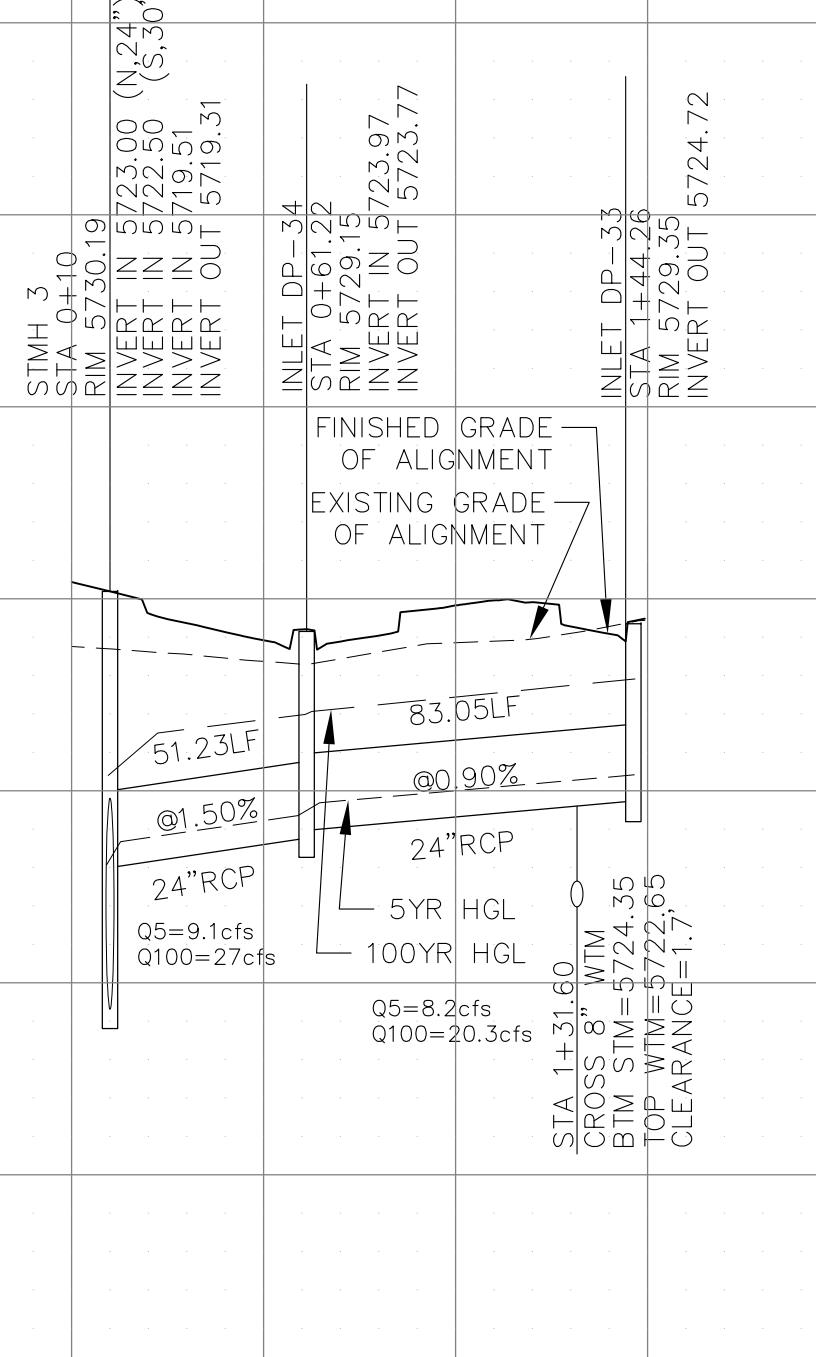
- 1 CURVE DATA ID
- 2 PEDESTRIAN RAMP, SEE SHEET C10.1
- 3 CURB/GUTTER FLOW LINE POINTS



STM LATERAL 'L1'



STM LATERAL 'L2'



CORE
ENGINEERING GROUP
15004 1ST AVENUE S,
DENVER, CO 80232
PHONE: 303.750.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

DATE: _____

NO: _____

DESCRIPTION: _____

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
**FONTAINE BLVD IN
LORSON RANCH EAST**
FONTAINE BLVD.-OLD GLORY DR
COLORADO SPRINGS, COLORADO

DRAWN: **RLS**
DESIGNED: **RLS**
CHECKED: **RLS**

STREET & STORM SEWER PLAN/PROFILE
LAMPREY DRIVE
STA 16+00 TO 24+00

DATE:
DECEMBER 20, 2017

PROJECT NO.
100.041

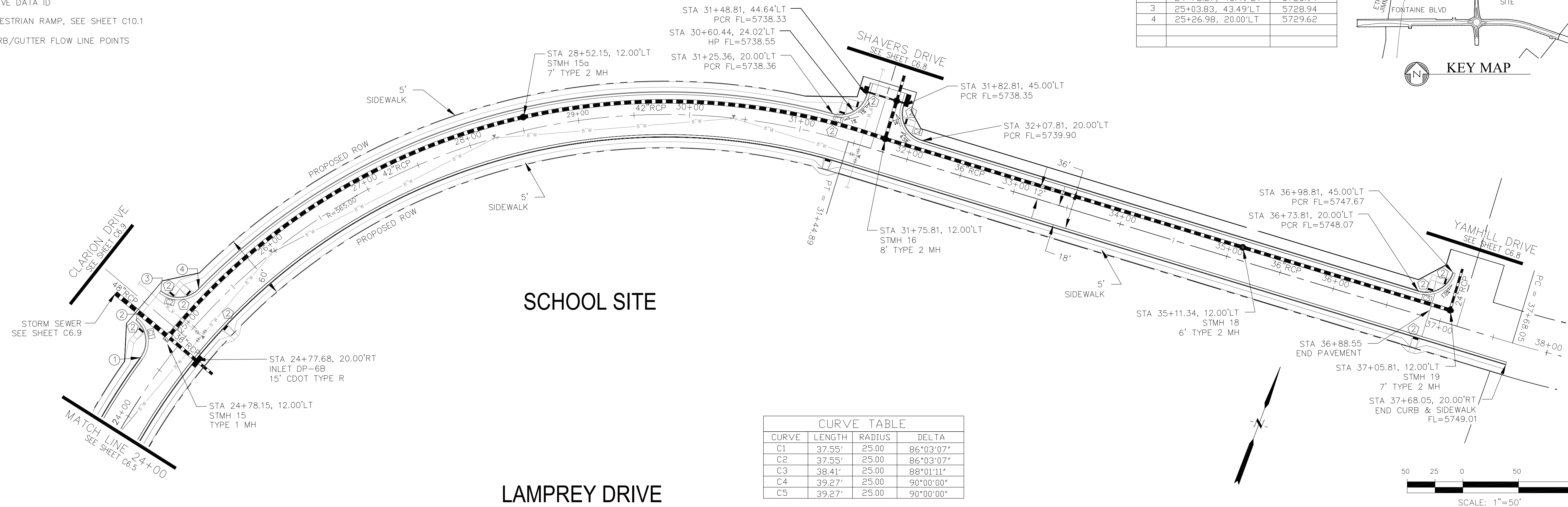
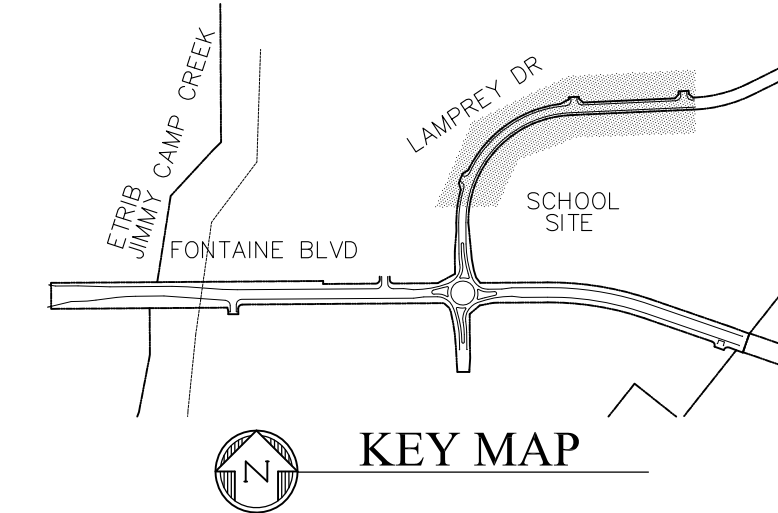
SHEET NUMBER
C6.5

TOTAL SHEETS: 34

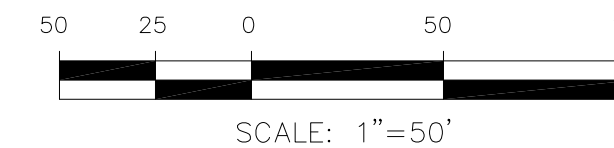
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
2. SEE EARLY GRADING PLAN FOR GRADING INFORMATION.
3. ALL STORM SEWER SHALL BE CLASS III RCP.
4. ALL MHs SHALL BE TYPE 1 UNLESS OTHERWISE NOTED.

- 1 CURVE DATA ID
2 PEDESTRIAN RAMP, SEE SHEET C10.1
3 CURB/GUTTER FLOW LINE POINTS

FL CURB/GUTTER TABLE		
POINT	STA/OFFSET	FLOWLINE
1	24+49.11, 20.00'LT	5729.82
2	24+72.27, 43.49'LT	5728.94
3	25+03.83, 43.49'LT	5728.94
4	25+26.98, 20.00'LT	5729.62



CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	37.55'	25.00	86°03'07"
C2	37.55'	25.00	86°03'07"
C3	38.41'	25.00	88°01'11"
C4	39.27'	25.00	90°00'00"
C5	39.27'	25.00	90°00'00"

[illegible]

LAMPREY WILL
BE GRADED
IT PROVIDES
GOOD ACCESS
TO PUMP
STATION

STREET & STORM SEWER PLAN/PROFILE
LAMPREY DRIVE
STA 24+00 TO 37+15.81

NO.	DESCRIPTION	DATE
<div> <div> PROJECT: </div> <div> FONTAINE BLVD IN LORSON RANCH EAST FONTAINE BLVD - OLD GLORY DR COLORADO SPRINGS, COLORADO </div> </div>		
<div> <div> PREPARED FOR: </div> <div> LORSON, LLC 212 N. WAHATCH AVE SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 639-3200 CONTACT: JEFF MARK </div> </div>		
<div> <div> CORE ENGINEERING GROUP </div> <div> 15004 1ST AVENUE S. BURNSVILLE, MN 55306 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@cegi.com </div> </div>		

DRAWN:	RLS
DESIGNED:	RLS
CHECKED:	RLS

DATE:
DECEMBER 20, 2017

PROJECT NO.
100.041

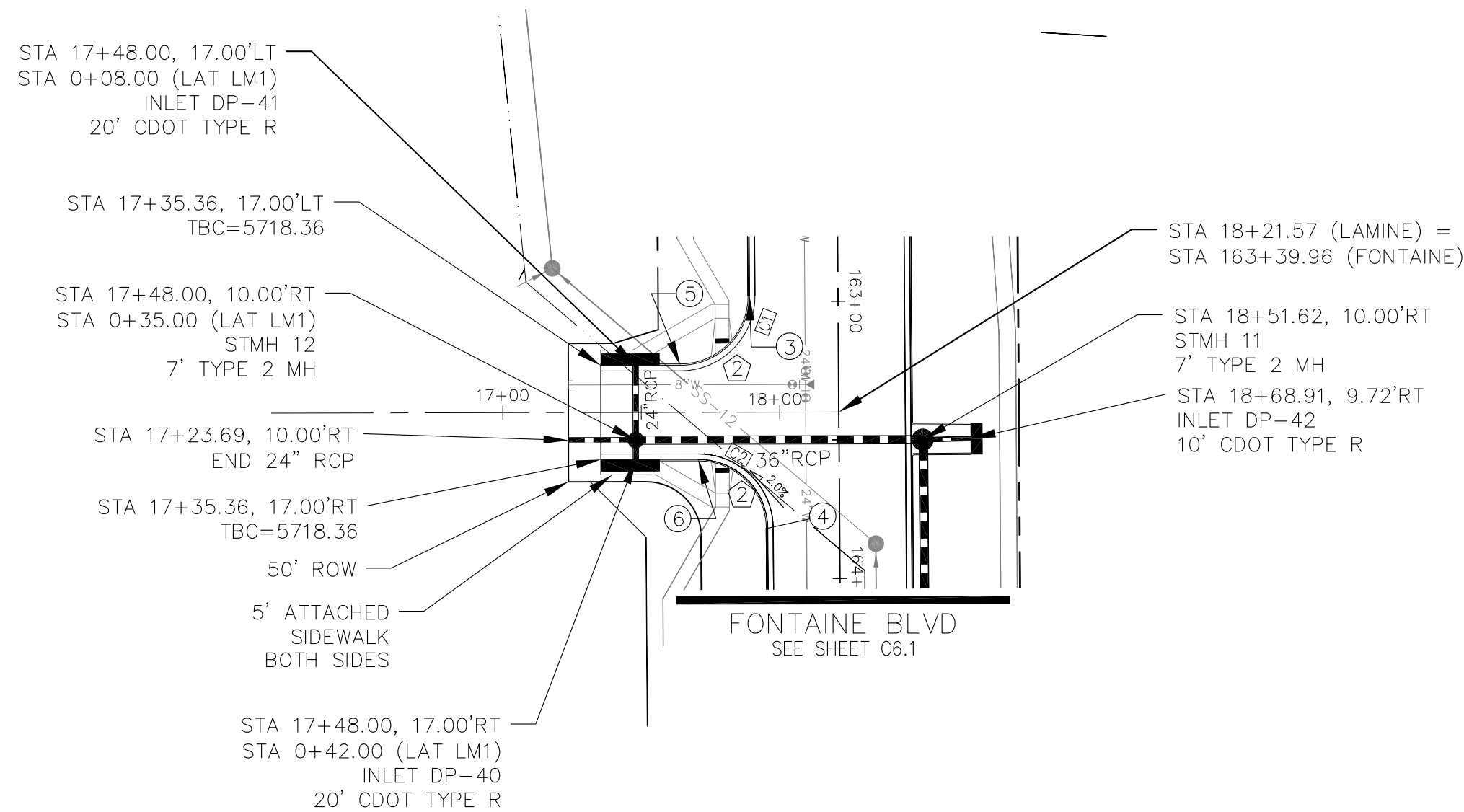
SHEET NUMBER
C6.6

TOTAL SHEETS: 34

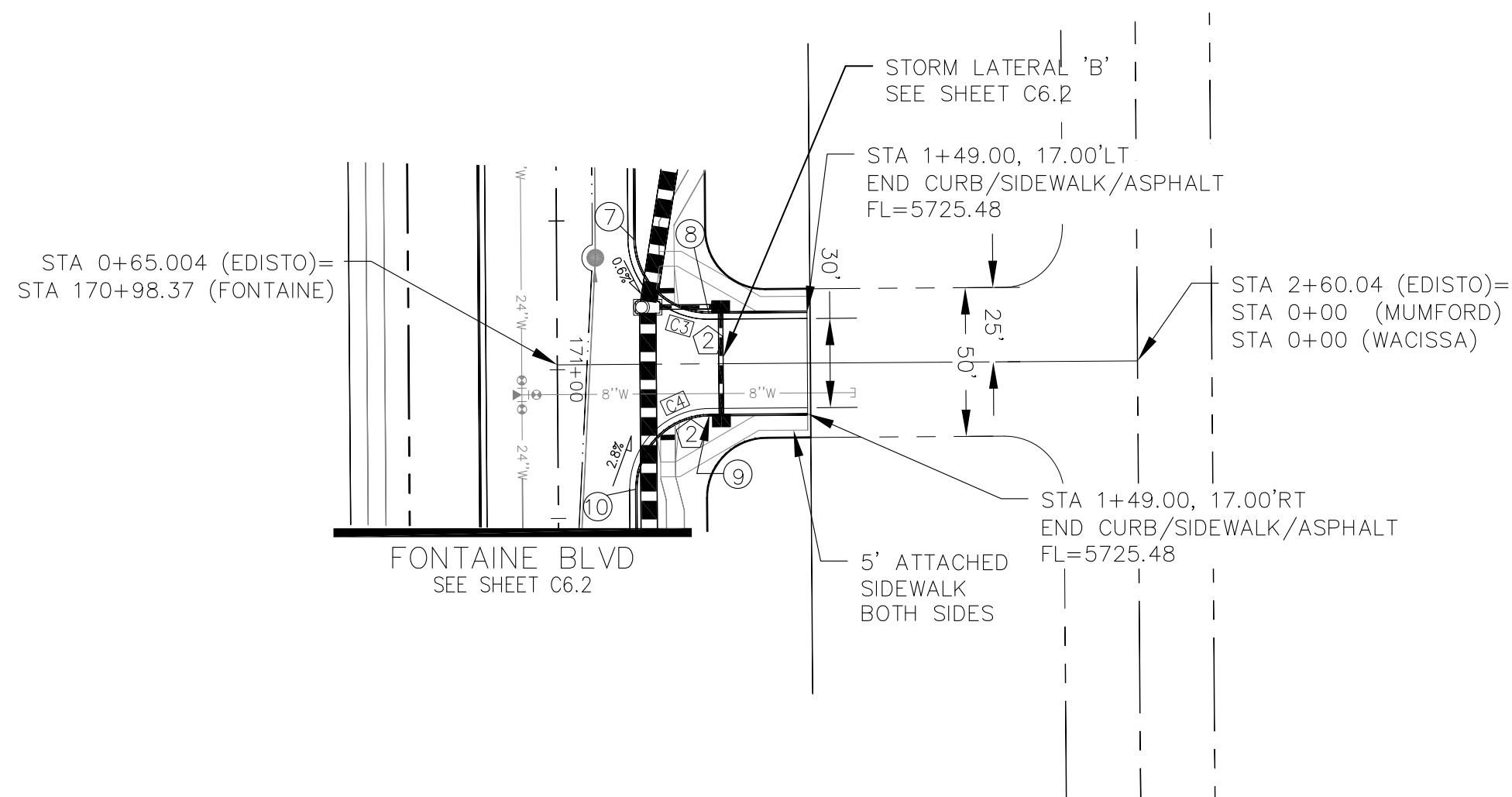
NOTES

1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
2. SEE EARLY GRADING PLAN FOR GRADING INFORMATION.
3. ALL STORM SEWER SHALL BE CLASS III RCP.
4. ALL MHs SHALL BE TYPE 1 UNLESS OTHERWISE NOTED.

- 1 CURVE DATA ID
2 PEDESTRIAN RAMP, SEE SHEET C10.1
3 CURB/GUTTER FLOW LINE POINTS

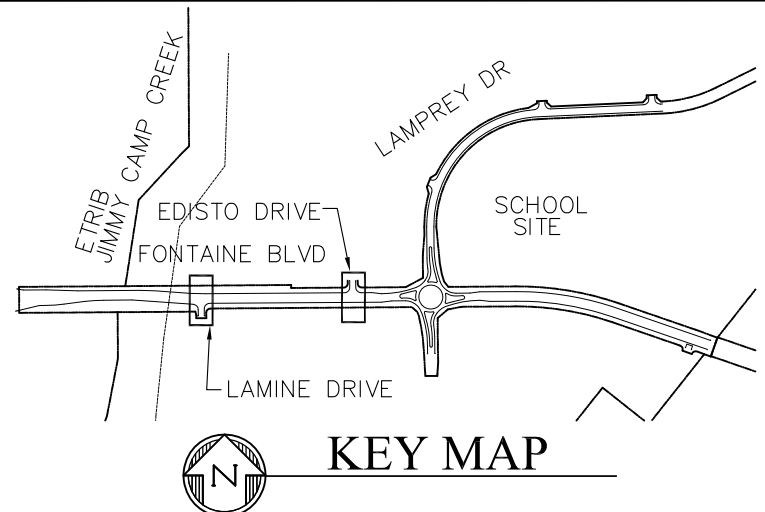


LAMINE DRIVE

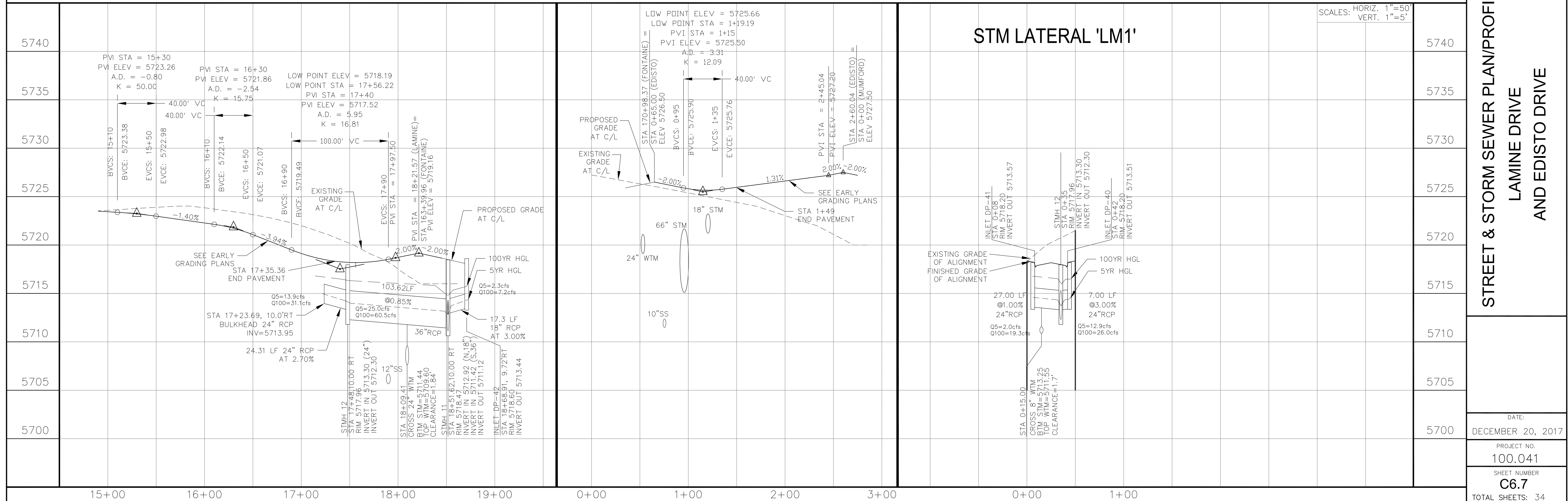
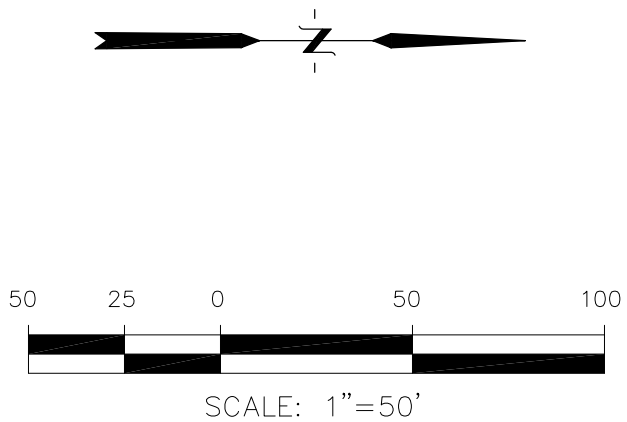


EDISTO DRIVE

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	39.40'	25.00	90°17'33"
C2	39.14'	25.00	89°42'27"
C3	39.27'	25.00	90°00'00"
C4	39.27'	25.00	90°00'00"

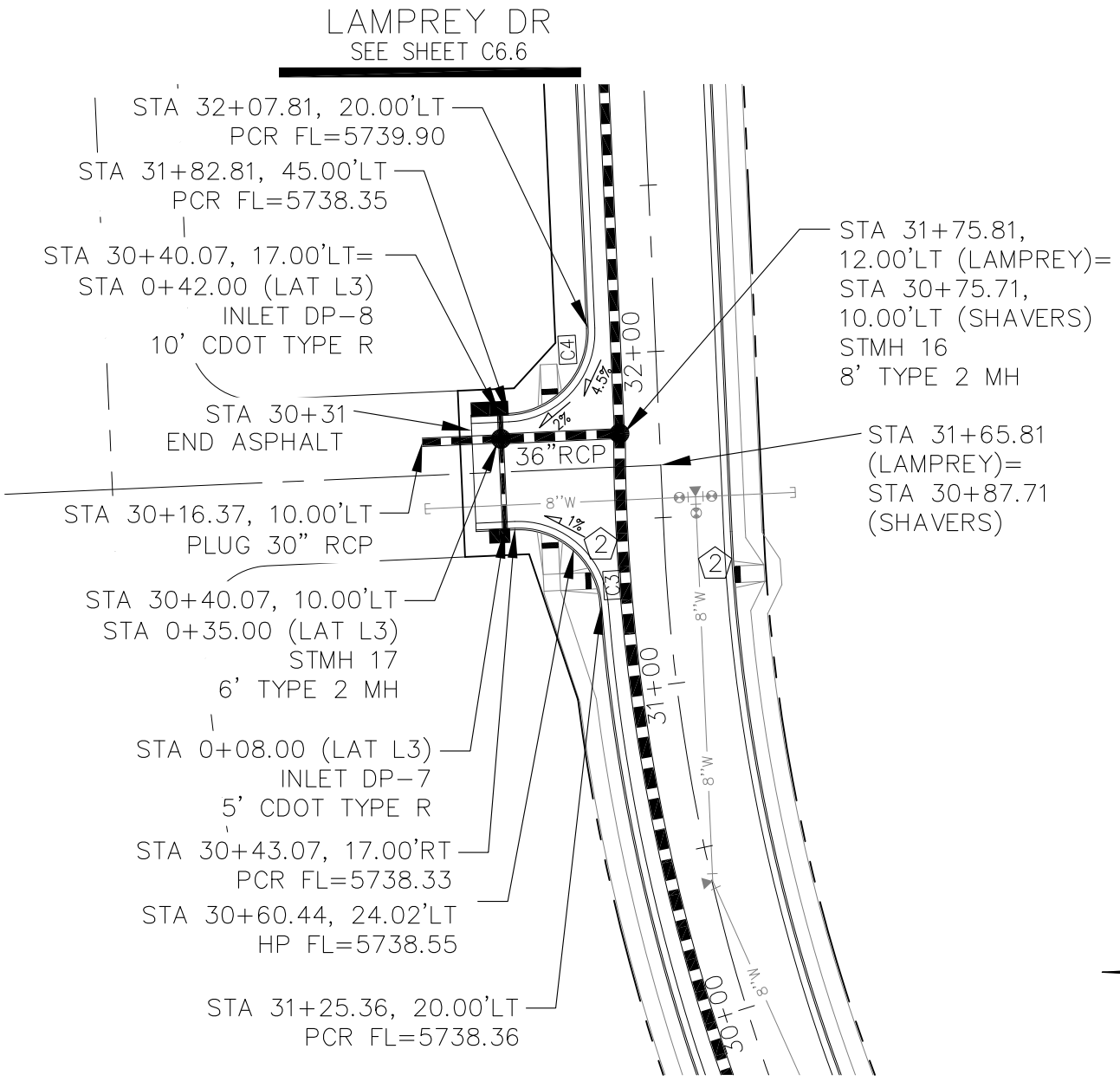
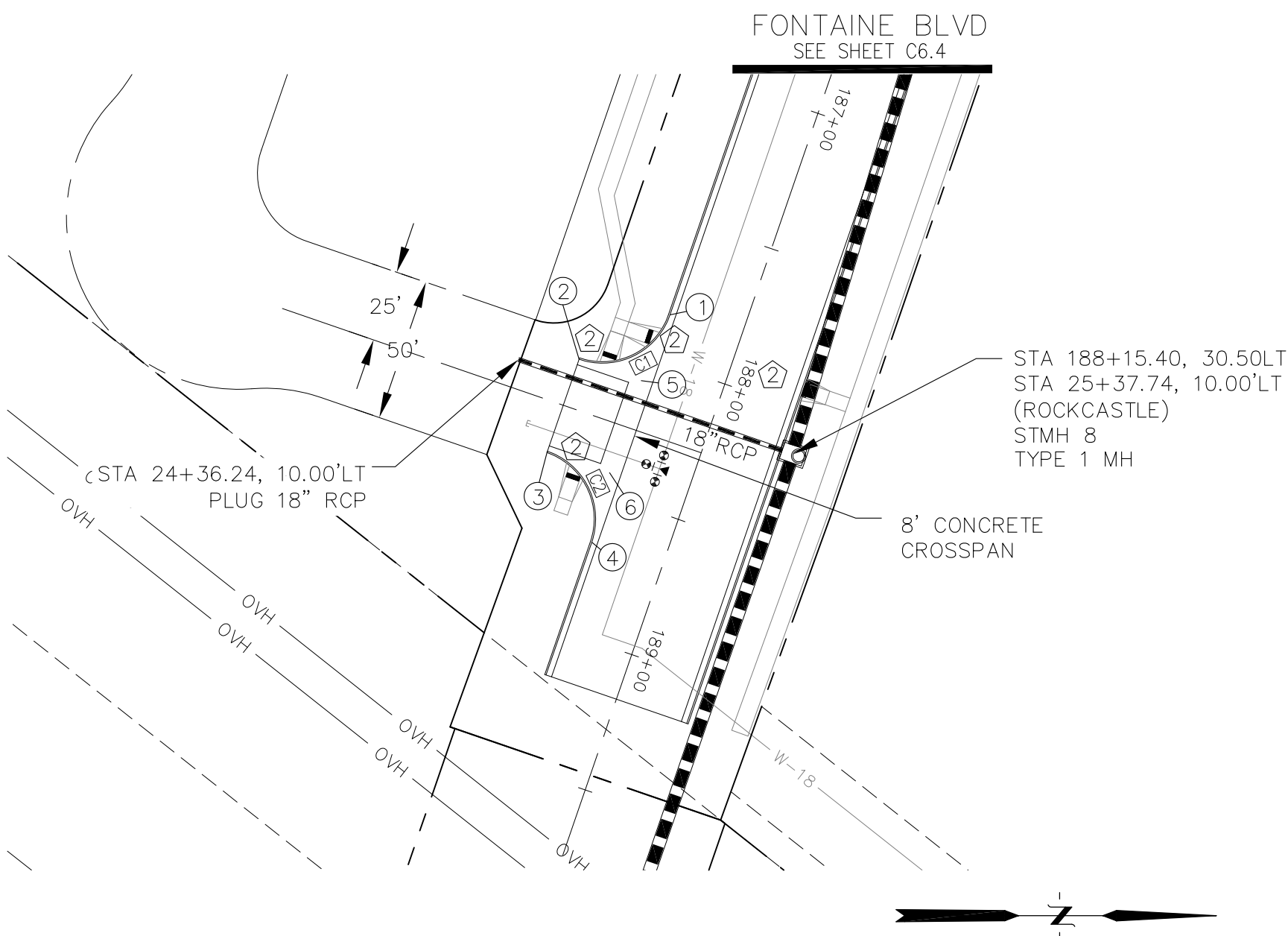


FL CURB/GUTTER TABLE			
POINT	STA/OFFSET		FLOWLINE
3	163+01.50, 32.16'RT		5718.51
4	163+81.70, 26.0'RT		5718.57
5	17+65.87, 17.00'LT		5717.74
6	17+70.57, 17.00'RT		5717.78
7	170+56.37, 26.00'LT		5725.42
8	1+16.00, 17.00'LT		5725.20
9	1+16.00, 17.00'RT		5725.20
10	171+40.37, 26.00'LT		5726.30



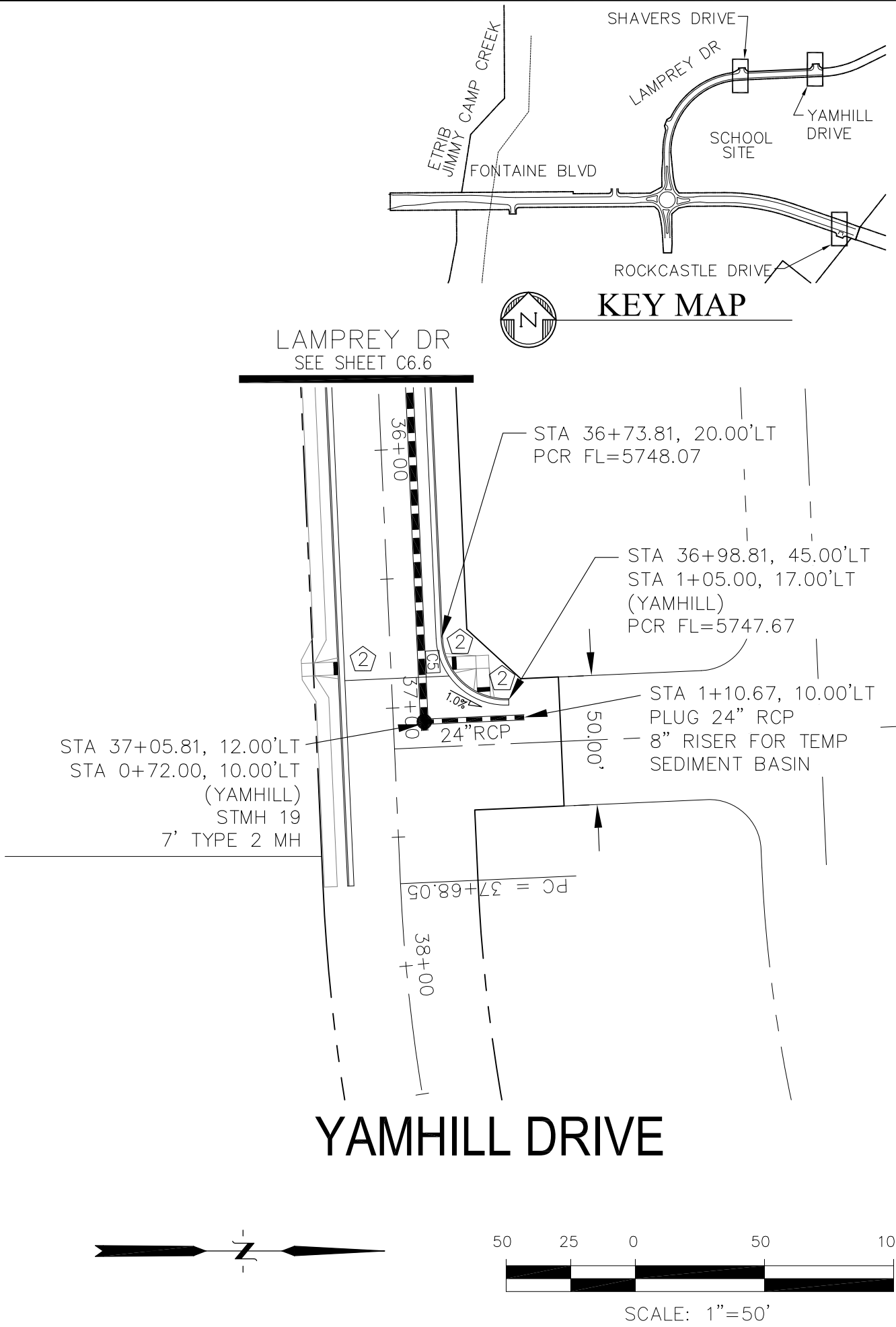
- NOTES
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
 2. SEE EARLY GRADING PLAN FOR GRADING INFORMATION.
 3. ALL STORM SEWER SHALL BE CLASS III RCP.
 4. ALL MHS SHALL BE TYPE 1 UNLESS OTHERWISE NOTED.

- ① CURVE DATA ID
- ② PEDESTRIAN RAMP, SEE SHEET C10.1
- ③ CURB/GUTTER FLOW LINE POINTS



FL CURB/GUTTER TABLE			
POINT	STA/OFFSET	FLOWLINE	
1	187+83.40, 26.00'RT	5748.29	
2	24+56.24, 17.00'LT	5748.85	
3	24+56.24, 17.00'RT	5749.10	
4	188+67.40, 26.00'RT	5749.17	
5	188+08.40, 28.00'RT	5748.55	
6	188+42.40, 28.00'RT	5748.91	

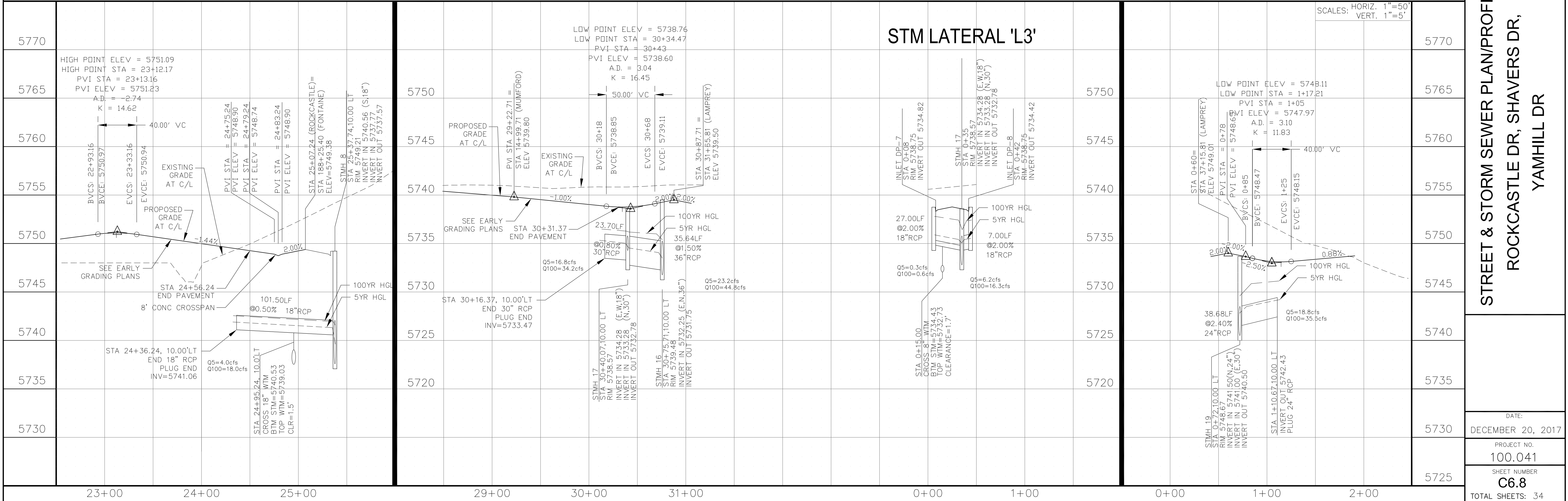
CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	39.27'	25.00	90°00'00"
C2	39.27'	25.00	90°00'00"
C3	38.41'	25.00	88°01'11"
C4	39.27'	25.00	90°00'00"
C5	39.27'	25.00	90°00'00"



ROCKCASTLE DRIVE

SHAVERS DRIVE

YAMHILL DRIVE



CORE

ENGINEERING GROUP

15004 1ST AVENUE S,
SUITE 301
DENVER, CO 80202
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: rich@ceg.com

DATE:

NO.:

DRAWN: RLS

DESIGNED: RLS

CHECKED: RLS

PROJECT:

FOR: LORSON, LLC

212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

STREET & STORM SEWER PLAN/PROFILE

ROCKCASTLE DR, SHAVERS DR,
YAMHILL DR

DATE:
DECEMBER 20, 2017

PROJECT NO.
100.041

SHEET NUMBER
C6.8

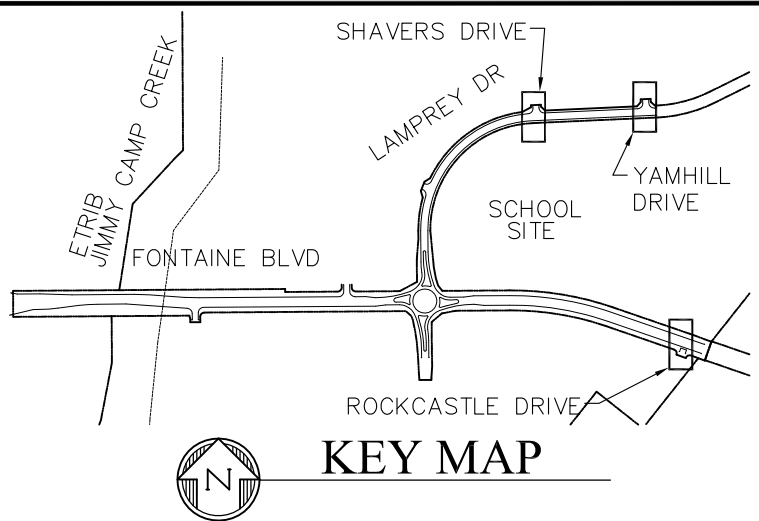
TOTAL SHEETS: 34

- NOTES
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
 2. SEE EARLY GRADING PLAN FOR GRADING INFORMATION.
 3. ALL STORM SEWER SHALL BE CLASS III RCP.
 4. ALL MHS SHALL BE TYPE 1 UNLESS OTHERWISE NOTED.

- ① CURVE DATA ID
- ② PEDESTRIAN RAMP, SEE SHEET C10.1
- ③ CURB/GUTTER FLOW LINE POINTS

FL CURB/GUTTER TABLE		
POINT	STA/OFFSET	FLOWLINE
1	24+49.11, 20.00'LT	5729.82
2	6+49.93, 17.00'RT	5728.94
3	6+49.93, 17.00'LT	5728.94
4	25+26.98, 20.00'LT	5729.62

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	37.55'	25.00	86°03'07"
C2	37.55'	25.00	86°03'07"



COLORADO SPRINGS UTILITIES
WATER PLAN DESIGN APPROVAL

APPROVED BY: _____

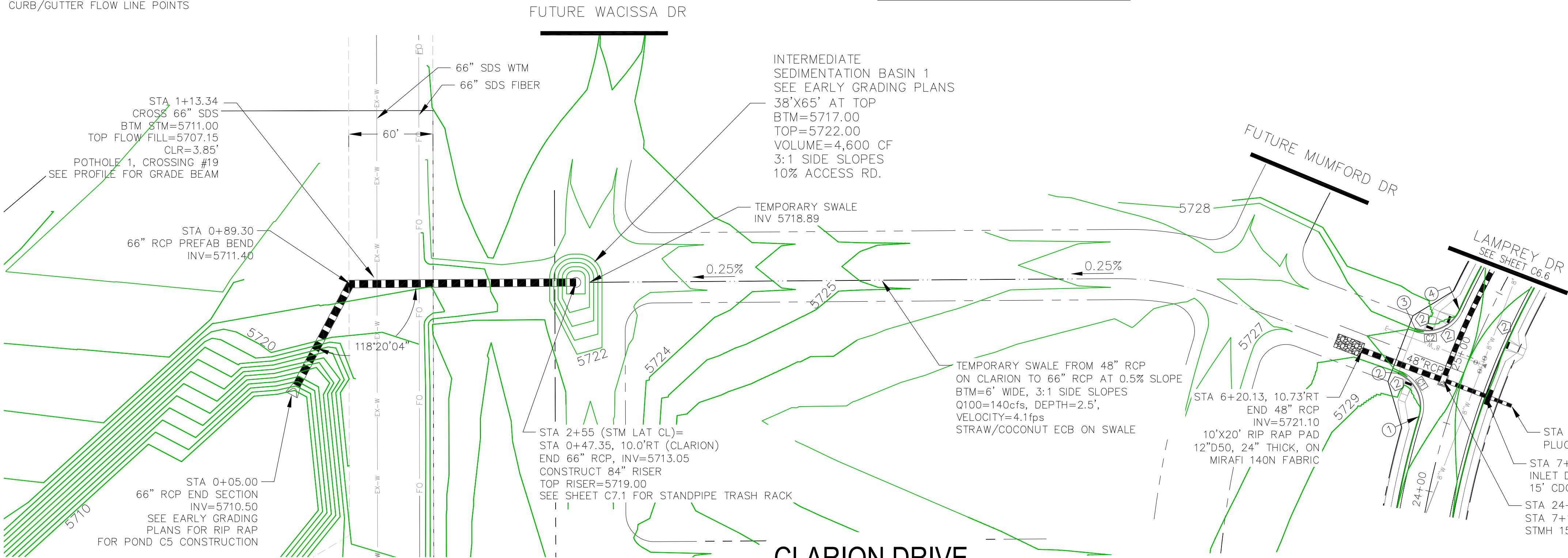
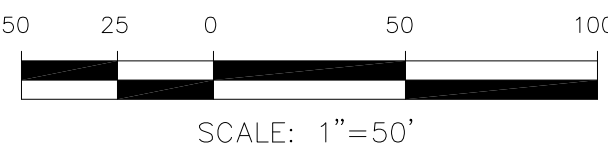
DATE: _____

PROJECT NUMBER: 2017-

WORK ORDER NUMBER:

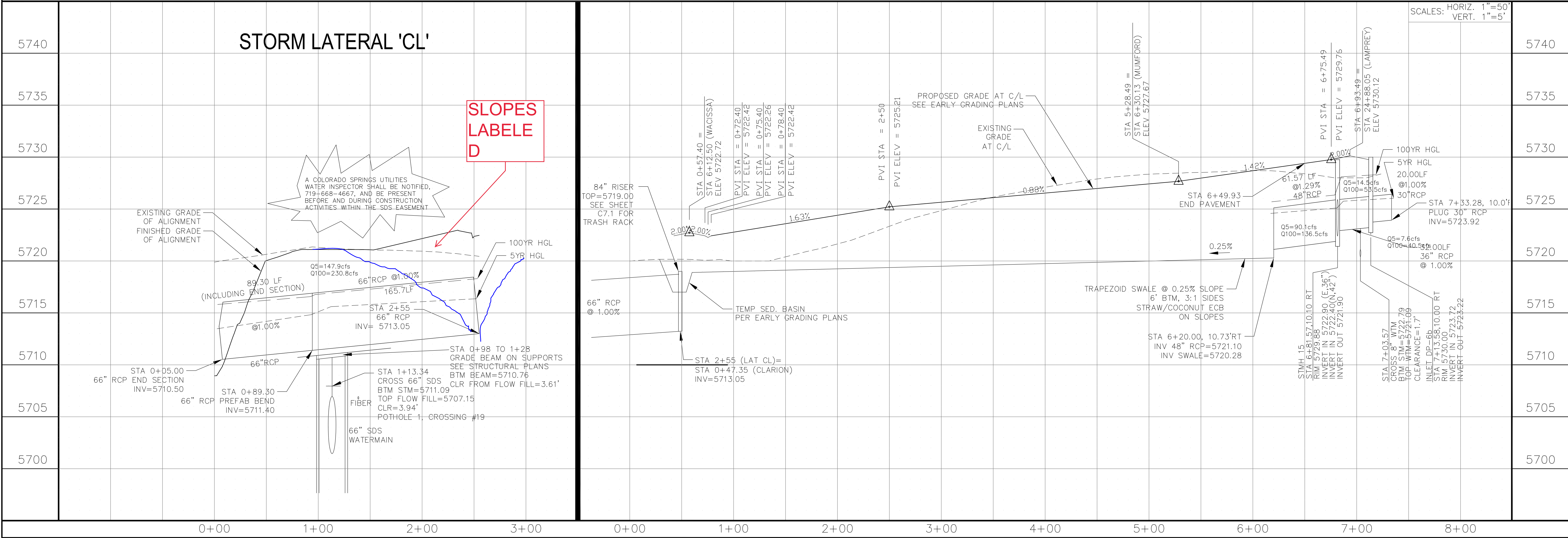
CSU SHEET ____ OF ____

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.



STORM LATERAL 'CL'

SLOPES
LABEL
D



CORE

ENGINEERING GROUP

15004 1ST AVENUE S,
SUITE 100
DENVER, CO 80202
PHONE: 303.750.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg.com

DATE

DESCRIPTION

NO.

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
**FONTAINE BLVD IN
LORSON RANCH EAST**
FONTAINE BLVD.-OLD GLORY DR
COLORADO SPRINGS, COLORADO

STREET & STORM SEWER PLAN/PROFILE

CLARION DRIVE AND
STORM LATERAL 'CL'

DATE:
DECEMBER 20, 2017

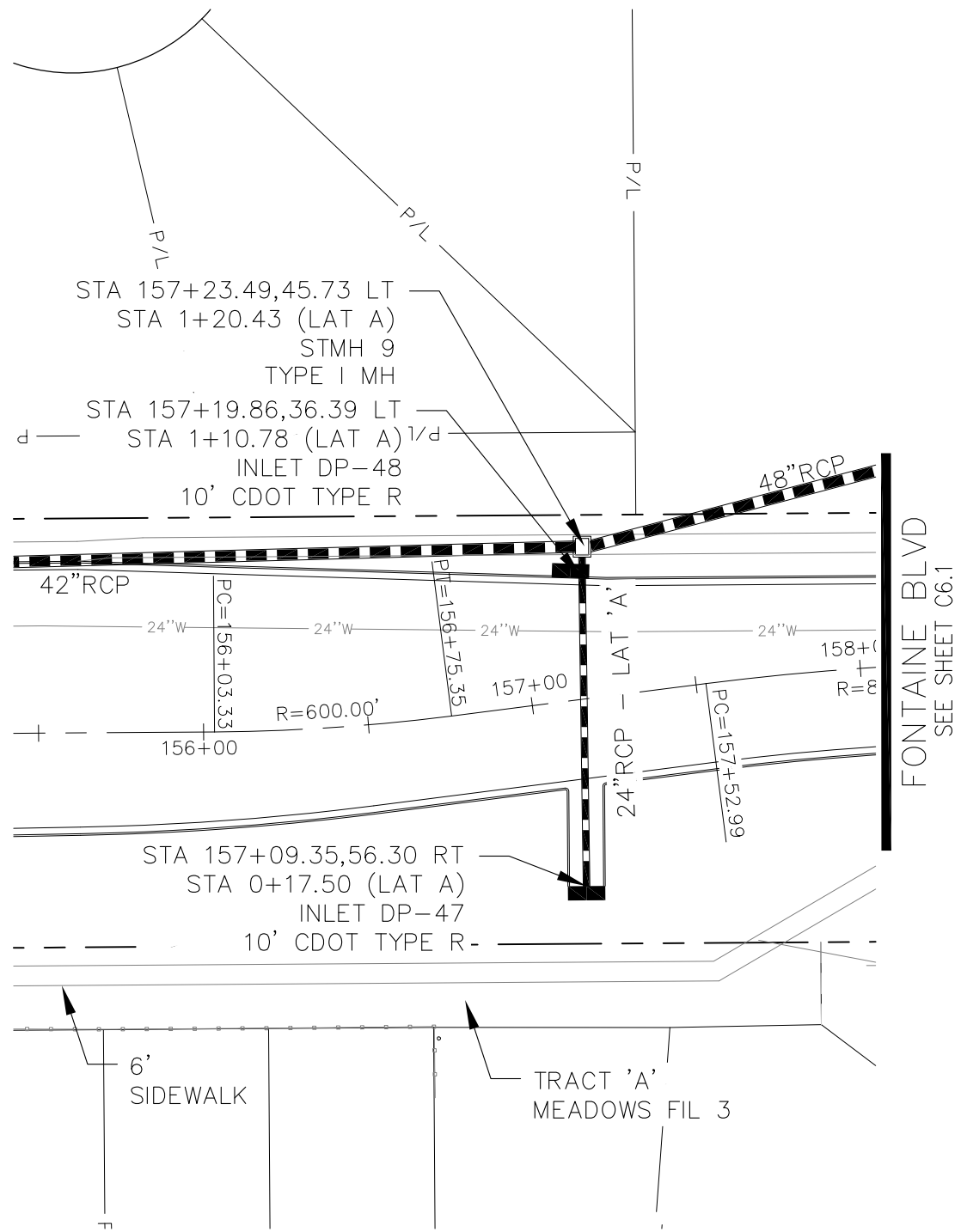
PROJECT NO.
100.041

SHEET NUMBER
C6.9

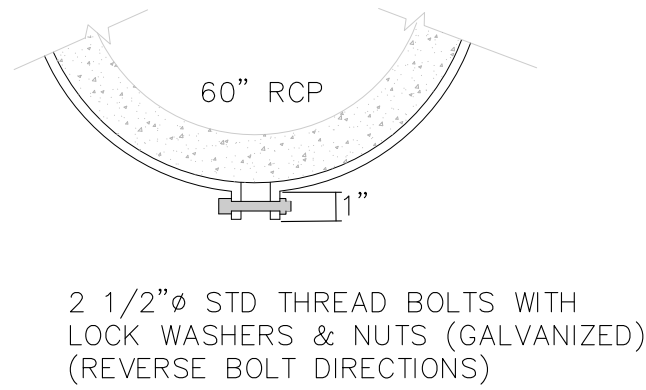
TOTAL SHEETS: 34

- NOTES
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
 2. SEE EARLY GRADING PLAN FOR GRADING INFORMATION.
 3. ALL STORM SEWER SHALL BE CLASS III RCP.
 4. ALL MHS SHALL BE TYPE 1 UNLESS OTHERWISE NOTED.

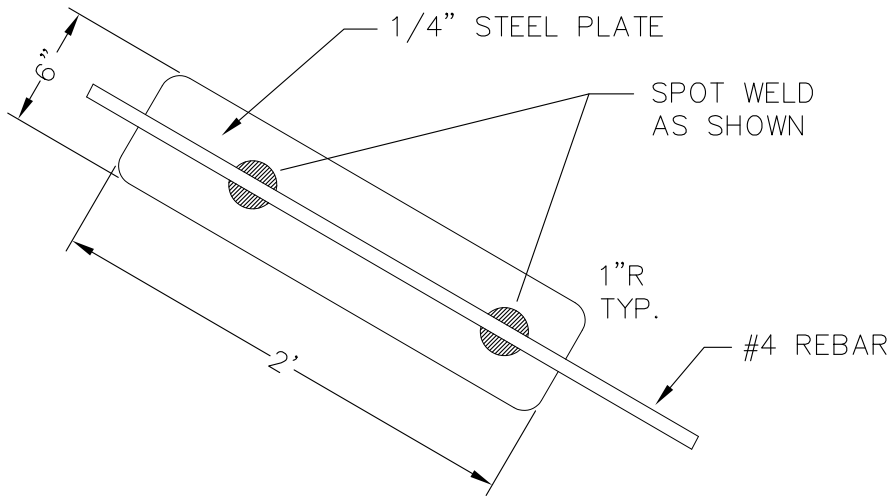
- 1 CURVE DATA ID
- 2 PEDESTRIAN RAMP, SEE SHEET C10.1
- 3 CURB/GUTTER FLOW LINE POINTS



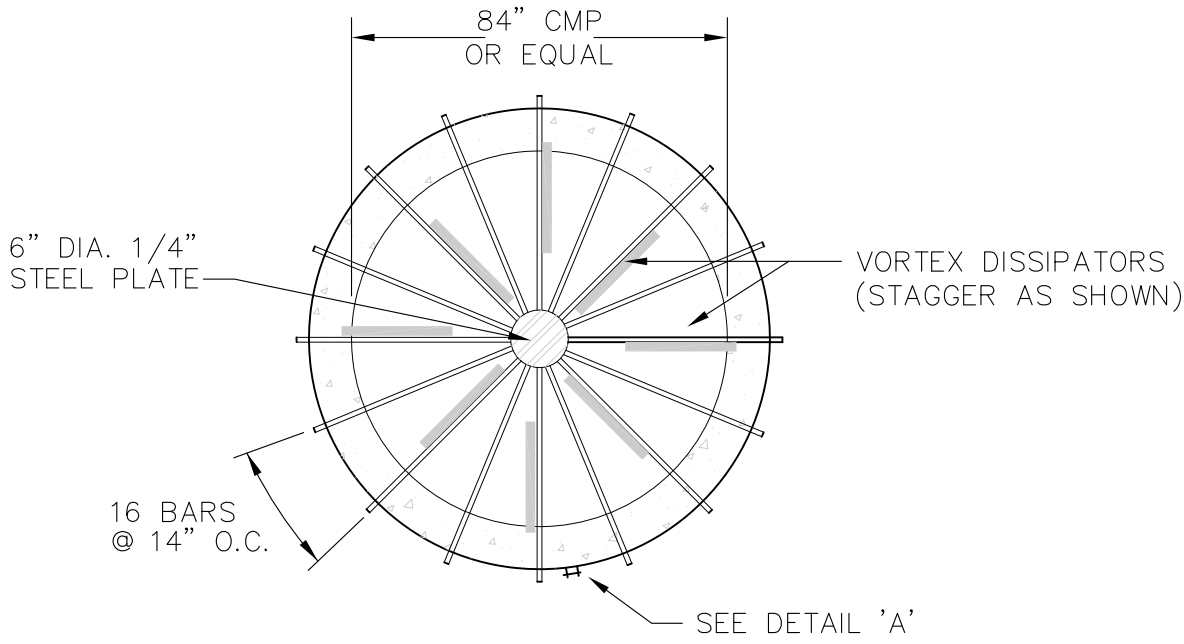
STORM LATERAL 'A'



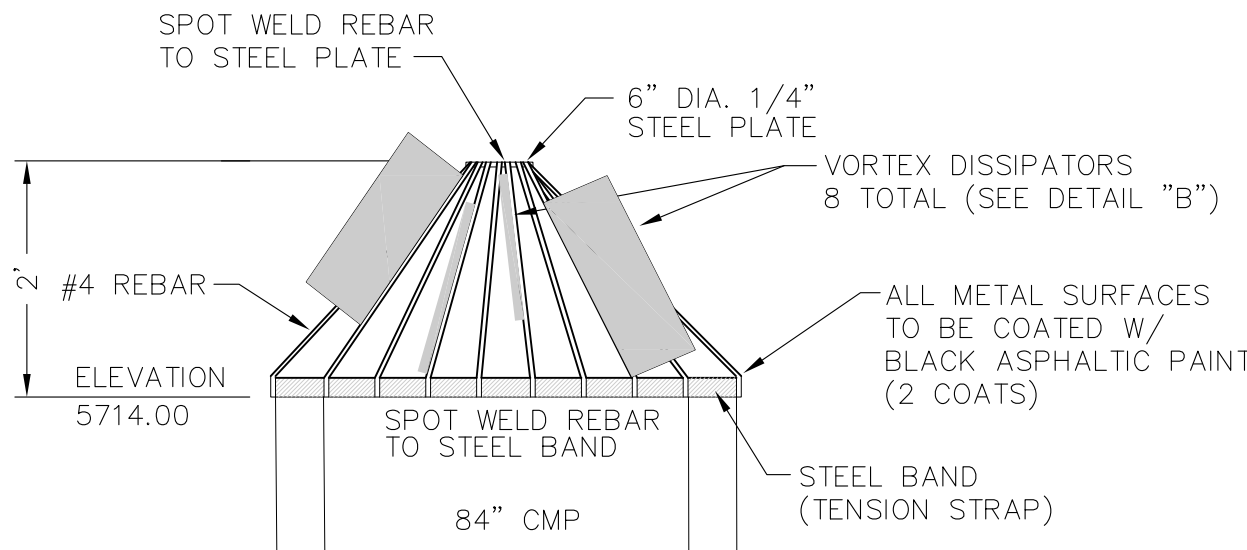
DETAIL 'A'



DETAIL 'B' VORTEX DISSIPATOR



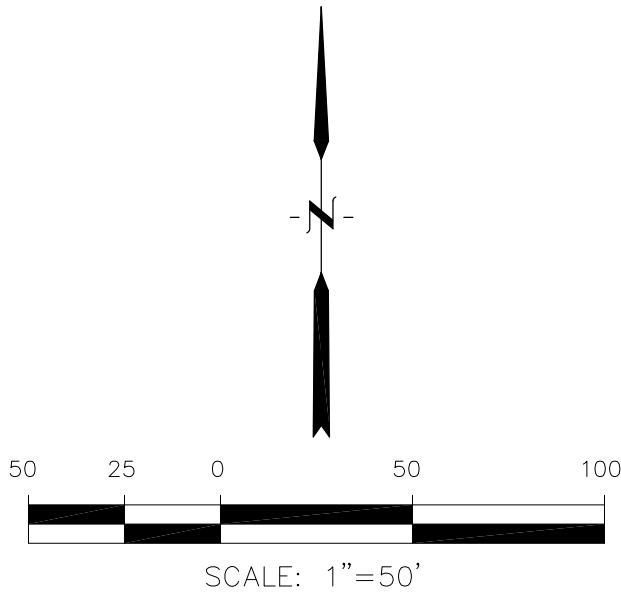
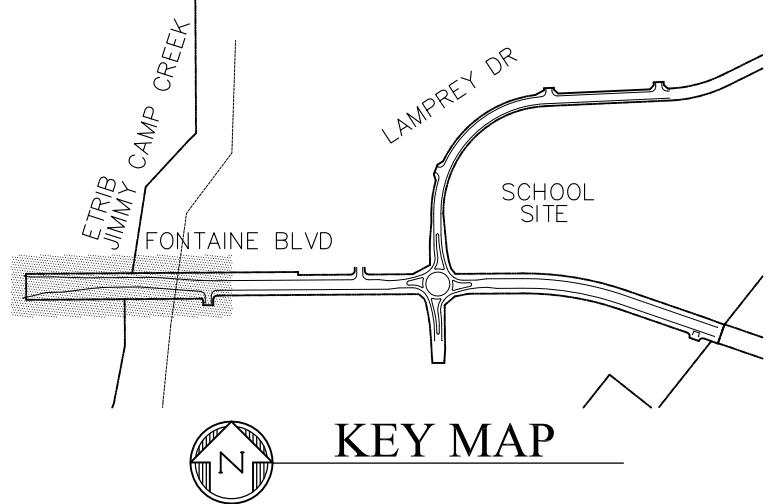
PLAN



ELEVATION

STAND PIPE TRASH RACK DETAILS
STORM LATERAL CL (SHEET C6.9)

NOT TO SCALE



CORE

ENGINEERING GROUP

15004 1ST AVENUE S,
DENVER, CO 80202
PHONE: 303.733.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

DATE

DESCRIPTION

NO.

PROJECT: FORN LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

STREET & STORM SEWER PLAN/PROF

FONTAINE BOULEVARD

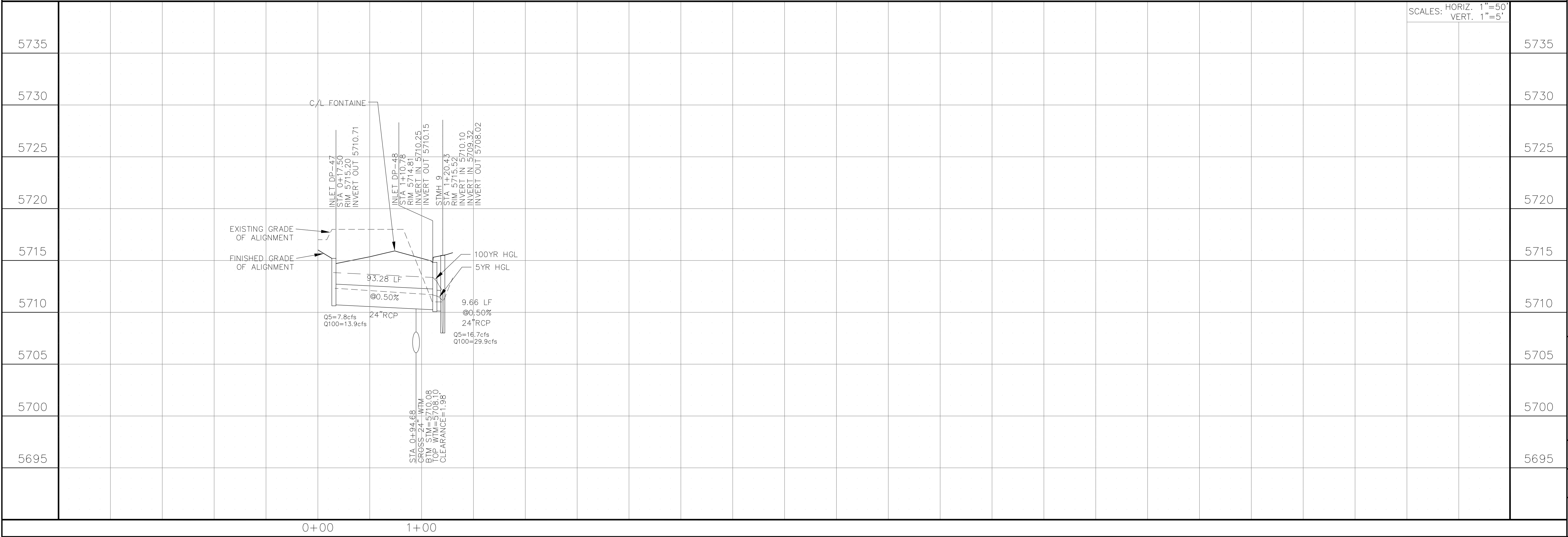
STORM LATERAL 'A'

DATE:
DECEMBER 20, 2017

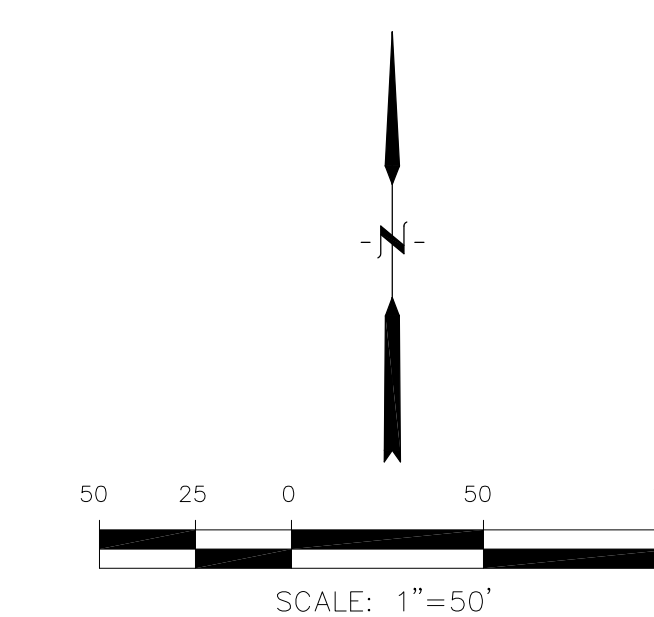
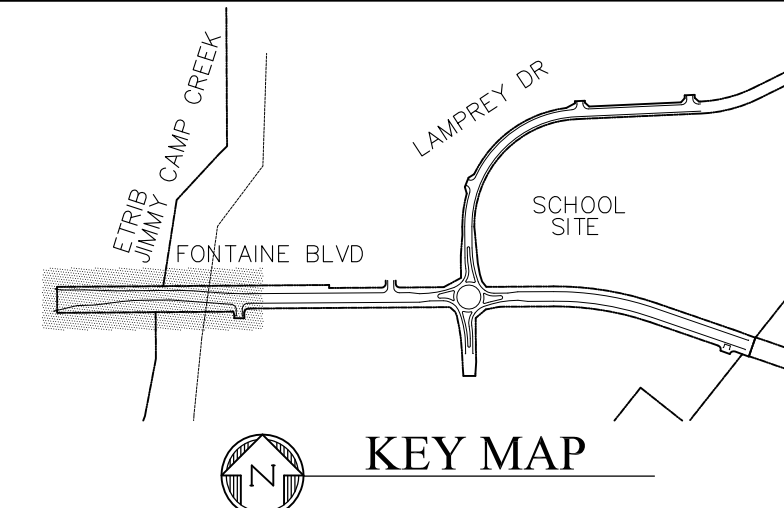
PROJECT NO.
100.041

SHEET NUMBER
C7.1

TOTAL SHEETS: 34



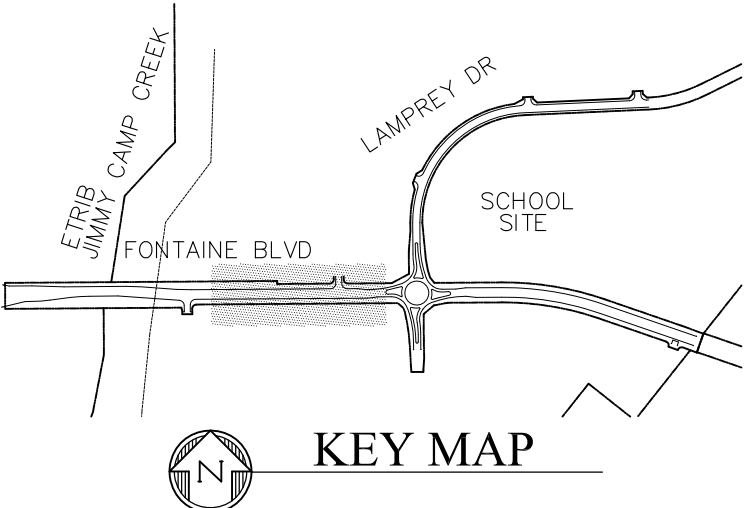
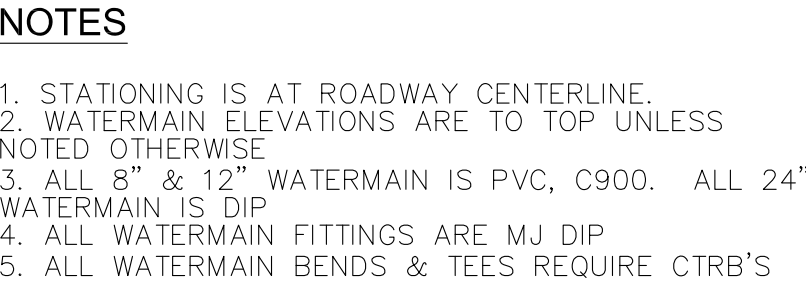
1. STATIONING IS AT ROADWAY CENTERLINE.
2. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE
3. ALL 8" & 12" WATERMAIN IS PVC, C900. ALL 24" WATERMAIN IS DIP
4. ALL WATERMAIN FITTINGS ARE MJ DIP
5. ALL WATERMAIN BENDS & TEES REQUIRE CTRB'S

[illegible]

WATERMAIN PLAN/PROFILE
FONTAINE BOULEVARD
STA 153+00 TO 164+00

DATE:	DECEMBER 20, 2017
PROJECT NO.	100.041
SHEET NUMBER	C8.1
TOTAL SHEETS:	34

[illegible]



COLORADO SPRINGS UTILITIES WATER PLAN DESIGN APPROVAL

APPROVED BY: _____

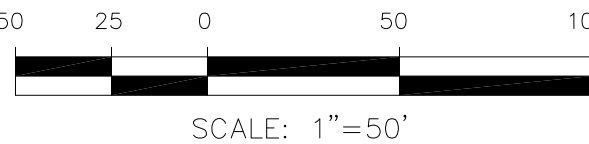
DATE: _____

PROJECT NUMBER: 2017-

WORK ORDER NUMBER:

CSU SHEET ____ OF ____

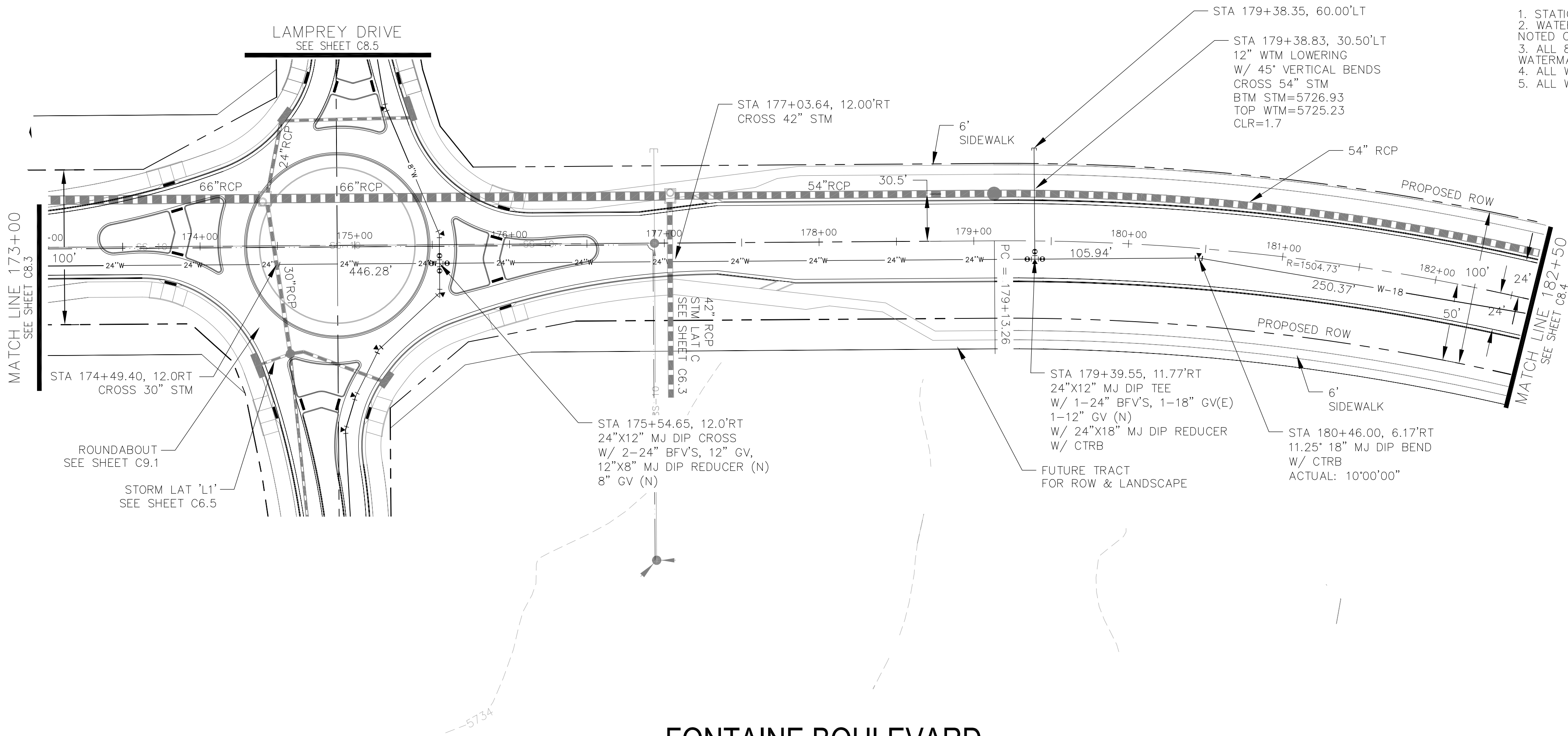
APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND
RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS
REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.



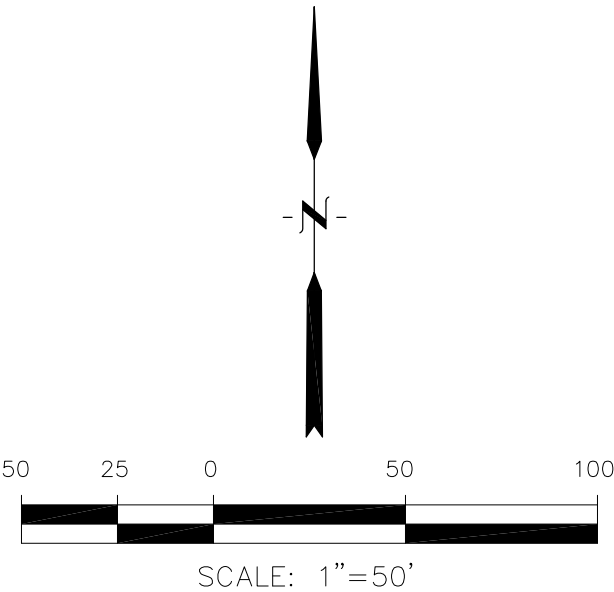
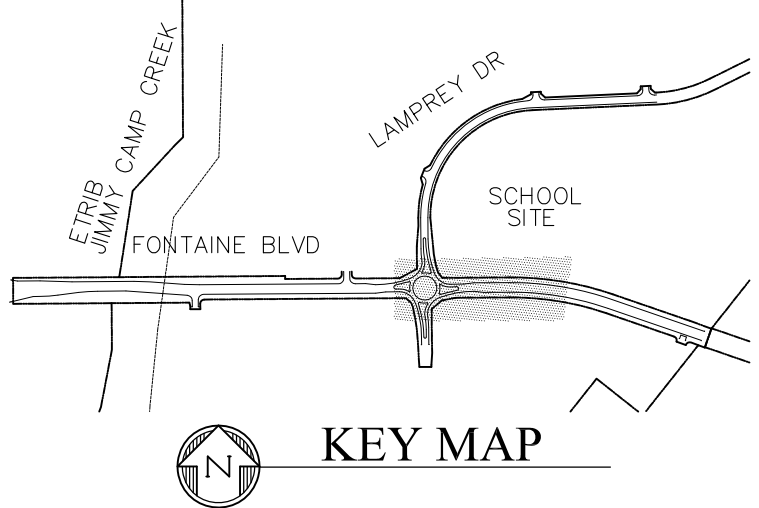
FONTAINE BOULEVARD

[illegible]

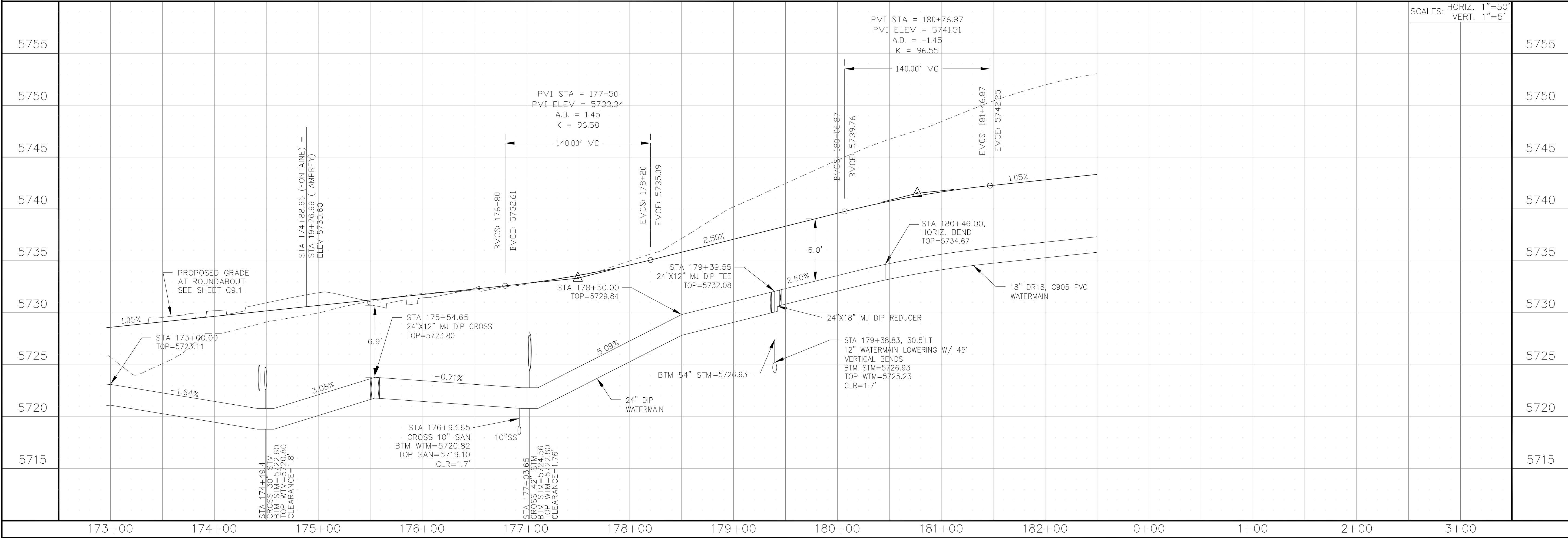
<div>WATERMAIN PLAN/PROFILE</div> <div>FONTAINE BOULEVARD</div> <div>STA 164+00 TO 173+00</div>	DATE:		DECEMBER 20, 2017	
	PROJECT NO.		100.041	
	SHEET NUMBER		C8.2	
	TOTAL SHEETS:		34	
	DRAWN: RLS DESIGNED: RLS CHECKED: RLS		PROJECT: FONTAINE BLVD IN LORSON RANCH EAST FONTAINE BLVD.-OLD GLORY DR COLORADO SPRINGS, COLORADO	
NO.		DESCRIPTION		DATE
		PREPARED FOR: LORSON, LLC 212 N. WAHSATCH AVE. SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: JEFF MARI		15004 1ST AVENUE S. BIRMINGHAM, AL 35306 PHONE: 205.976.1100 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@eg1.com



- NOTES**
1. STATIONING IS AT ROADWAY CENTERLINE.
 2. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE
 3. ALL 8" & 12" WATERMAIN IS PVC, C900. ALL 24" WATERMAIN IS DIP
 4. ALL WATERMAIN FITTINGS ARE MJ DIP
 5. ALL WATERMAIN BENDS & TEES REQUIRE CTRB'S

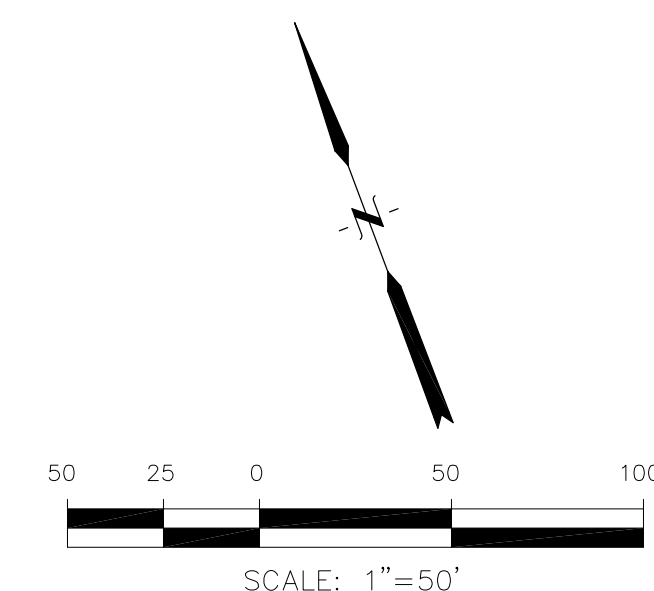
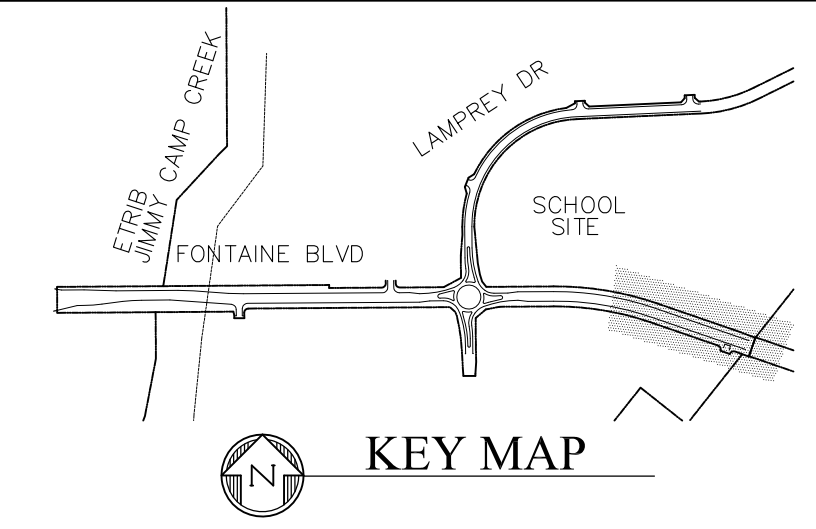


FONTAINE BOULEVARD



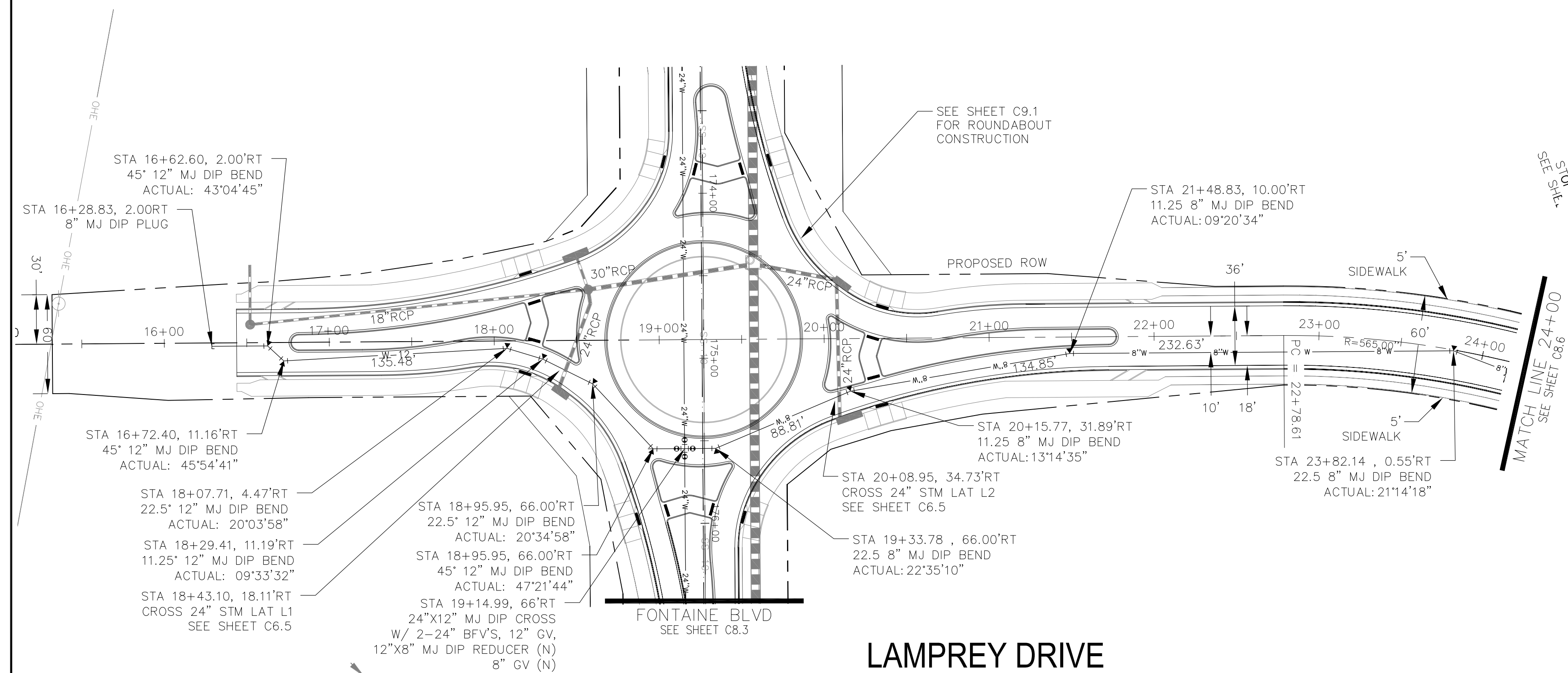
CORE ENGINEERING GROUP 15004 1ST AVENUE S. DENVER, CO 80202 PHONE: 303.750.1100 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@ceg1.com	
DATE: _____	DESCRIPTION: _____
NO: _____	PROJECT: FONTAINE BLVD IN LORSON, LLC 212 N. WAHSATCH AVE. SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: JEFF MARK
DRAWN: RLS	DESIGNED: RLS
CHECKED: RLS	
WATERMAIN PLAN/PROFILE FONTAINE BOULEVARD STA 173+00 TO 182+50	
DATE: DECEMBER 20, 2017	
PROJECT NO. 100.041	
SHEET NUMBER C8.3	
TOTAL SHEETS: 34	

1. STATIONING IS AT ROADWAY CENTERLINE.
2. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE
3. ALL 8" & 12" WATERMAIN IS PVC, C900. ALL 24" WATERMAIN IS DIP
4. ALL WATERMAIN FITTINGS ARE MJ DIP
5. ALL WATERMAIN BENDS & TEES REQUIRE CTRB'S

[illegible]

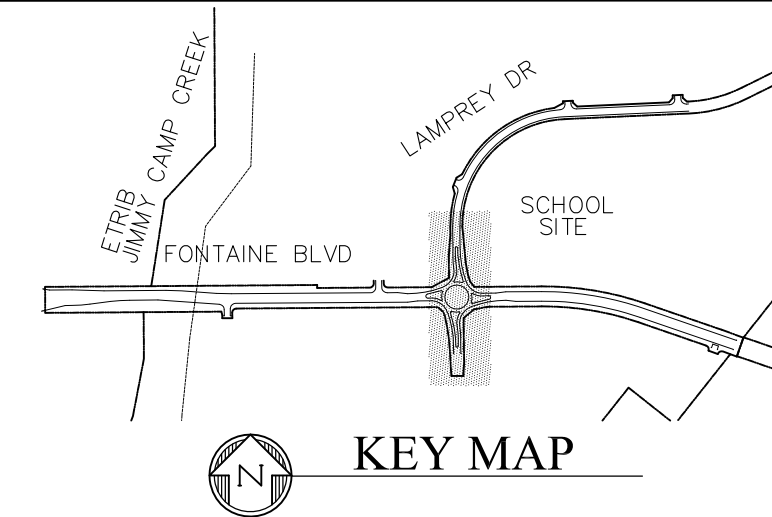
DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

DATE:	
DECEMBER 20, 2017	
PROJECT NO.	
100.041	
SHEET NUMBER	
C8.4	
TOTAL SHEETS: 34	

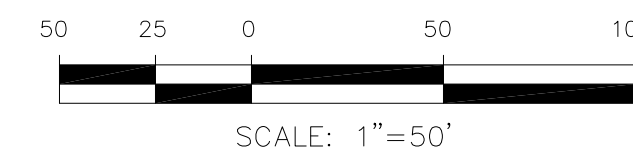


NOTES

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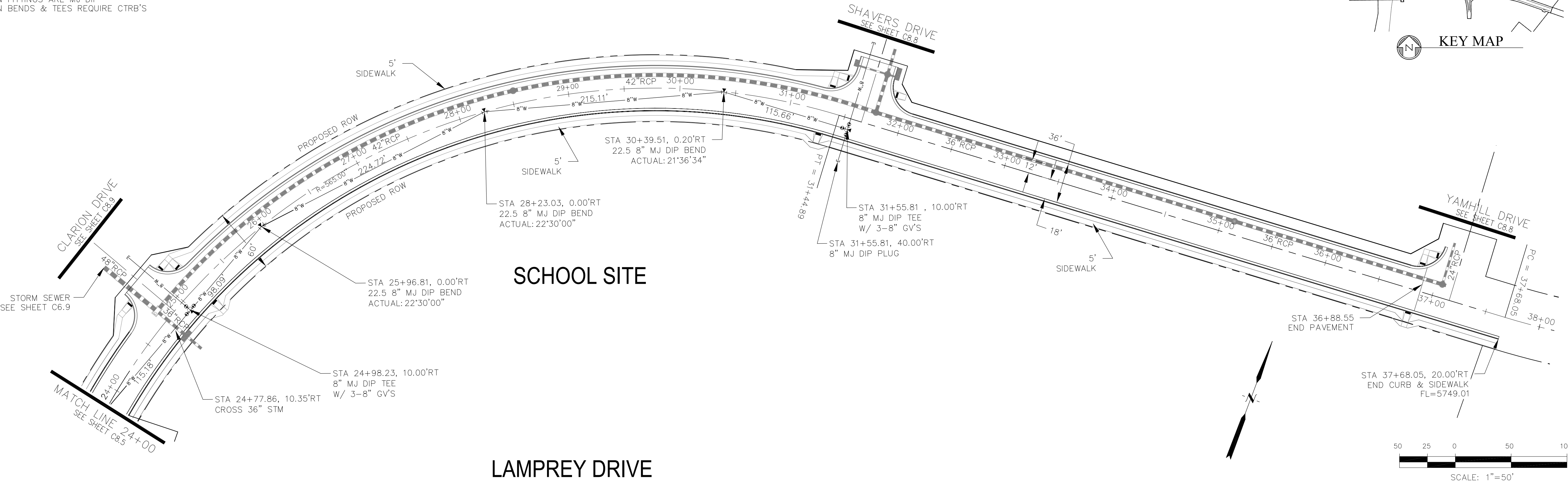
KEY MAP



WATERMAIN PLAN/PROFILE LAMPREY DRIVE STA 16+00 TO 24+00	DATE:		PROJECT NO.		SHEET NUMBER		TOTAL SHEETS: 34	
	DECEMBER 20, 2017		100.041		C8.5			
	DRAWN: RLS		PROJECT: RLS		NO.		DATE	
	DESIGNED: RLS		CHECKED: RLS		DESCRIPTION			
					PREPARED FOR:		CORE ENGINEERING GROUP	
					FONTAINE BLVD IN		15004 1ST AVENUE S.	
					LORSON RANCH EAST		BURNSVILLE, MN 55306	
					FONTAINE BLVD.-OLD GLORY DR		CONTACT: RICHARD L. SCHINDLER, P.E.	
					COLORADO SPRINGS, COLORADO		EMAIL: Rich@ceg1.com	
					(719) 635-3200			
				CONTACT: JEFF MARK				

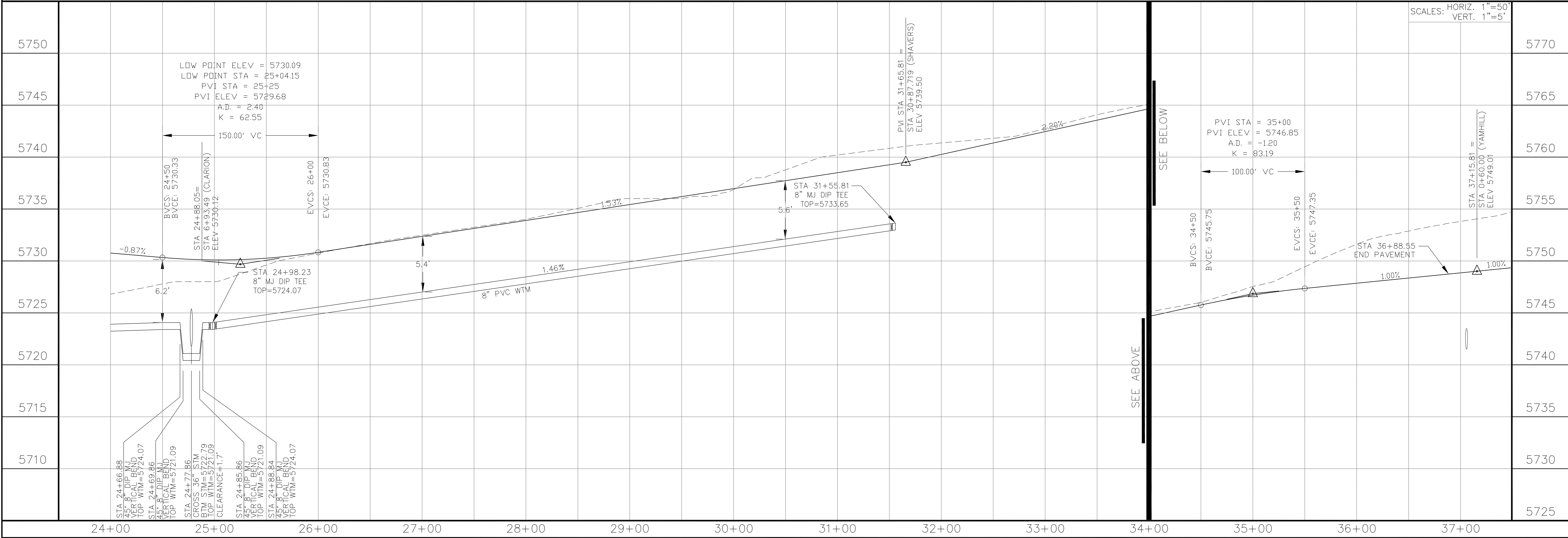
NOTES

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SCHOOL SITE

LAMPREY DRIVE



CORE
ENGINEERING GROUP

15004 1ST AVENUE S,
DENVER, CO 80202
PHONE: 303.750.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: rich@ceg.com

DATE

DESCRIPTION

NO.

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

PROJECT:
FOR: LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
FOR: LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

WATERMAIN PLAN/PROFILE
LAMPREY DRIVE
STA 24+00 TO 37+15.81

DATE:
DECEMBER 20, 2017

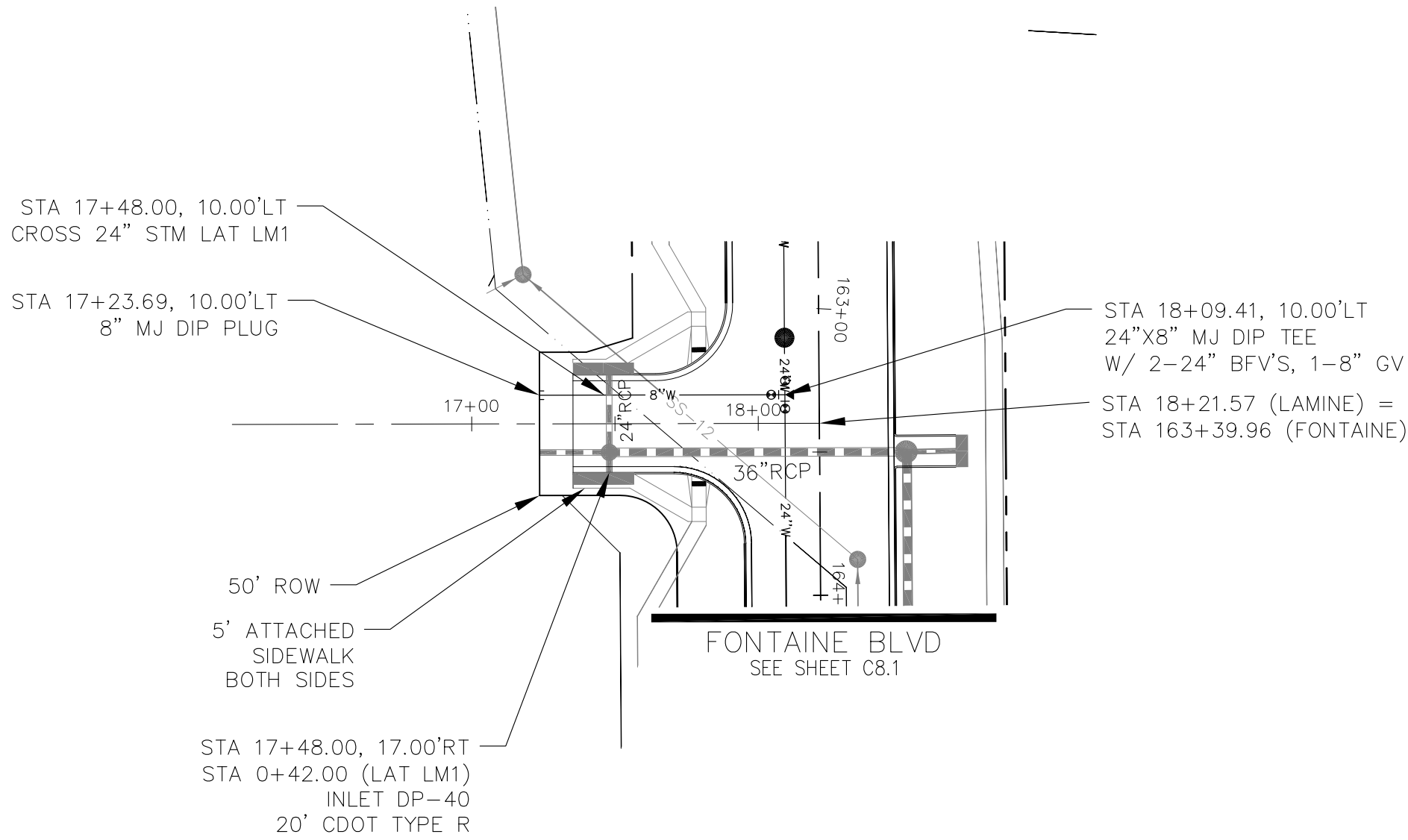
PROJECT NO.
100.041

SHEET NUMBER
C8.6

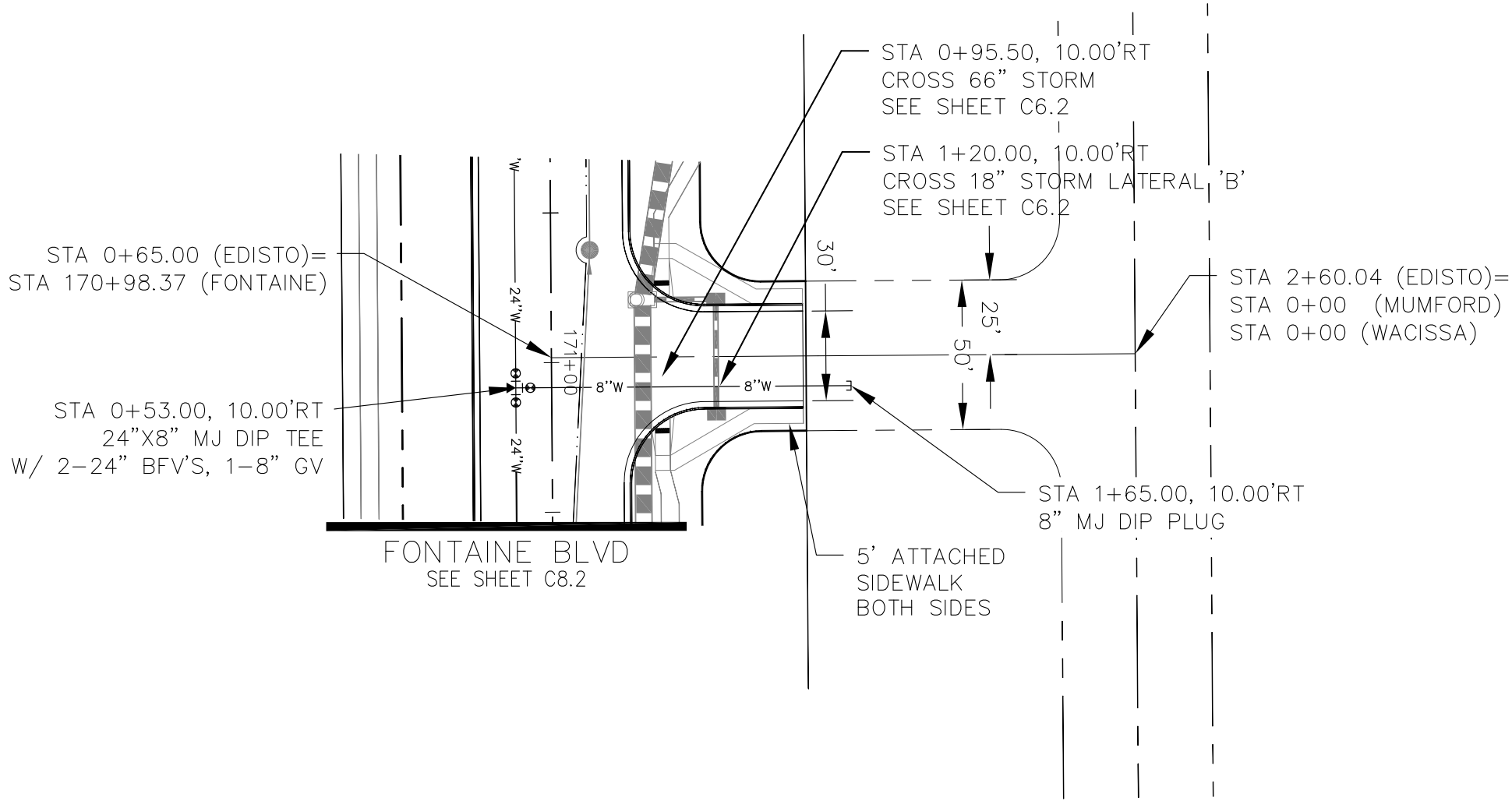
TOTAL SHEETS: 34

NOTES

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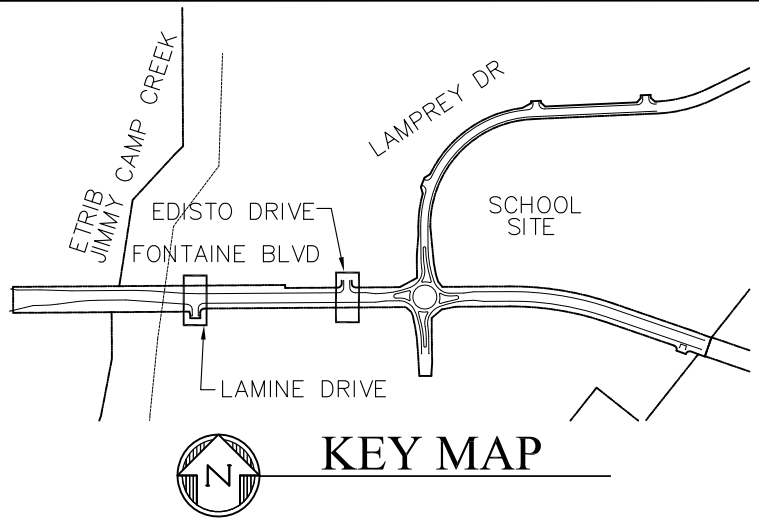


LAMINE DRIVE

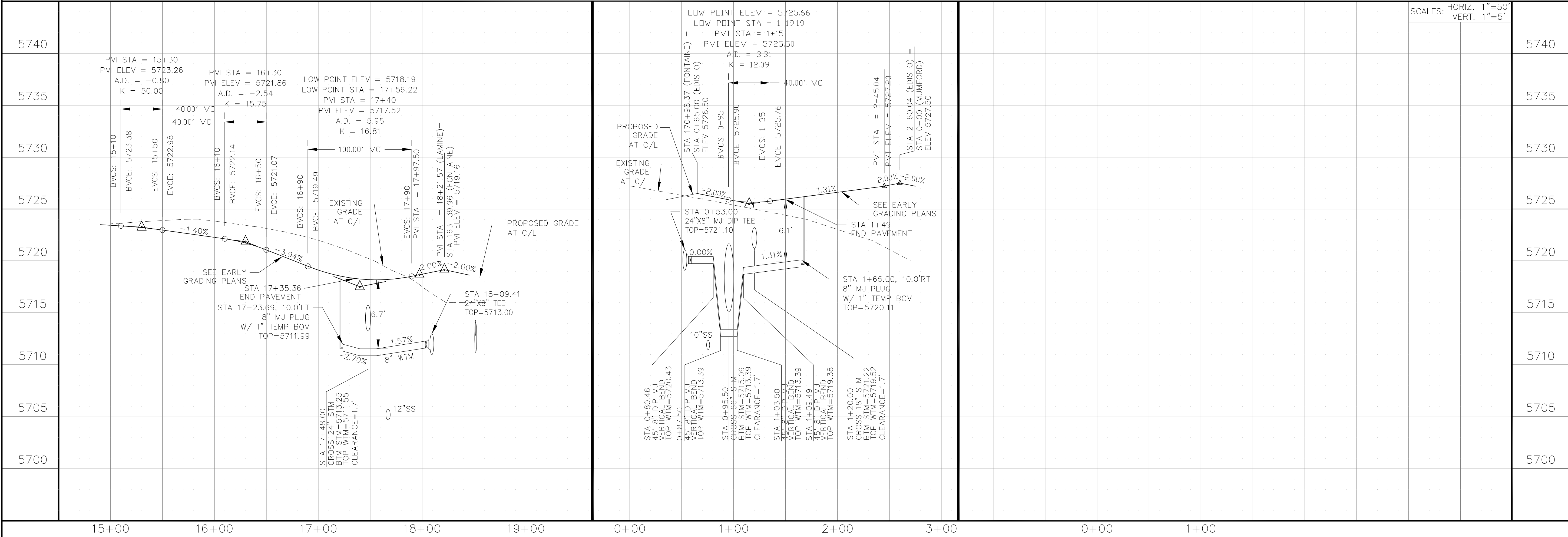
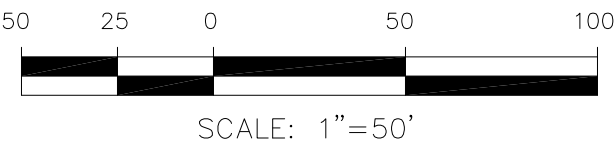
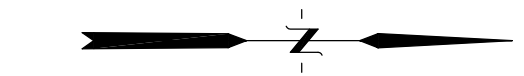


EDISTO DRIVE

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	37.46'	25.00	85°50'39"
C2	39.14'	25.00	89°42'27"
C3	39.27'	25.00	90°00'00"
C4	39.27'	25.00	90°00'00"



FL CURB/GUTTER TABLE		
POINT	STA/OFFSET	FLOWLINE
3	163+01.50, 32.16'RT	5718.51
4	163+81.70, 26.0'RT	5718.57
5	17+65.87, 17.00'LT	5717.74
6	17+70.57, 17.00'RT	5717.78
7	170+56.37, 26.00'LT	5725.42
8	1+16.00, 17.00'LT	5725.20
9	1+16.00, 17.00'RT	5725.20
10	171+40.37, 26.00'LT	5726.30



CORE
ENGINEERING GROUP

15004 1ST AVENUE S.
DENVER, CO 80202
PHONE: 303.750.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg.com

DATE

DESCRIPTION

NO.

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

PROJECT NO. 100.041

SHEET NUMBER C8.7

TOTAL SHEETS: 34

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE. SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
FONTAINE BLVD IN
LORSON RANCH EAST
FONTAINE BLVD.-OLD GLORY DR
COLORADO SPRINGS, COLORADO

DATE:
DECEMBER 20, 2017

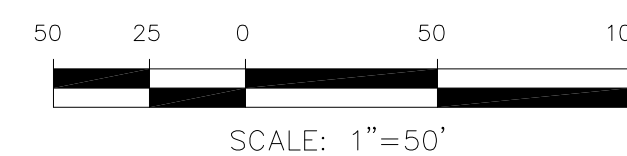
PROJECT NO.
100.041

SHEET NUMBER
C8.7

TOTAL SHEETS: 34

WATERMAIN PLAN/PROFILE
LAMINE DRIVE
AND EDISTO DRIVE

1. STATIONING IS AT ROADWAY CENTERLINE.
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SCALES: HORIZ. 1"=50'

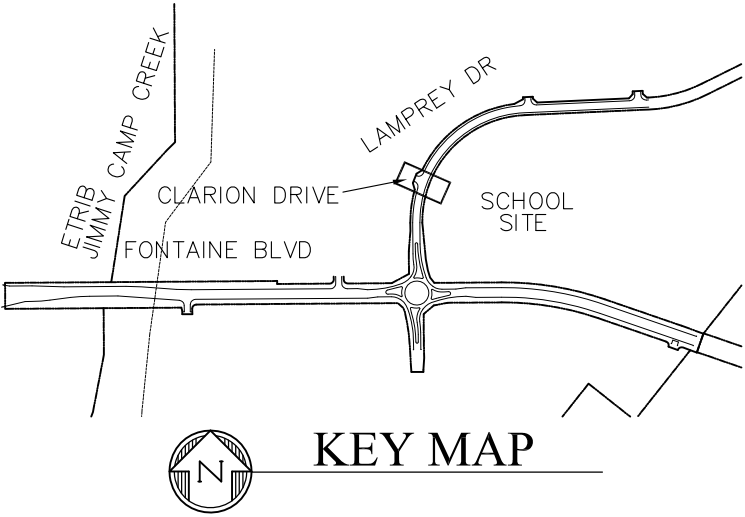
STREET & STORM SEWER PLAN/PROFILE
ROCKCASTLE DR, SHAVERS DR,
YAMHILL DR

DATE:	DECEMBER 20, 2017
PROJECT NO.	100.041
SHEET NUMBER	C8.8
TOTAL SHEETS:	34

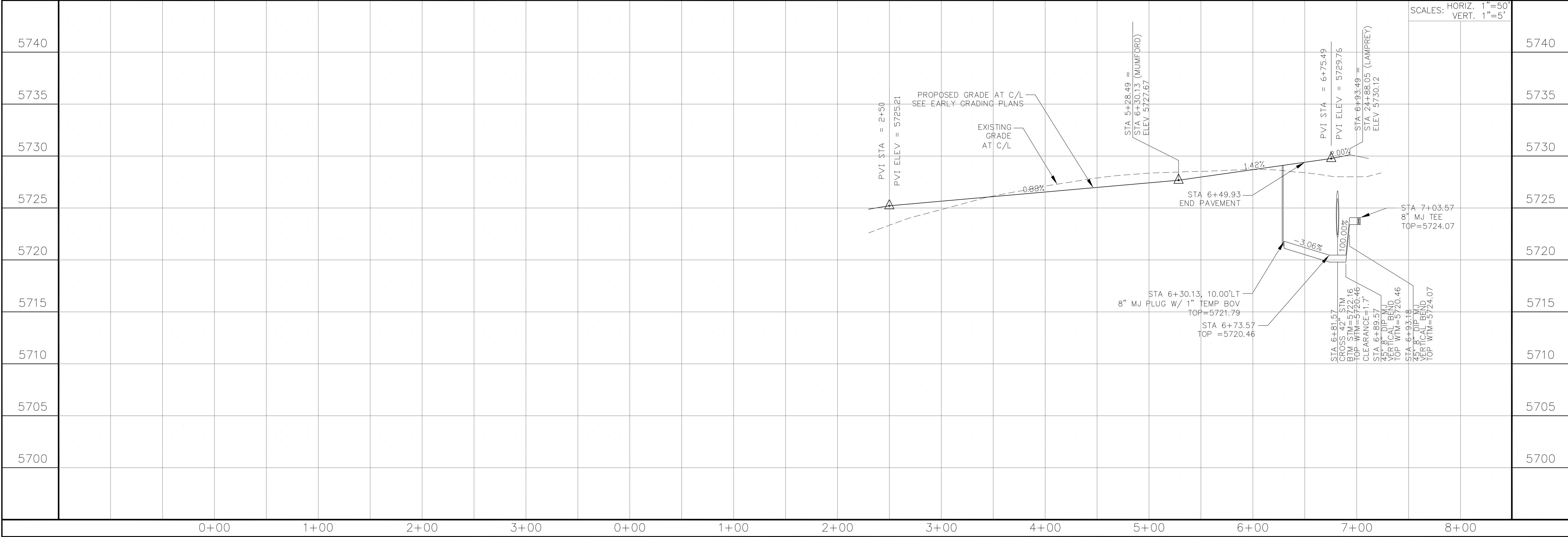
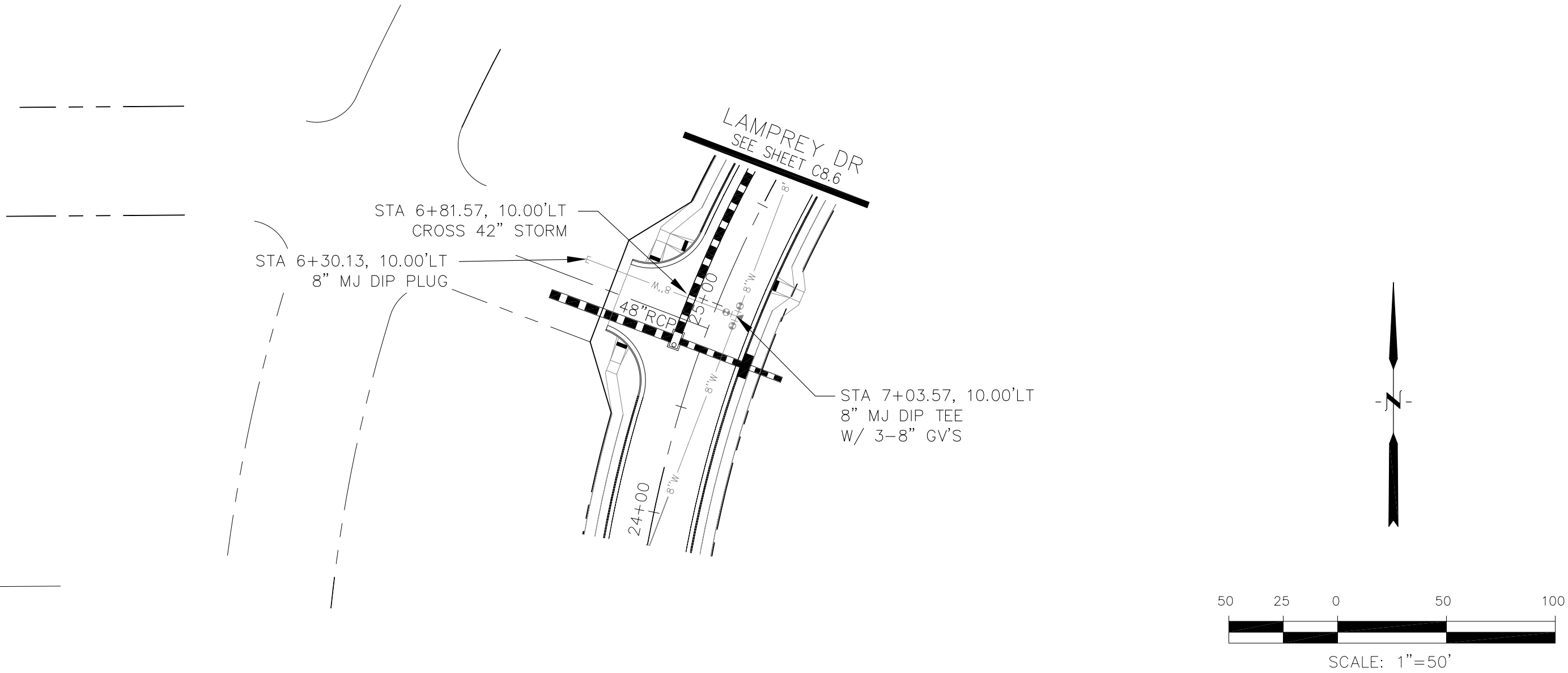
NO.	DESCRIPTION	DATE
PROJECT:	<p> FONTAINE BLVD IN LORSON RANCH EAST FONTAINE BLVD - OLD GLORY DR COLORADO SPRINGS, COLORADO </p>	
	PREPARED FOR:	<p> LORSON, LLC 212 N. WAHSATCH AVE, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (303) 633-0000 CONTACT: JEFF MARK </p>
<p> CORE ENGINEERING GROUP 15004 1ST AVENUE S. BURNSVILLE, MN 55306 PH: 719.570.1100 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: rlsch@cegi.com </p>		

NOTES

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CLARION DRIVE



CORE

ENGINEERING GROUP

15004 1ST AVENUE S,
DENVER, CO 80202
PHONE: 303.750.5506
FAX: 303.750.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

DATE

DESCRIPTION

NO.

PROJECT FOR:

LORSON, LLC

212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:

FONTAINE BLVD IN
LORSON RANCH EAST
FONTAINE BLVD.-OLD GLORY DR
COLORADO SPRINGS, COLORADO

DRAWN:

RLS

DESIGNED:

RLS

CHECKED:

RLS

DATE:

DECEMBER 20, 2017

PROJECT NO.

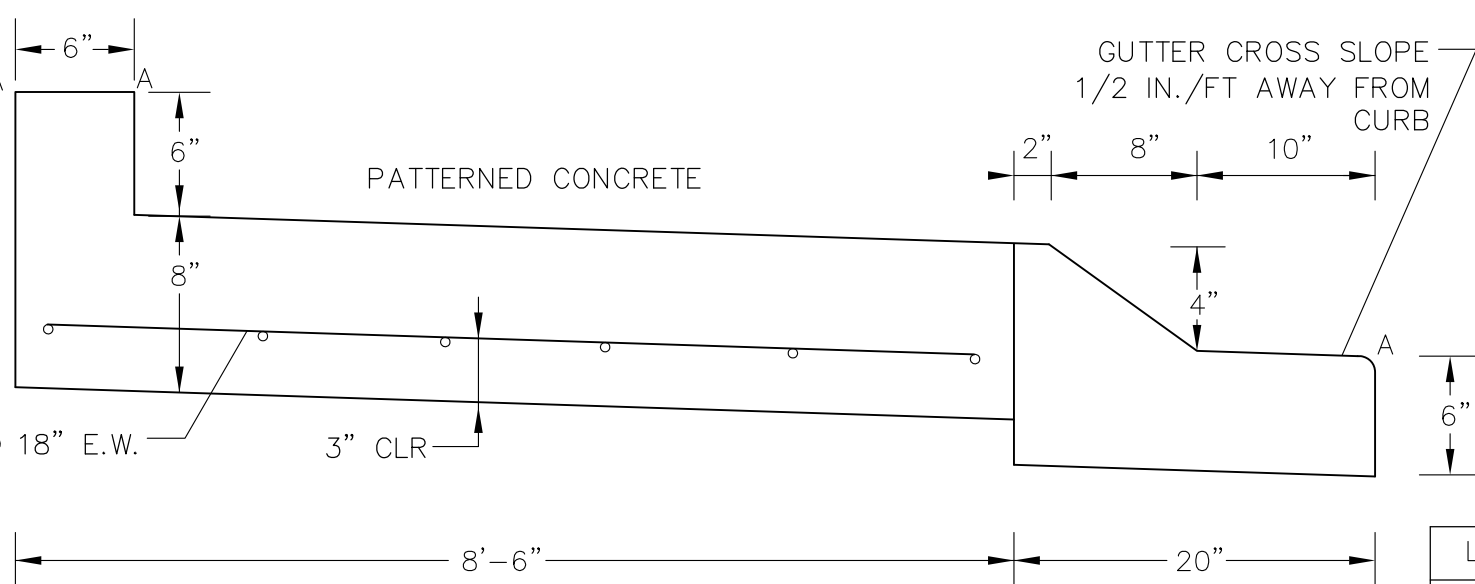
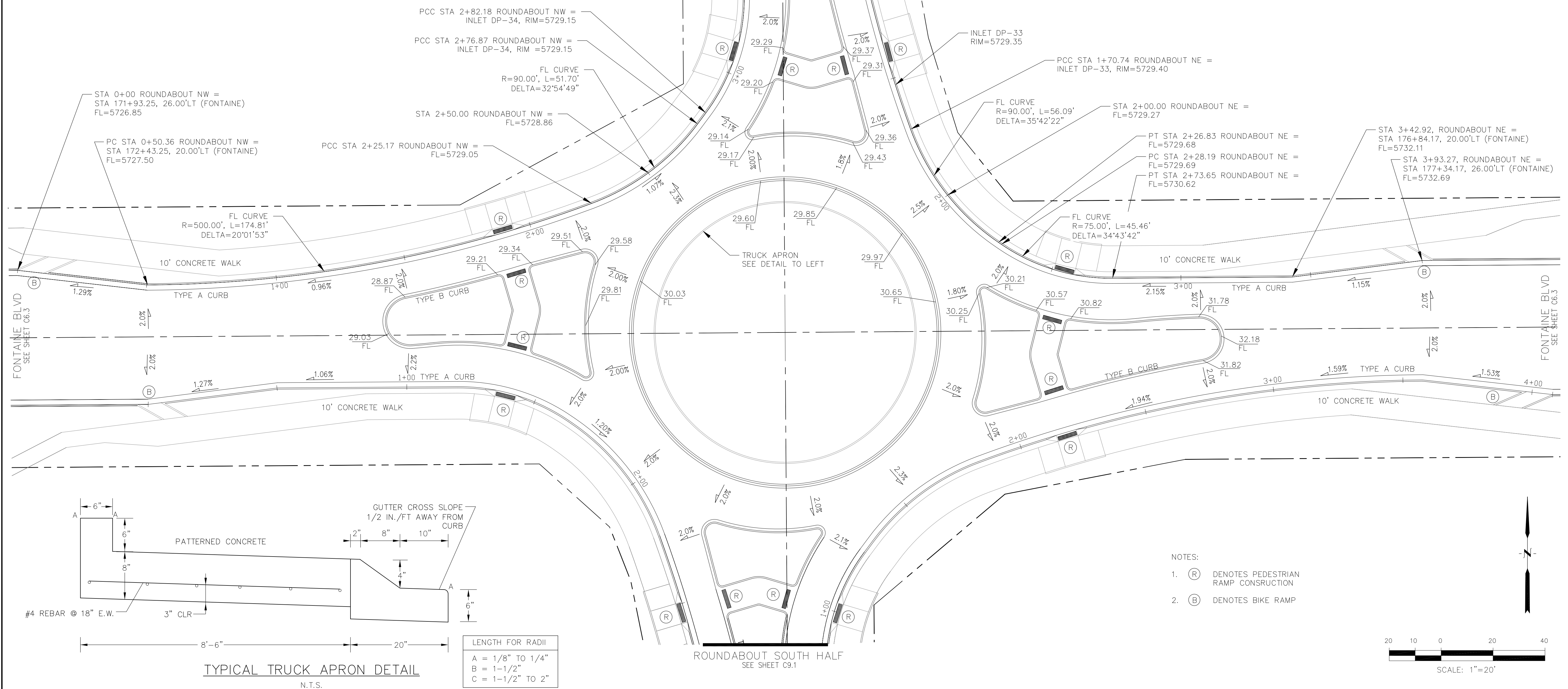
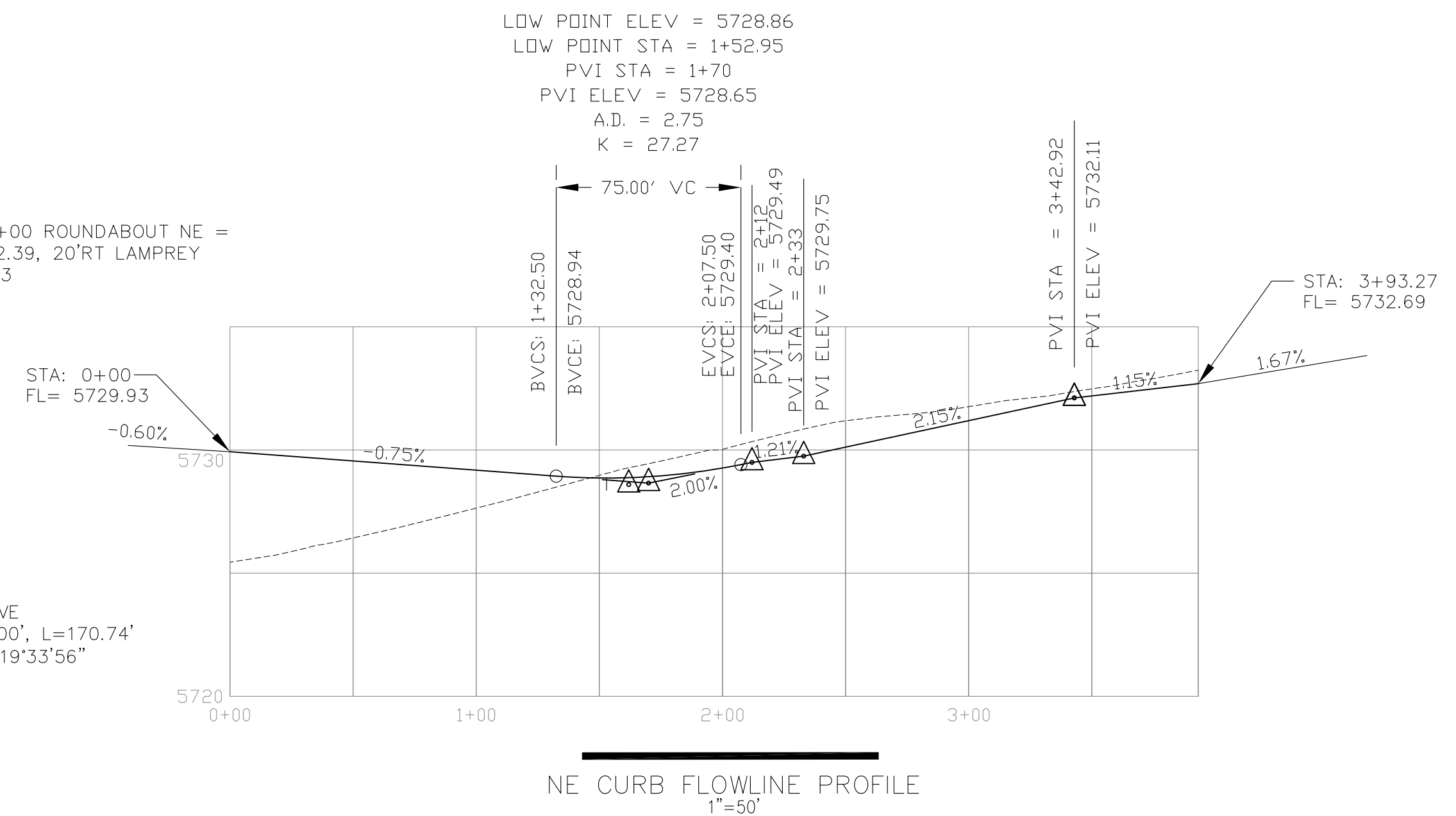
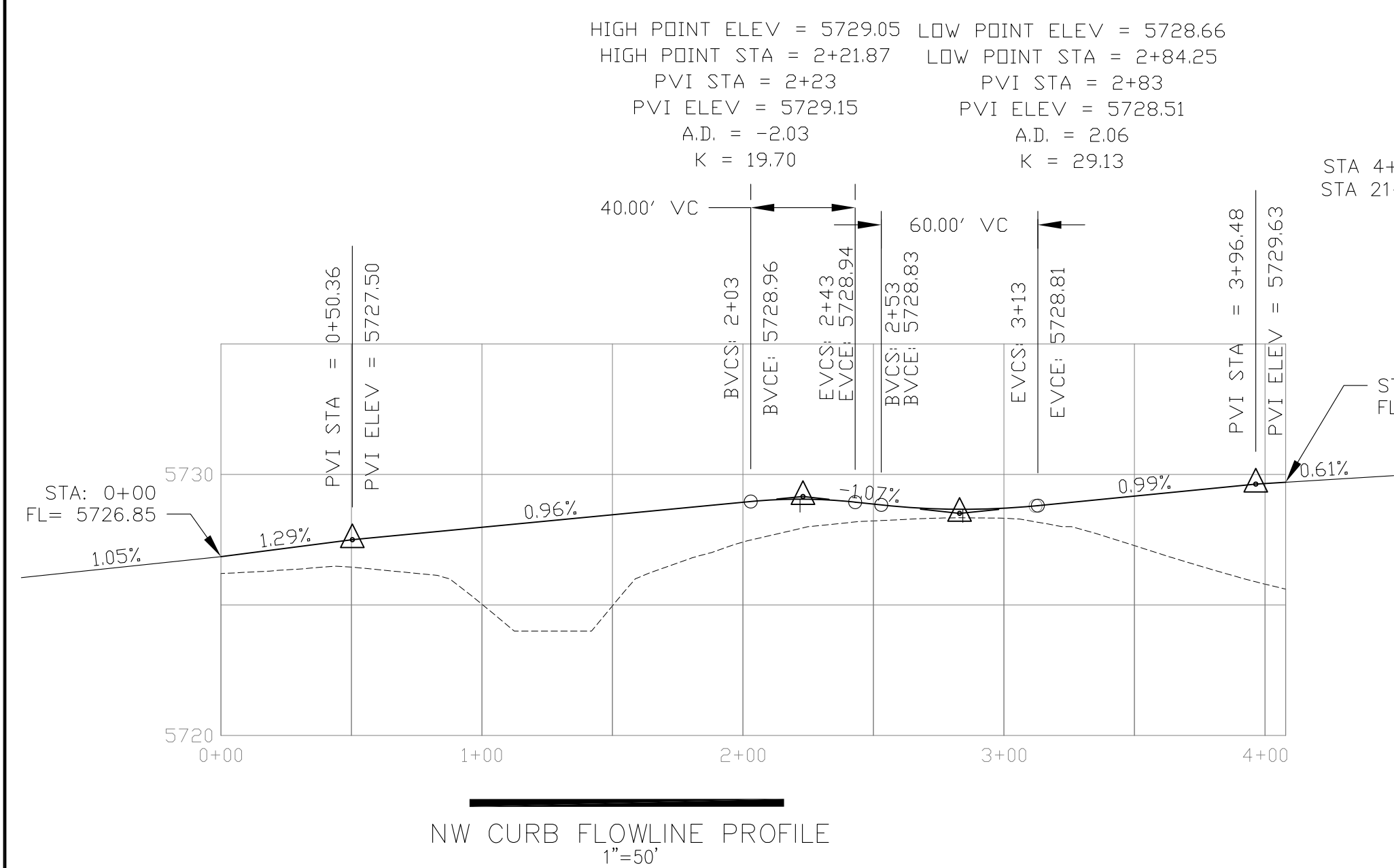
100.041

SHEET NUMBER

C8.9

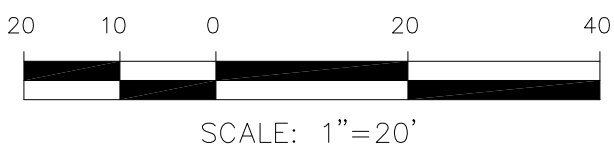
TOTAL SHEETS:

34

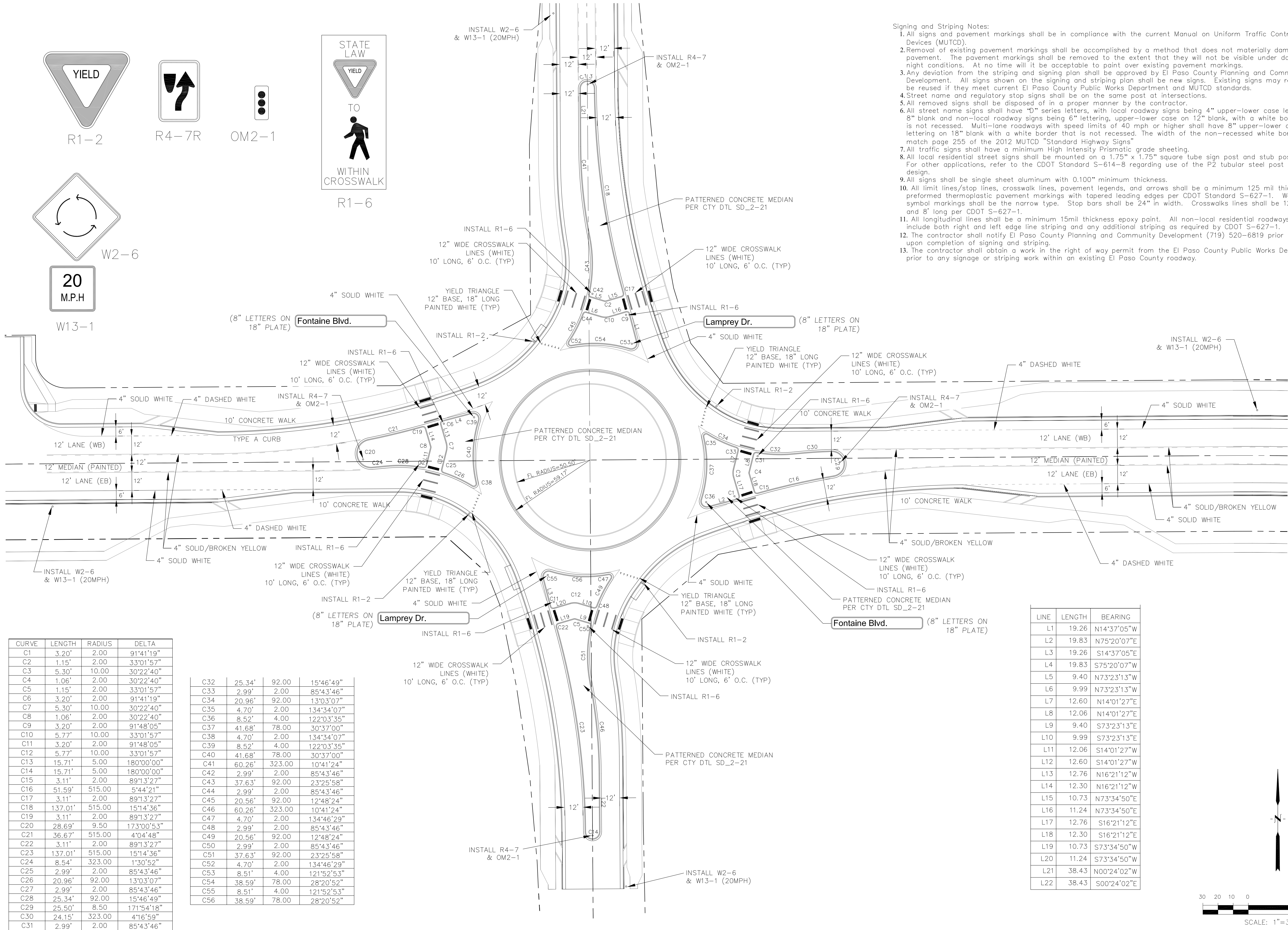


NOTES:

1. (R) DENOTES PEDESTRIAN RAMP CONSTRUCTION
2. (B) DENOTES BIKE RAMP



<div> <div>ROUNDABOUT DETAILED GRADING</div> <div>FONTAINE BOULEVARD</div> <div>NORTH HALF</div> </div>	<div>DATE:</div> <div>DECEMBER 20, 2017</div>	<div>PROJECT NO.</div> <div>100.041</div>	<div>SHEET NUMBER</div> <div>C9.2</div>	<div>TOTAL SHEETS</div> <div>34</div>	<div>DRAWN:</div> <div>RLS</div>	<div>PROJECT:</div> <div>FONTAINE BLVD IN</div> <div>LORSON RANCH EAST</div> <div>FONTAINE BLVD.-OLD GLORY DR</div> <div>COLORADO SPRINGS, COLORADO</div>	<div>PREPARED FOR:</div> <div>LORSON, LLC</div> <div>212 N. WAHSATCH AVE. SUITE 301</div> <div>COLORADO SPRINGS, COLORADO 80903</div> <div>(719) 635-3200</div> <div>CONTACT: JEFF MARK</div>	<div>NO.</div>	<div>DESCRIPTION</div>	<div>DATE</div>
					<div>CHECKED:</div> <div>RLS</div>					
					<div>DESIGNED:</div> <div>RLS</div>					
<div> <div> <div> <div>CORE</div> <div>ENGINEERING GROUP</div> </div> <div> <div>15004 1ST AVENUE S.</div> <div>DENVER, CO 80202</div> <div>PHONE: 719.570.1100</div> <div>CONTACT: RICHARD L. SCHINDLER, P.E.</div> <div>EMAIL: Rich@cog1.com</div> </div> </div> </div>										

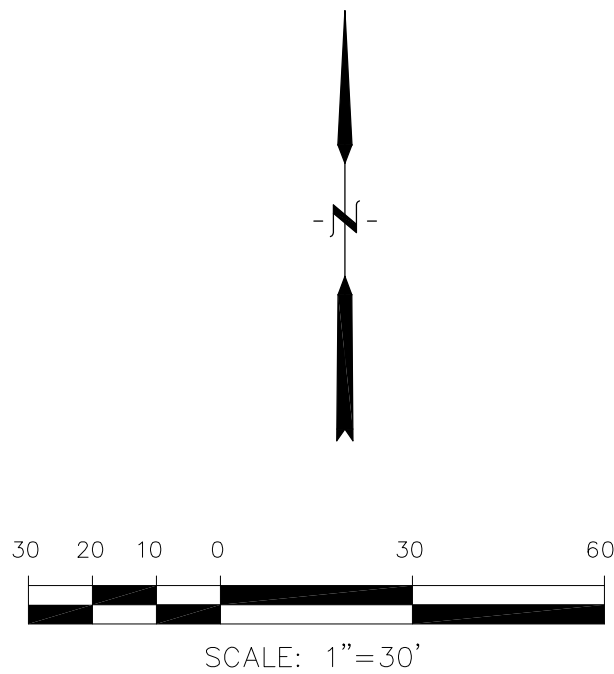


- Signing and Striping Notes:
1. All signs and pavement markings shall be in compliance with the current Manual on Uniform Traffic Control Devices (MUTCD).
 2. Removal of existing pavement markings shall be accomplished by a method that does not materially damage the pavement. The pavement markings shall be removed to the extent that they will not be visible under day or night conditions. At no time will it be acceptable to paint over existing pavement markings.
 3. Any deviation from the striping and signing plan shall be approved by El Paso County Planning and Community Development. All signs shown on the signing and striping plan shall be new signs. Existing signs may remain or be reused if they meet current El Paso County Public Works Department and MUTCD standards.
 4. Street name and regulatory stop signs shall be on the same post at intersections.
 5. All removed signs shall be disposed of in a proper manner by the contractor.
 6. All street name signs shall have "D" series letters, with local roadway signs being 4" upper-lower case lettering on 8" blank and non-local roadway signs being 6" lettering, upper-lower case on 12" blank, with a white border that is not recessed. Multi-lane roadways with speed limits of 40 mph or higher shall have 8" upper-lower case lettering on 18" blank with a white border that is not recessed. The width of the non-recessed white borders shall match page 255 of the 2012 MUTCD, "Standard Highway Signs".
 7. All traffic signs shall have a minimum High Intensity Prismatic grade sheeting.
 8. All local residential street signs shall be mounted on a 1.75" x 1.75" square tube sign post and stub post base. For other applications, refer to the CDOT Standard S-614-8 regarding use of the P2 tubular steel post slipbase design.
 9. All signs shall be single sheet aluminum with 0.100" minimum thickness.
 10. All limit lines/stop lines, crosswalk lines, pavement legends, and arrows shall be a minimum 125 mil thickness preformed thermoplastic pavement markings with tapered leading edges per CDOT Standard S-627-1. Word and symbol markings shall be the narrow type. Stop bars shall be 24" in width. Crosswalks lines shall be 12" wide and 8' long per CDOT S-627-1.
 11. All longitudinal lines shall be a minimum 15mil thickness epoxy paint. All non-local residential roadways shall include both right and left edge line striping and any additional striping as required by CDOT S-627-1.
 12. The contractor shall notify El Paso County Planning and Community Development (719) 520-6819 prior to and upon completion of signing and striping.
 13. The contractor shall obtain a work in the right of way permit from the El Paso County Public Works Department prior to any signage or striping work within an existing El Paso County roadway.

CURVE	LENGTH	RADIUS	DELTA
C1	3.20'	2.00	91°41'19"
C2	1.15'	2.00	33°01'57"
C3	5.30'	10.00	30°22'40"
C4	1.06'	2.00	30°22'40"
C5	1.15'	2.00	33°01'57"
C6	3.20'	2.00	91°41'19"
C7	5.30'	10.00	30°22'40"
C8	1.06'	2.00	30°22'40"
C9	3.20'	2.00	91°48'05"
C10	5.77'	10.00	33°01'57"
C11	3.20'	2.00	91°48'05"
C12	5.77'	10.00	33°01'57"
C13	15.71'	5.00	180°00'00"
C14	15.71'	5.00	180°00'00"
C15	3.11'	2.00	89°13'27"
C16	51.59'	515.00	5°44'21"
C17	3.11'	2.00	89°13'27"
C18	137.01'	515.00	15°14'36"
C19	3.11'	2.00	89°13'27"
C20	28.69'	9.50	173°00'53"
C21	36.67'	515.00	4°04'48"
C22	3.11'	2.00	89°13'27"
C23	137.01'	515.00	15°14'36"
C24	8.54'	323.00	1°30'52"
C25	2.99'	2.00	85°43'46"
C26	20.96'	92.00	13°03'07"
C27	2.99'	2.00	85°43'46"
C28	25.34'	92.00	15°46'49"
C29	25.50'	8.50	171°54'18"
C30	24.15'	323.00	4°16'59"
C31	2.99'	2.00	85°43'46"

C32	25.34'	92.00	15°46'49"
C33	2.99'	2.00	85°43'46"
C34	20.96'	92.00	13°03'07"
C35	4.70'	2.00	134°34'07"
C36	8.52'	4.00	122°03'35"
C37	41.68'	78.00	30°37'00"
C38	4.70'	2.00	134°34'07"
C39	8.52'	4.00	122°03'35"
C40	41.68'	78.00	30°37'00"
C41	60.26'	323.00	10°41'24"
C42	2.99'	2.00	85°43'46"
C43	37.63'	92.00	23°25'58"
C44	2.99'	2.00	85°43'46"
C45	20.56'	92.00	12°48'24"
C46	60.26'	323.00	10°41'24"
C47	4.70'	2.00	134°46'29"
C48	2.99'	2.00	85°43'46"
C49	20.56'	92.00	12°48'24"
C50	2.99'	2.00	85°43'46"
C51	37.63'	92.00	23°25'58"
C52	4.70'	2.00	134°46'29"
C53	8.51'	4.00	121°52'53"
C54	38.59'	78.00	28°20'52"
C55	8.51'	4.00	121°52'53"
C56	38.59'	78.00	28°20'52"

LINE	LENGTH	BEARING
L1	19.26	N14°37'05"W
L2	19.83	N75°20'07"E
L3	19.26	S14°37'05"E
L4	19.83	S75°20'07"W
L5	9.40	N73°23'13"W
L6	9.99	N73°23'13"W
L7	12.60	N14°01'27"E
L8	12.06	N14°01'27"E
L9	9.40	S73°23'13"E
L10	9.99	S73°23'13"E
L11	12.06	S14°01'27"W
L12	12.60	S14°01'27"W
L13	12.76	N16°21'12"W
L14	12.30	N16°21'12"W
L15	10.73	N73°34'50"E
L16	11.24	N73°34'50"E
L17	12.76	S16°21'12"E
L18	12.30	S16°21'12"E
L19	10.73	S73°34'50"W
L20	11.24	S73°34'50"W
L21	38.43	N00°24'02"W
L22	38.43	S00°24'02"E



CORE

ENGINEERING GROUP

15004 1ST AVENUE S,
SUITE 100
DENVER, CO 80202
PHONE: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

DATE:

DESCRIPTION:

NO:

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

PROJECT: LORSON, LLC
212 N. WAHSATCH AVE. SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

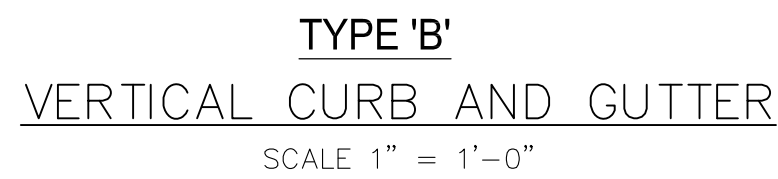
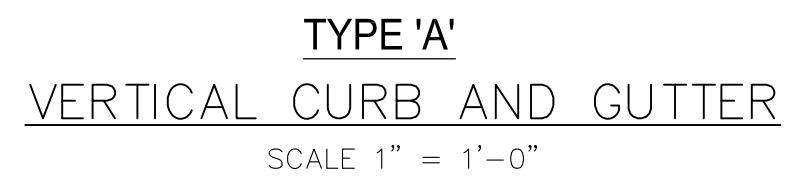
ROUNDABOUT SIGNAGE/STRIPING

DATE:
DECEMBER 20, 2017

PROJECT NO.
100.041

SHEET NUMBER
C9.3

TOTAL SHEETS: 34



ATTACHED WALK

GUTTER CROSS SLOPE
1/2 IN./FT WHEN DRAINING
AWAY FROM CURB

EXPANSION JOINT

DETECTABLE WARNING

24" 20:1

12:1 MAX

9' MIN (TYP)

6' (TYP)

30°

5'

0.5'

R-O-W

1.5' 5' 1.5' (TYP)

DETACHED WALK

EXPANSION JOINT

DETECTABLE WARNING

24" 20:1

12:1 MAX

9' MIN (TYP)

6' (TYP)

30°

5'

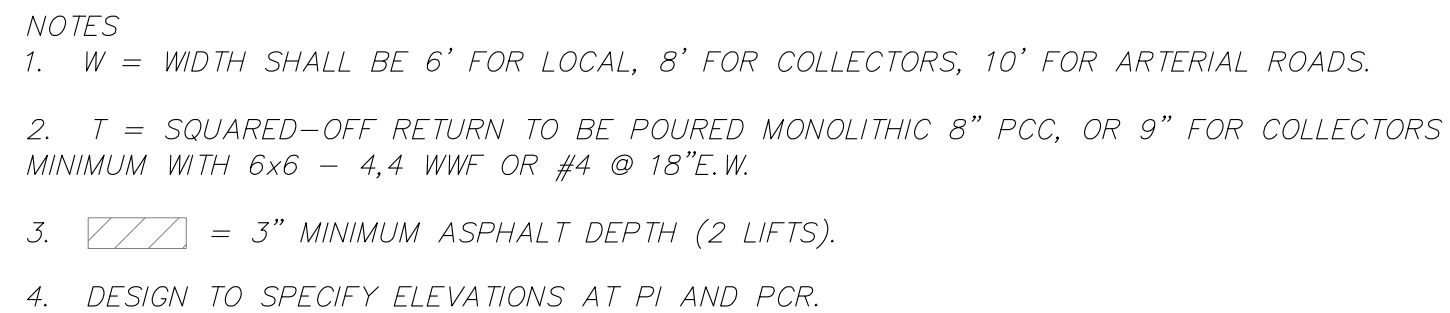
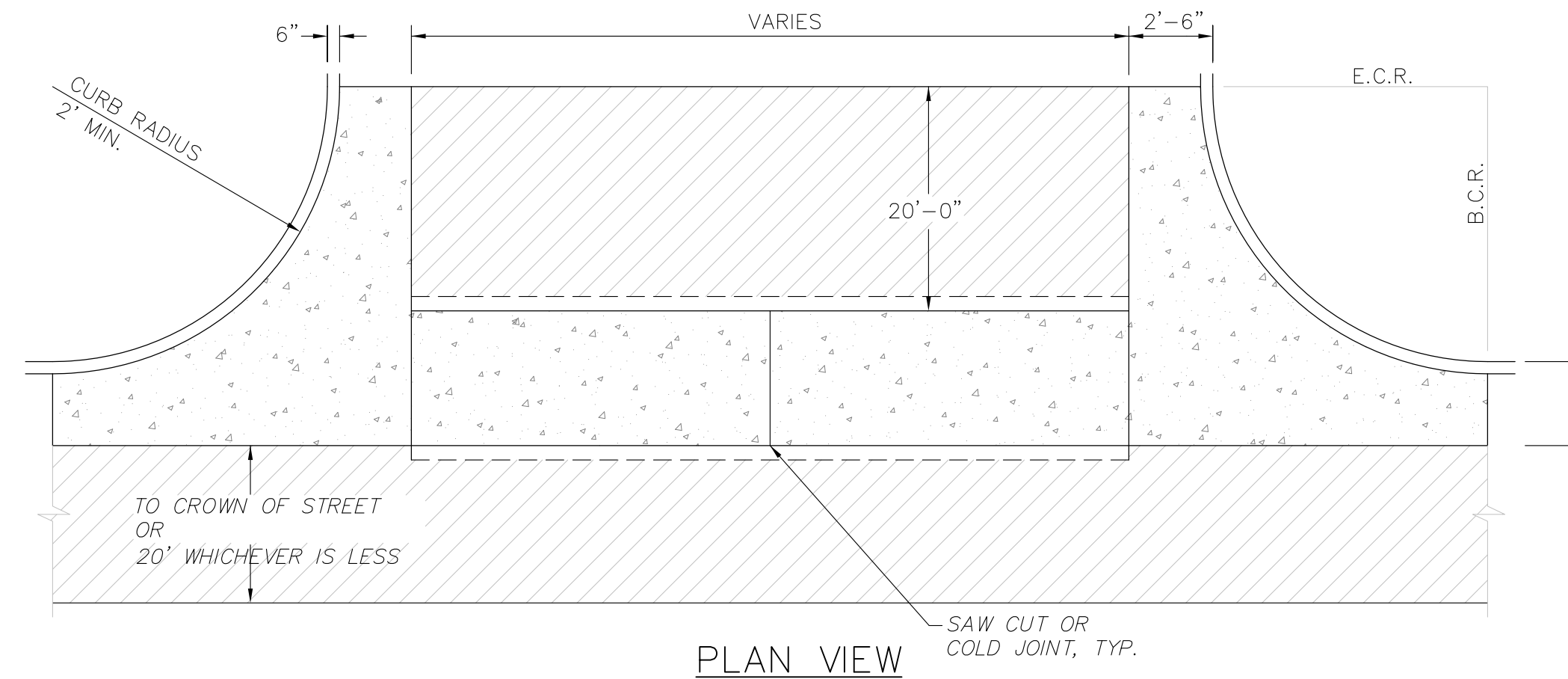
0.5'

R-O-W

1.5' 5' 1.5' (TYP)

PEDESTRIAN RAMPS AT INTERSECTIONS (ECM SD 2-40)

NO SCALE



The drawing illustrates a pedestrian ramp layout at an intersection. Key features include:

- TOOL JOINT (TYP)**: Indicated on the ramp surface.
- 6.0' MIN (TYP)**: Minimum length of the ramp section.
- LANDING @ 2% SLOPE**: A landing area with a 2% slope.
- 20:1** and **24"**: Slope and width dimensions for a specific section.
- 12:1 (MAX)**: Maximum slope for the ramp.
- HINGE LINE (TYP)**: A line indicating a change in direction or material.
- 1'-6" (TYP)**: Typical width of the ramp.
- 24" DETECTABLE WARNING AREA WITH TRUNCATED DOMES (TYP)**: A safety feature at the ramp ends.
- W**: Dimension representing the width of the ramp, noted as being the same as the approaching sidewalk but not less than 4.0 feet.

PEDESTRIAN RAMP NOTES

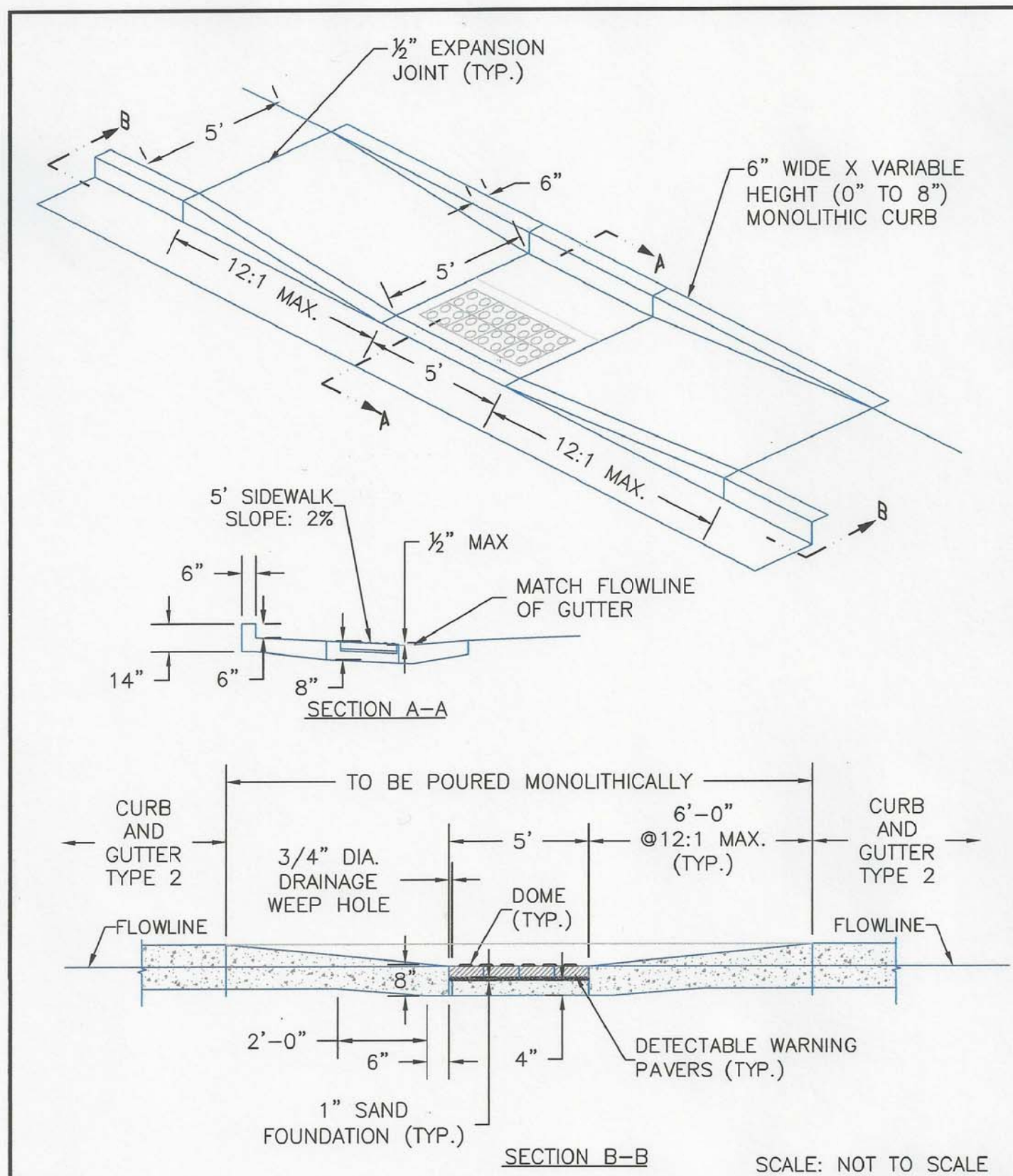
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT ENGINEERING CRITERIA MANUAL AND ADA REQUIREMENTS.
- CONTRACTOR TO NOTIFY ENGINEERING DIVISION INSPECTION STAFF 48 HOURS PRIOR TO CONCRETE PLACEMENT.
- PEDESTRIAN RAMP CONSTRUCTION SHALL BE A MINIMUM 4,500 PSI CONCRETE, MINIMUM 4" THICK, NON-COLORED, NON-SCORED, COARSE BROOM FINISH.
- RAMP LOCATION AND LENGTH MAY REQUIRE MODIFICATION TO MAINTAIN THE 12:1 MAXIMUM RUNNING RAMP SLOPE AND 20:1 DETECTABLE WARNING AREA DUE TO STREET INTERSECTION GRADES AND/OR ALIGNMENTS.
- DETECTABLE WARNING AREA SHALL START A MINIMUM OF 6" BUT NOT MORE THAN 8" FROM THE FLOWLINE OF THE CURB AT ANY POINT.
- DETECTABLE WARNING AREA SHALL BE PREFABRICATED REDDISH INTEGRALLY COLORED TRUNCATED-DOMES.
- THE DETECTABLE WARNING AREA SHALL BE 24" IN LENGTH AND THE FULL WIDTH OF THE RAMP.
- RAMP WIDTH REQUIRED IS SAME AS APPROACHING SIDEWALK; 4' MINIMUM.
- ALL RAMPS WILL BE PERPENDICULAR TO TRAFFIC WITH THE EXCEPTION OF MID-BLOCK OR TERMINAL RAMPS WHICH MAY BE PARALLEL SUBJECT TO APPROVAL.
- AVOID PLACING DRAINAGE STRUCTURES, TRAFFIC SIGNAL/SIGNAGE, UTILITIES/JUNCTION BOXES, OR OTHER OBSTRUCTIONS WITHIN PROPOSED RAMP AREAS.

LAYOUT CURB SECTIONS SO THAT AT LEAST ONE TOOL JOINT IS WITHIN RAMP THROAT

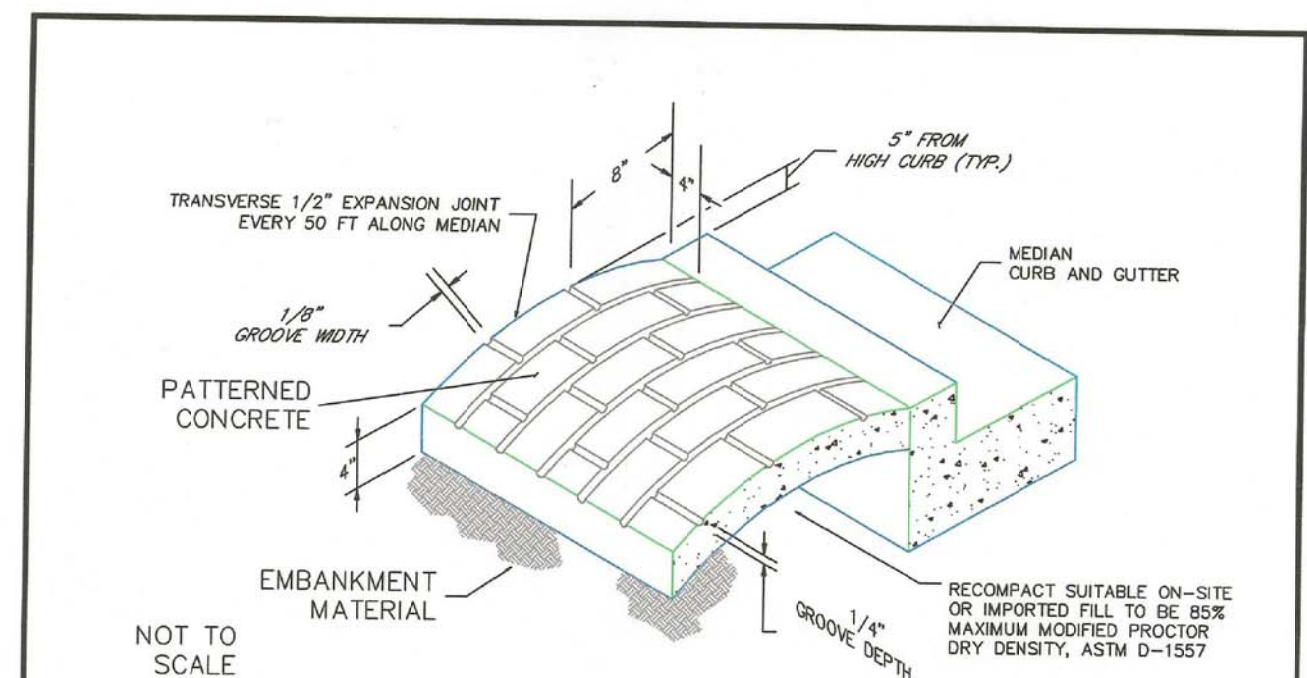
GENERAL NOTES

- WHERE THE 1'-6" FLARED SIDE(S) OF A PERPENDICULAR CURB RAMP IS (ARE) CONTIGUOUS WITH A PEDESTRIAN OR HARD SURFACE AREA, THE MAXIMUM FLARE SLOPE SHALL NOT EXCEED 10:1.
- PEDESTRIAN WALKWAY AND/OR LOCATION OF EXISTING OR FUTURE PEDESTRIAN RAMPS ON OPPOSITE CORNERS SHALL BE REVIEWED BEFORE CONSTRUCTING NEW RAMPS.
- AT MARKED PEDESTRIAN CROSSINGS, THE BOTTOM OF THE RAMPS, EXCLUSIVE OF THE FLARE SIDES, SHALL BE TOTALLY CONTAINED WITHIN THE MARKINGS.

<div><div>FONTAINE BLVD STREET/STORM AND WATER/SEWER CONSTRUCTION</div><div>STREET/STORM DETAILS</div></div>		DATE:			
		DECEMBER 20, 2017			
		PROJECT NO.			
		100.041			
		SHEET NUMBER			
C10.1		TOTAL SHEETS: 34			
DRAWN: DESIGNED: CHECKED:		RLS RLS RLS			
<div>FONTAINE BLVD IN LORSON RANCH EAST</div> <div>FONTAINE BLVD.—OLD GLORY DR COLORADO SPRINGS, COLORADO</div>		<div>PROJECT:</div> <div>FONTAINE BLVD IN LORSON, LLC</div> <div>212 N. WAHSATCH AVE., SUITE 301 COLORADO SPRINGS, COLORADO 80903</div> <div>(719) 635-3200</div> <div>CONTACT: JEFF MARK</div>			
				NO.	
				DESCRIPTION	
				DATE	
<div><div>CORE</div><div>ENGINEERING GROUP</div></div>		<div>15004 1ST AVENUE S. DENVER, CO 80202-5506 PHONE: 303.733.1100 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@ceg1.com</div>			

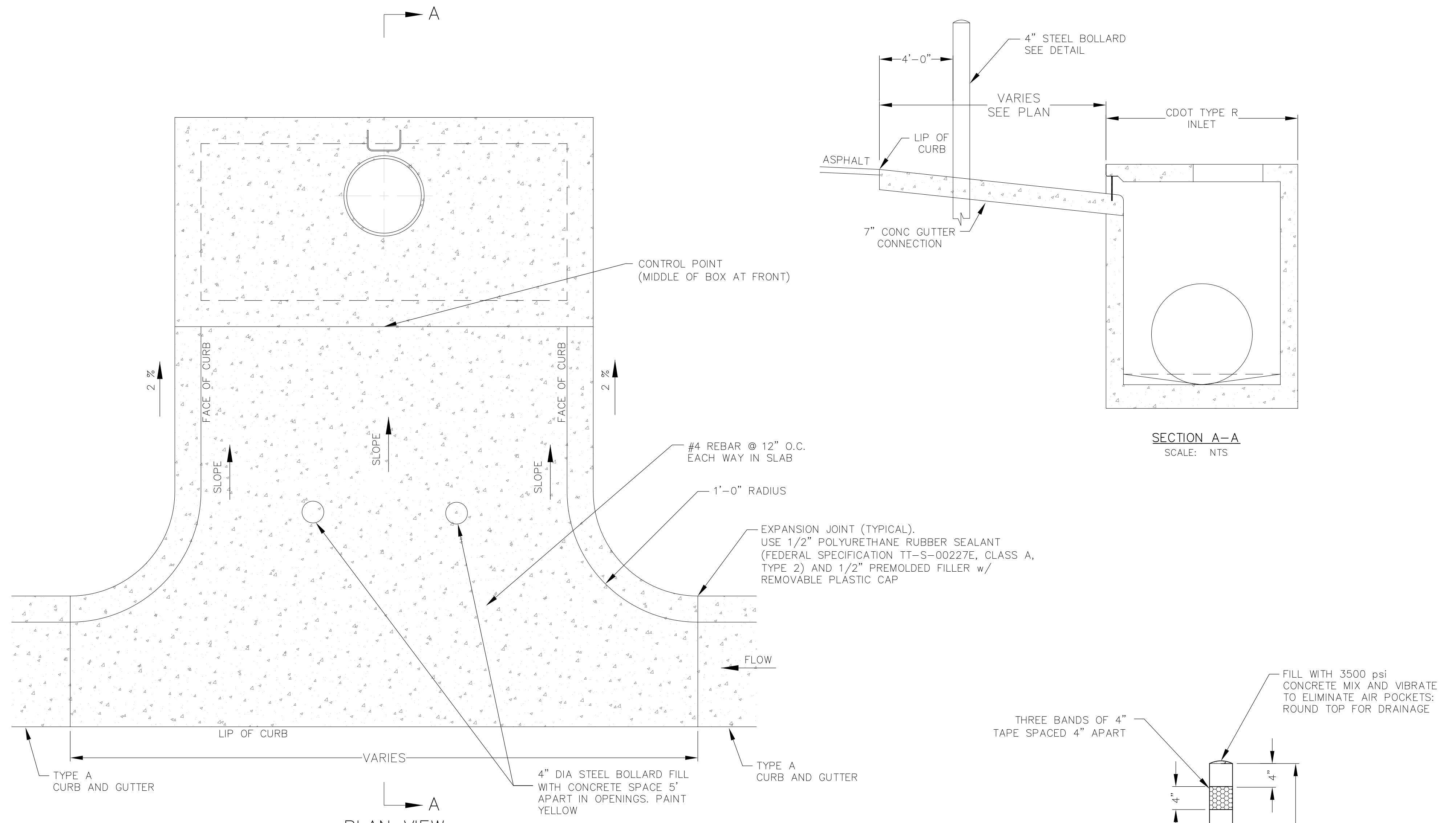


8/11/11	Parallel Pedestrian Ramp Detail	
DATE APPROVED:	André P. Brackin	
DEPARTMENT OF TRANSPORTATION	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION	
REVISION DATE:	12/8/15	FILE NAME: SD_2-50

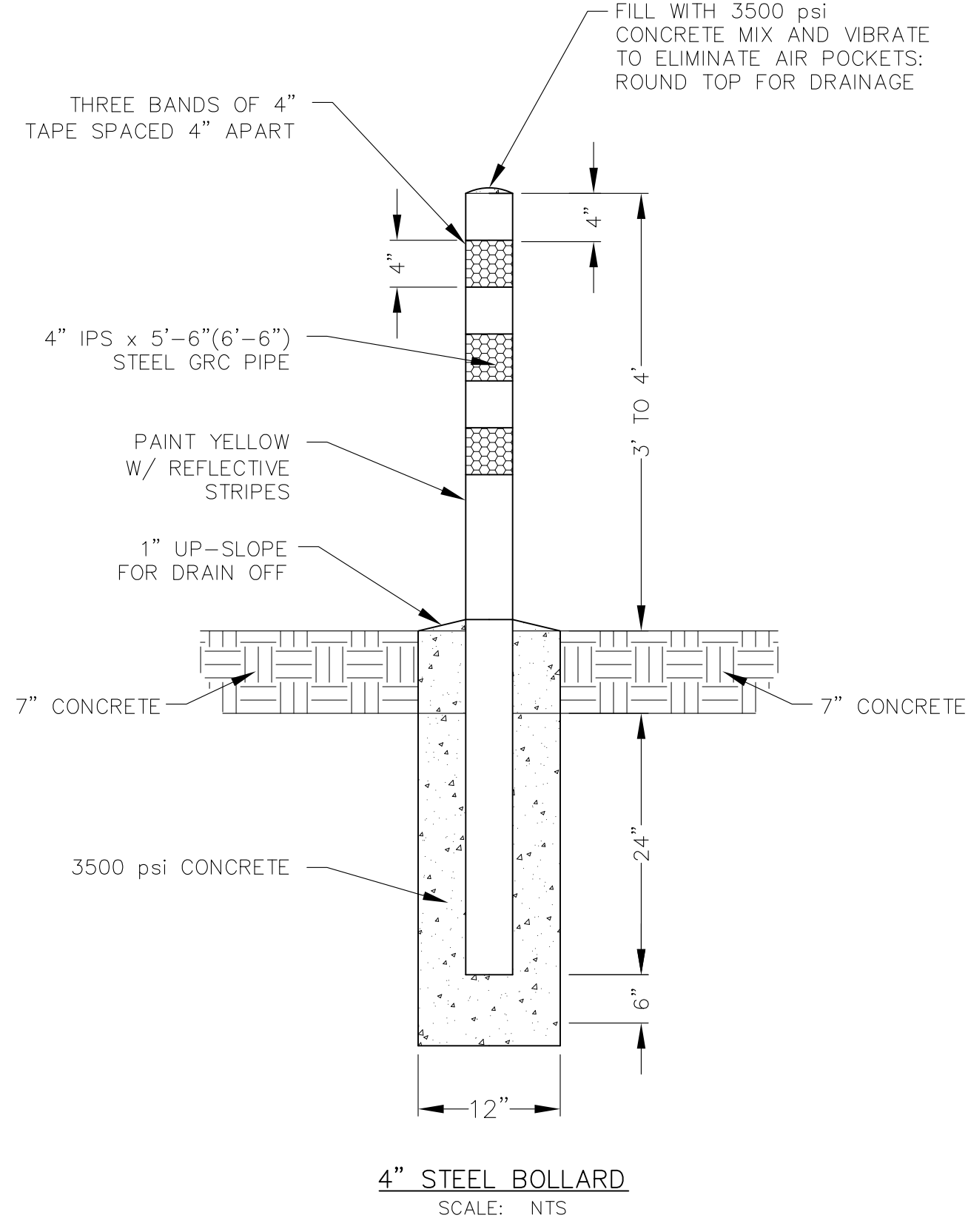


- NOTES:
- The median paving shall be constructed with 4 inch thick, integrally colored concrete, embossed with a running band 4" x 8" brick pattern as shown.
 - Install 1/2" x 4" expansion material at median noses, fixed objects, and at transverse joints at 50 ft. intervals (maximum) along the median.
 - The color additive shall be an approved commercially pure or synthetic mineral pigment, factory formulated and packaged in cubic yard dosage increments. The mixture shall be "Chromix" as manufactured by L.M. Scofield Company, "Davis Colors" as manufactured by Davis Color Company, Pigment No. 678, 5 lbs./sack, or an approved equal.
 - Patterned concrete to be colored L.M. Scofield Company "Santa Barbara Brown, C-35", Davis Color Company, Pigment No. 678, 5 lbs./sack, or an approved equal.
 - The Matching curing compound shall be a blend of waxes and pigments in a solvent emulsion base and conform to the requirements of ASTM C-309. The curing compound shall be "Lithochrome Colorwax" as manufactured by L.M. Scofield Company, Davis Color-Seal, as manufactured by Davis Color Company, or approved equal.
 - The concrete mix design shall conform to the requirements of the color admixture manufacturer and shall meet CDOT Class B concrete requirements, unless otherwise approved.
 - For weed control prior to median paving, apply a pre-emergent herbicide to median subgrade area per manufacturer's specifications for paving under Barrier 50 label (pbi Gordon), Trifluralin is labeled for use under asphalt under the Treflan 4EC label (Elanco).

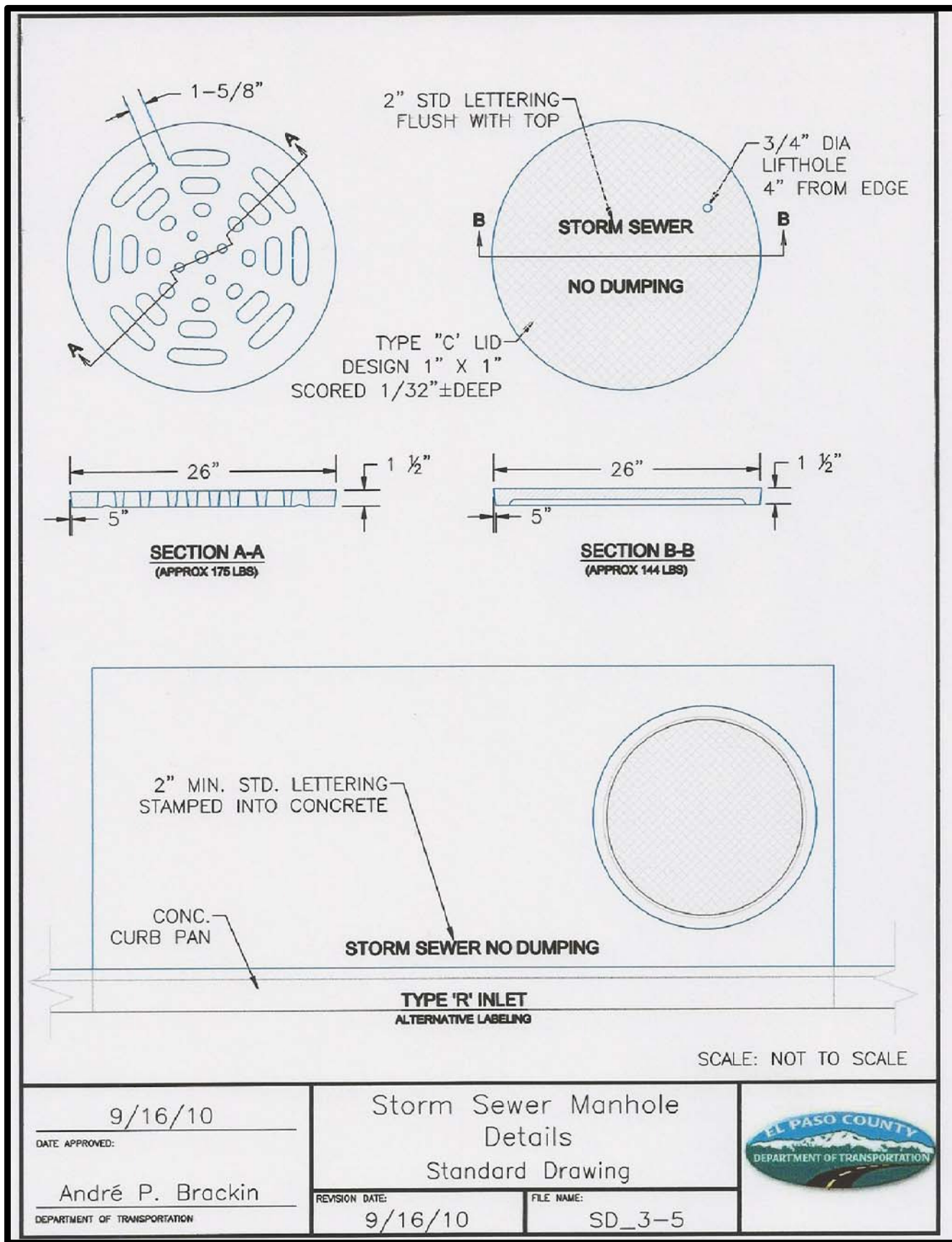
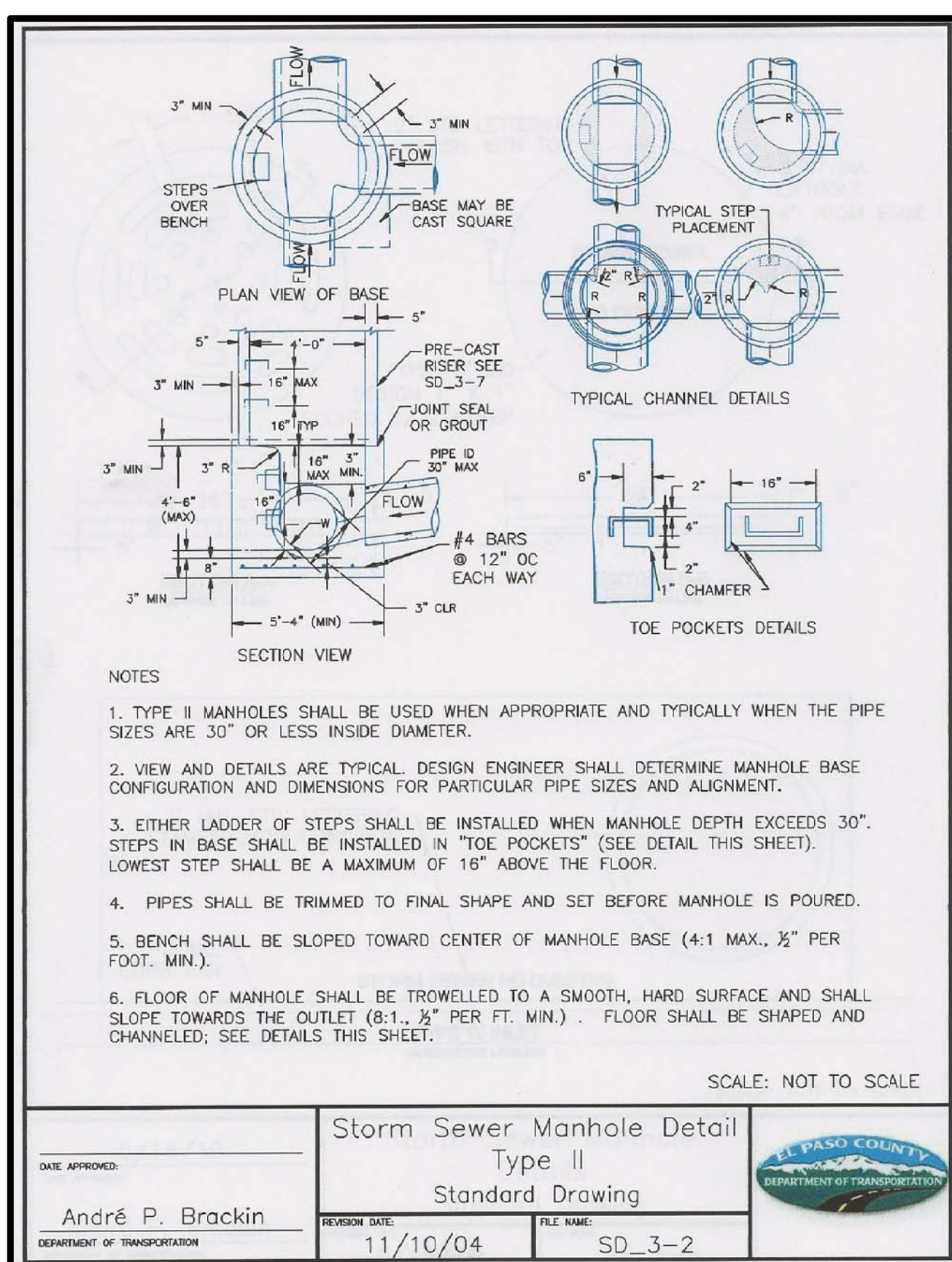
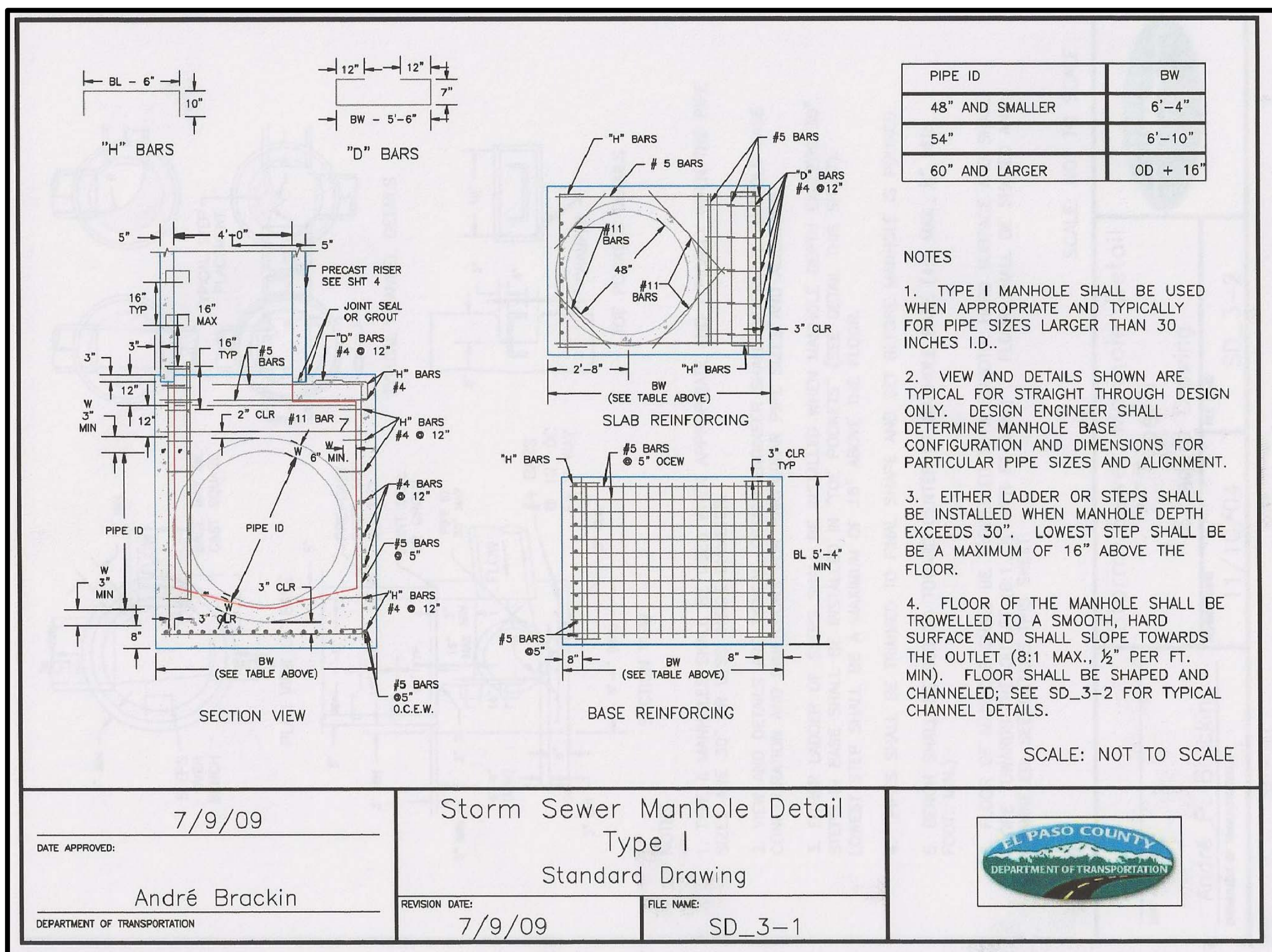
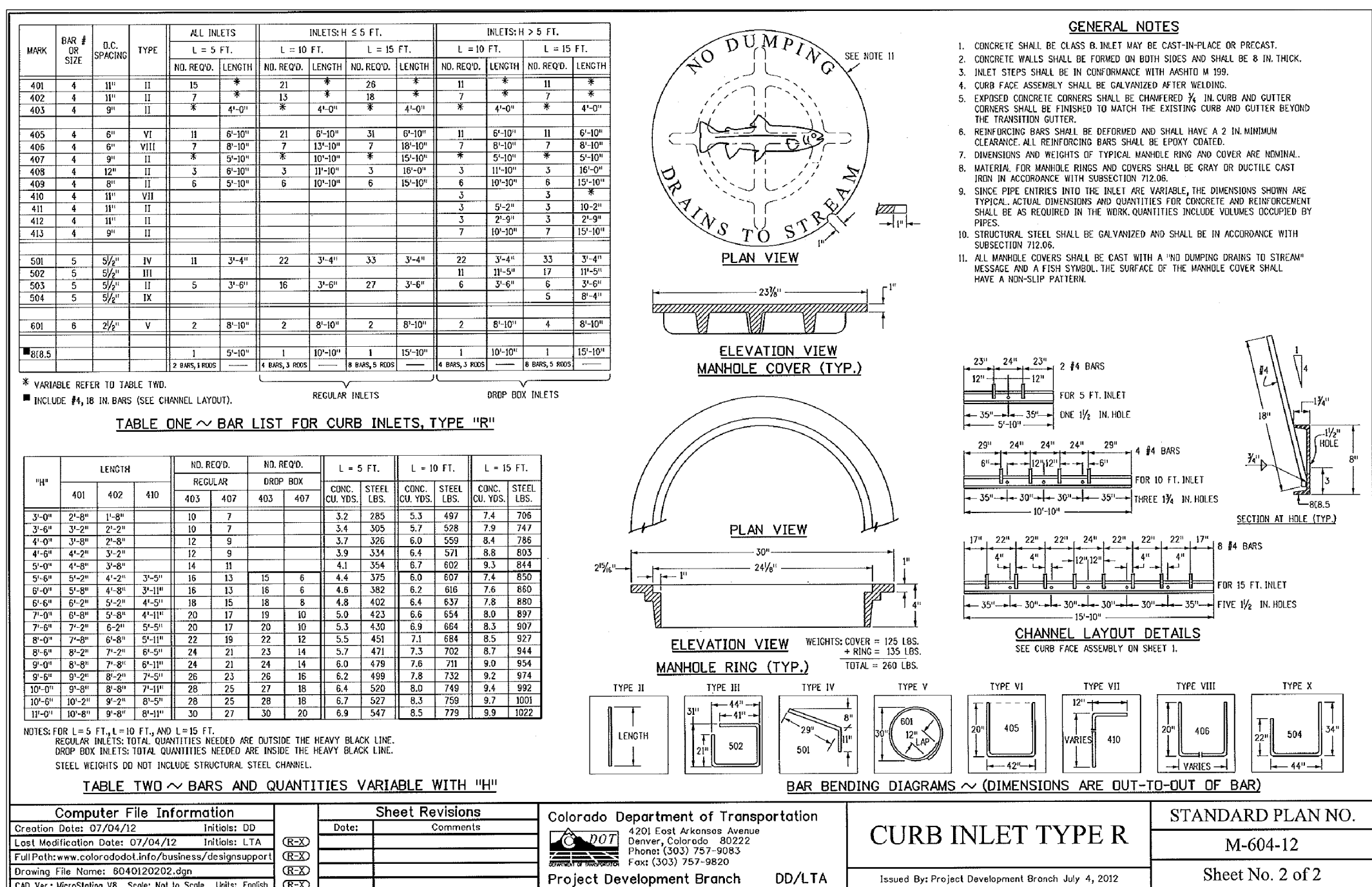
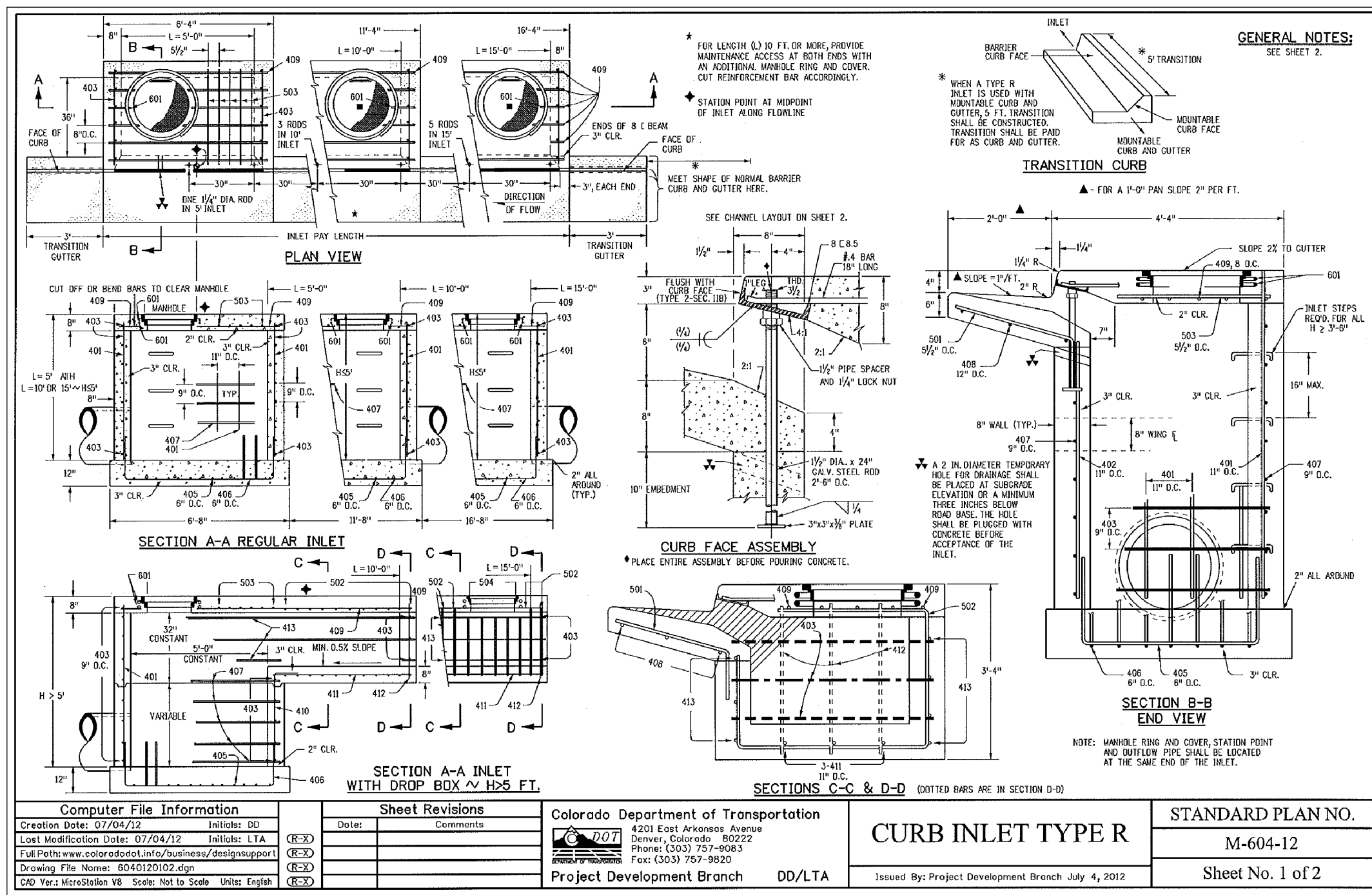
7/9/09	Patterned Concrete Median Paving	
DATE APPROVED:	André P. Brackin	
DEPARTMENT OF TRANSPORTATION	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION	
REVISION DATE:	1/18/11	FILE NAME: SD_2-21



- NOTES
- REINFORCING NOT SHOWN FOR CLARITY. REFERENCE CDOT M604-12 DETAILS.
 - SEE STORM DRAIN PROFILES FOR PIPE INVERT ELEVATIONS.
 - CONSTRUCT IN ACCORDANCE WITH EL PASO COUNTY STANDARDS EXCEPT WHERE MODIFIED HERE.



CORE ENGINEERING GROUP		15004 1ST AVENUE S, SUITE 100, DENVER, CO 80202, PHONE: 719.570.1100, CONTACT: RICHARD L. SCHINDLER, P.E., EMAIL: Rich@ceg.com	
DATE		PROJECT NO.	100.041
DESCRIPTION		SHEET NUMBER	C10.2
NO.		TOTAL SHEETS:	34
PREPARED FOR: LORSON, LLC		PROJECT: FONTAINE BLVD IN LORSON RANCH EAST	
212 N. WAHSATCH AVE, SUITE 301, COLORADO SPRINGS, COLORADO 80903		FONTAINE BLVD.-OLD GLORY DR COLORADO SPRINGS, COLORADO	
CONTACT: RICHARD L. SCHINDLER, P.E.		CONTACT: JEFF MARK	
DRAWN: RLS		DATE: DECEMBER 20, 2017	
DESIGNED: RLS		PROJECT NO. 100.041	
CHECKED: RLS		SHEET NUMBER C10.2	
		TOTAL SHEETS: 34	



STREET/STORM SEWER DETAILS

GENERAL STRUCTURAL NOTES

1. APPLICABLE CODES:

A. These general notes apply to all structural drawings. This project is designed in accordance with the International Building Code (IBC), 2009 Edition, and the Minimum Design Loads for Buildings and Other Structures (ASCE 1-05) and The Pike Peak Regional Building Code, (2011 Edition).

B. All material and workmanship shall be in accordance with applicable provisions of the codes specified above.

2. CONCRETE:

A. Concrete has been designed and shall be constructed in accordance with the American Concrete Institute "Building Code Requirement Reinforced Concrete" and "Specifications for Structural Concrete for Buildings" (ACI 308 and ACI 307) latest editions. Section 13 "Inspection" of ACI 308 is deleted in its entirety, see "Field Observations" paragraph. All concrete shall be of stone aggregate, unless noted otherwise.

B. Concrete mixes:

See specifications for any additional durability requirements.

Mix 'A' For drilled piers:

5000 psi minimum compressive strength at age of 28 days.

Type I/II Cement, minimum of 410 pounds per cubic yard.

Fly ash not allowed.

3/4" maximum aggregate size.

6" minimum- 8" maximum slump.

Mix 'B' For footings, grade beams, and miscellaneous concrete:

4000 psi minimum compressive strength at age of 28 days.

Type I/II Cement, minimum of 564 pounds per cubic yard.

3/4" maximum aggregate size.

6± 1% Entrained air.

4" (8" with superplasticizer) maximum slump.

C. Reinforcing is to be new billet steel ASTM A615, Grade-60, except ties and bars to be welded shall be Grade-40. Provide not less than (2) #5 around all sides of all openings in concrete and extend 2'-0" past edges of openings. No splices of reinforcement are permitted except as detailed or authorized by structural engineer. Where permitted, use contact lap splices, (36) bar diameters minimum. Welded Wire Fabric (WWF) shall be in accordance with ASTM A185. Lap (1) full mesh minimum at splices. No welding of reinforcement permitted unless detailed.

D. Placing of Reinforcement: Provide chairs, bolsters, additional reinforcement, and accessories necessary to support reinforcement at position shown on drawings. Support of reinforcement on form ties, wood, brick, brickbat or other unacceptable material will not be permitted.

E. Reinforcement shall be placed so that the following minimum concrete protection is provided, unless noted otherwise:

1) Concrete surfaces poured against ground . . . 3" Clear

2) Formed surfaces exposed to ground or weather:

a) Bars #6 and larger 2" Clear

b) Bars #5 and smaller 1 1/2" Clear

3) Slabs at center (unl.)

4) Concrete not exposed to earth or weather . . . 3/4"

5) Beams, Columns, Ties, Stirrups or spirals around primary reinforcement, or primary reinforcement with no ties, stirrups or spirals 1 1/2"

F. The contractor is responsible for determining when it is safe to remove forms and/or shoring. Forms and shoring must not be removed until the walls are strong enough to carry their own weight and any anticipated superimposed loads. For foundation walls, this typically requires at least 12 hours of cumulative curing time at a temperature of 50°F or more. Concrete must be adequately covered during cold periods to maintain this surface temperature. Due to varying weather conditions, alternative curing processes, and the use of Type I/II cement, Rocky Mountain Group suggests forms remain in place a minimum of 3 days to assure this performance specification has been met. When forms are stripped there must be no excessive deflection or distortion or discoloration and no evidence of damage to the concrete. Adequate thermal protection of the concrete shall be continued after stripping for a cumulative period of 48 hours at 50°F, or more, after the initial pour. See applicable notes for specifications on when to backfill foundation walls.

G. Field quality control:

1) Reference standard: ACI 301 Chapters 16 and 17, latest edition.

2) Slump tests: The general contractor shall provide necessary equipment and shall make test in conformity with ASTM C143. The contractor shall make slump tests on the first truck of each pour and as often as deemed necessary by the contractor to maintain the required slump tests when directed by the Architect or Engineer.

3) Control tests:

a. Control tests of concrete work shall be made on every 50 cubic yards or fraction thereof of concrete placed and, in any case, minimum of once during each day's pour.

b. Each test shall consist of four standard 6" test cylinders cast and cured in accordance with ASTM C31 and ASTM C172.

c. Sample concrete at point of placement.

d. One cylinder shall be broken at end of seven days after placing, two cylinders shall be broken at end of 28 days after placing, and remaining cylinder shall be stored until its disposition is determined by Architect.

e. In general, remaining cylinder will be broken only when previous test reports indicated unsatisfactory results.

f. Tests on remaining cylinder shall be at expense of the contractor.

g. Architect and/or Engineer reserves right to stop future concrete work when seven or 28 day tests indicate unsatisfactory results until, in the opinion of the Architect and/or the Engineer of Record, proper corrective measures have been taken to insure quality concrete in future work and corrections deemed necessary have been made.

h. Tests shall be made at time control tests are taken and so stated in reports to determine slump, air content, unit weight, and temperature of concrete.

i. All tests shall be made in accordance with ASTM C138 or ASTM C231.

4) Slab tolerance: Maintain surface flatness with maximum variation of 1/8 inch in 20 feet.

3. DRILLED PIER FOUNDATIONS:

A. The foundation design has been completed in accordance with pertinent standards, recommended design soil parameters, accepted engineering design procedures, and is based on the best information available at the time of completion. The design is intended to minimize differential movement as described in the reference Geotechnical Report. It must be recognized that foundation components will undergo movement. It shall be the responsibility of the contractor and/or present owner to inform any subsequent owners of the soil condition and advised to maintain good practices in the future with regard to surface and subsurface drainage, framing of partitions above floor slabs, and finish work above the floor slabs, etc.

B. Foundation design is based on soil report No. 159665 prepared by RMG Engineers dated 11/17/17. The Contractor shall thoroughly review and understand all pertinent construction aspects of this report before beginning any work.

C. The structure is to be founded on concrete grade beams bearing on drilled piers. Design of drilled piers is based on the following criteria:

Maximum allowable end bearing pressure 35,000 psf

Maximum allowable side shear 3,200 psf

(For the portion of the pier in bedrock and at least 17'-11" below bottom of grade beam)

Maximum penetration into bedrock 8'-0"

Minimum total length 40'-0"

Minimum spacing 3 PIER DIA.

D. The maximum variation of the center of any drilled pier at its top from the required location shall not be more than 5% of its diameter, and no pier shall be out of plumb more than 1% of its overall length.

E. A representative of the Geotechnical engineer shall provide full time observation of the drilling operation and reinforcement / concrete placement to verify that the soil type and conditions are consistent with design criteria of the soil report. If the soil properties are found to be different from this criteria, the foundation engineer shall be promptly notified so that the foundation design may be reviewed.

F. The bottom of all piers shall be thoroughly cleaned and dewatered prior to concrete placement.

G. Continuous horizontal bars and corner bars in grade beams supported on piers shall be applied only where necessary for purposes of handling and bar length. Bar splices shall be placed in accordance with the following requirements:

Bar Location Splice Location Minimum Lap

Bottom bars at support (36) bar diameters

Top bars at mid-span (42) bar diameters

Corner top bars at corner (42) bar diameters

Other bars staggered (36) bar diameters

4. STRUCTURAL STEEL:

A. Structural steel, including cast in angles, plates or other sections shall be detailed and erected in accordance with the American Institute of Steel Construction (AISC) Specifications and Code of Standard Practice, latest edition.

B. All wide flange and channel structural steel shall conform to ASTM A992. All other structural shapes and miscellaneous steel shall conform to ASTM A36 unless otherwise noted. Tube steel columns shall conform to ASTM A500, Grade-B. Pipe columns shall conform to ASTM A53.

C. Shop connections shall be welded with E70xx electrodes and ground smooth where exposed. Field connections shall be made with bolts conforming to ASTM A325N unless otherwise noted. Field welds shall be made with E70xx electrodes. All welding shall be in accordance with AWS "Structural Welding Code", latest edition and performed by certified, licensed welder.

D. Headed stud anchors shall conform to AWS D11 and shall be automatically end welded.

5. FIELD OBSERVATIONS:

A. The Contractor shall inform the Engineer of Record at least 24 hours prior to casting any concrete so as to allow the Engineer of Record the opportunity to review the placement of reinforcing and/or embedded items. Contact Rocky Mountain Group: (719) 548-0600.

B. The Contractor shall maintain a log of all field observations and provide copies to the Engineer of Record and the Architect.

C. The Contractor shall maintain a log of all field observations and provide copies to the Engineer of Record and the Architect.

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Z. The Contractor shall maintain a log of all field observations and provide copies to the Engineer of Record and the Architect.

AA. The Contractor shall maintain a log of all field observations and provide copies to the Engineer of Record and the Architect.

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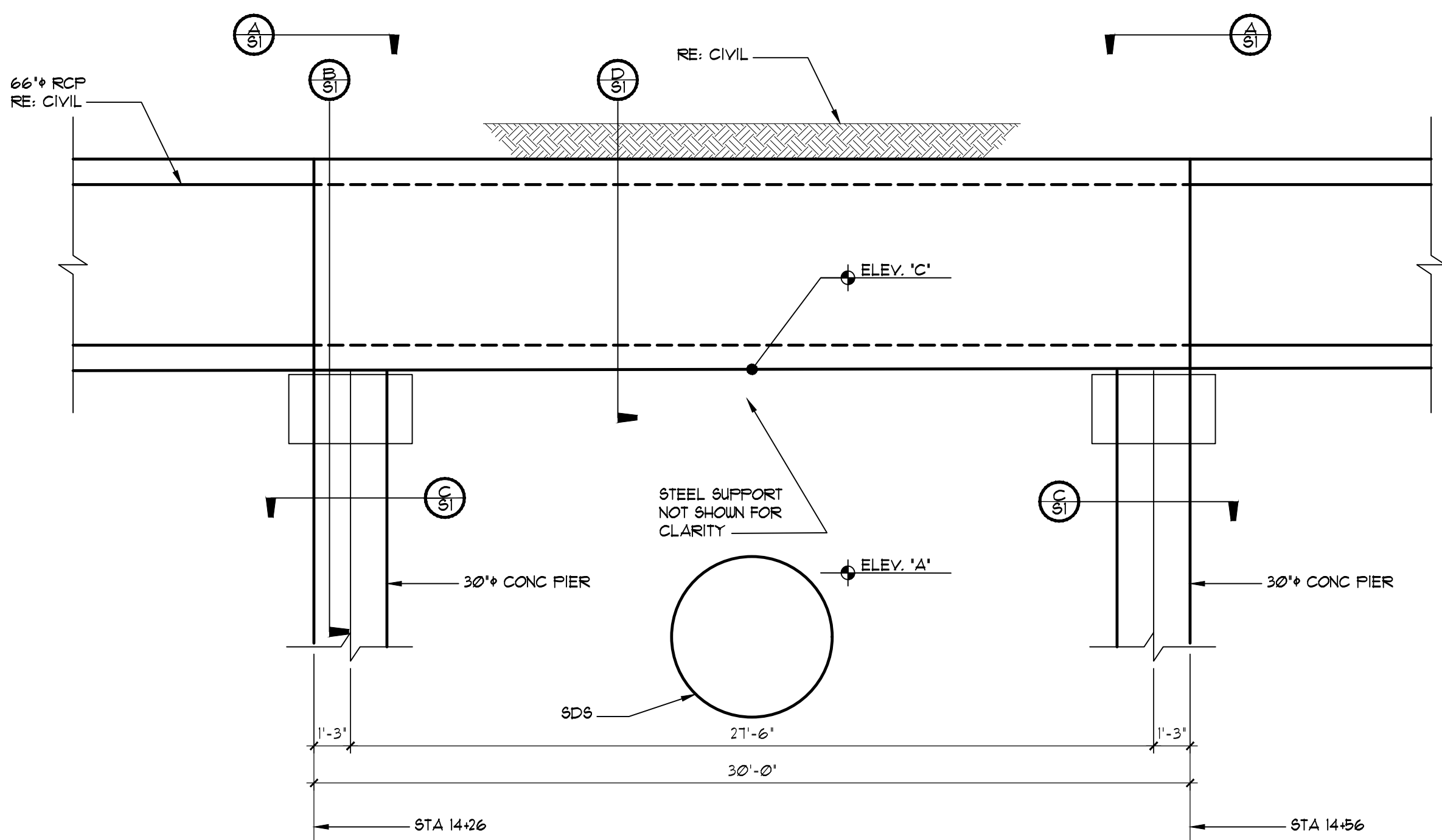
AG. The Contractor shall maintain a log of all field observations and provide copies to the Engineer of Record and the Architect.

AH. The Contractor shall maintain a log of all field observations and provide copies to the Engineer of Record and the Architect.

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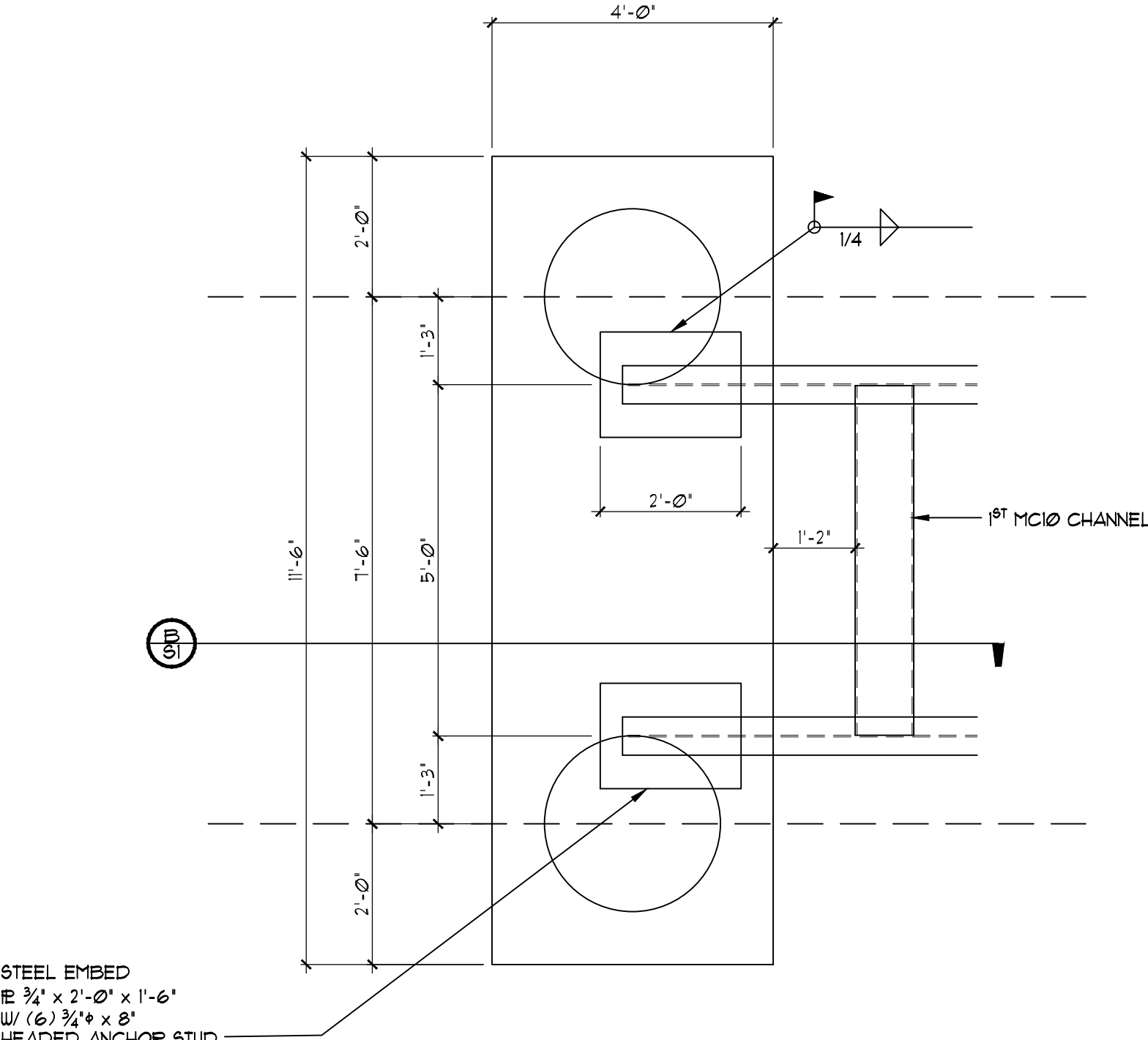
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1 SDS CROSSING ELEVATION

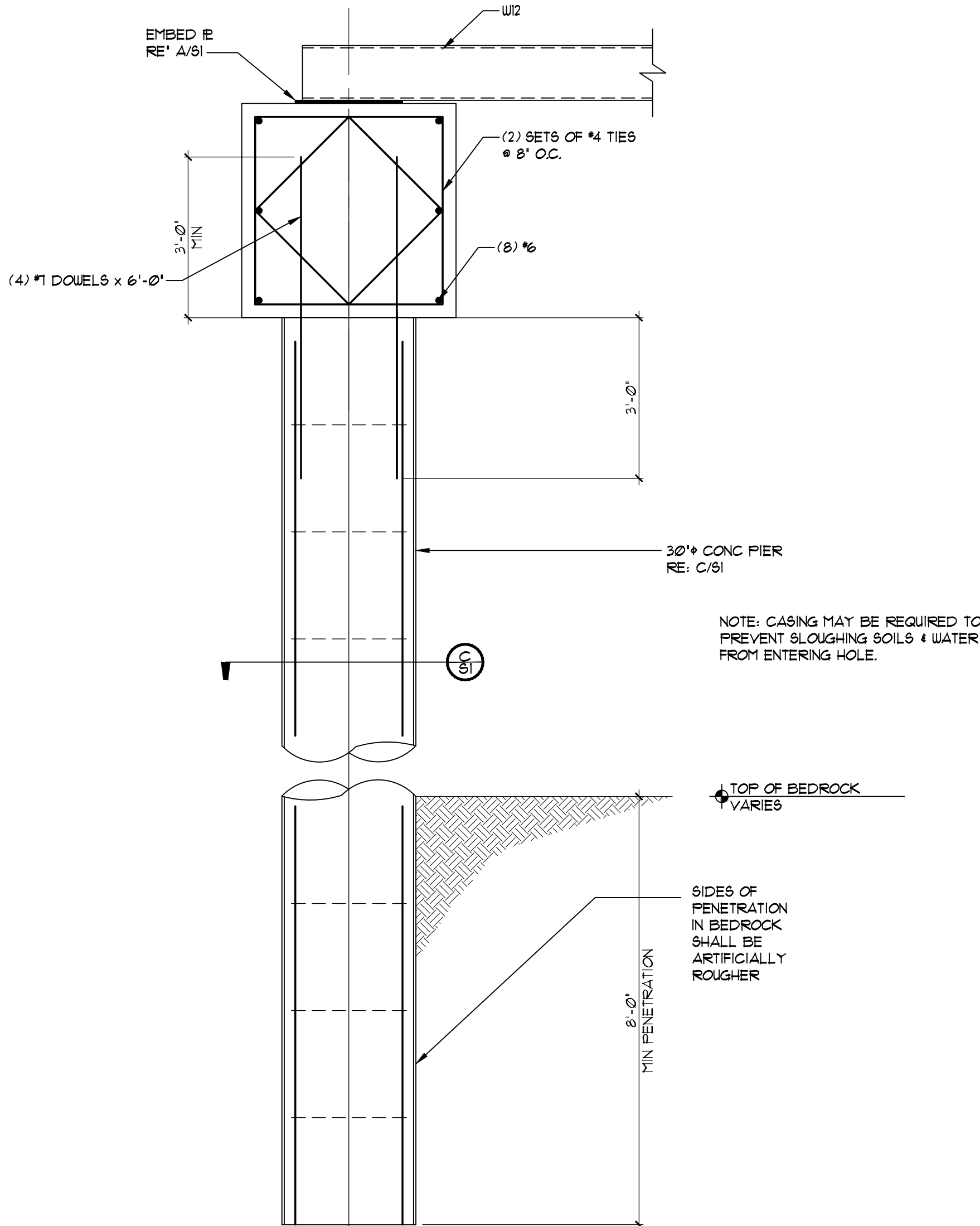
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A PIER CAP PLAN

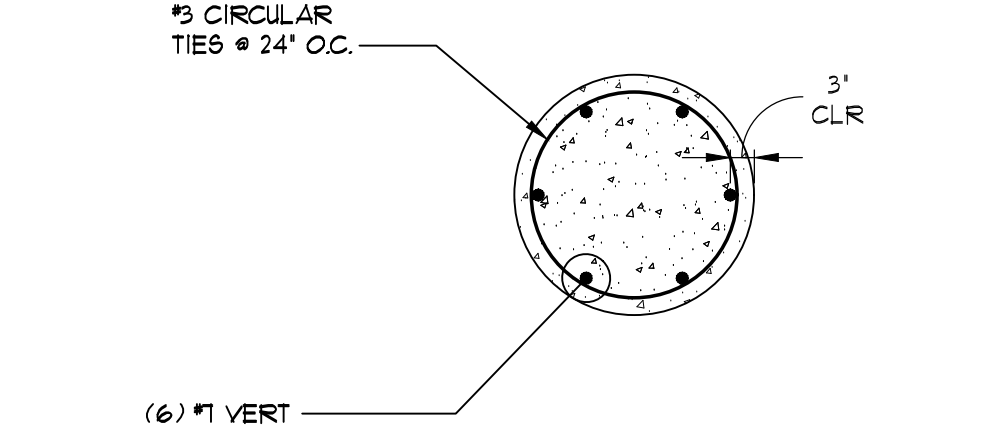
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NOTE: ALL EXPOSED STEEL BE COATED IN ASPHALT COATING



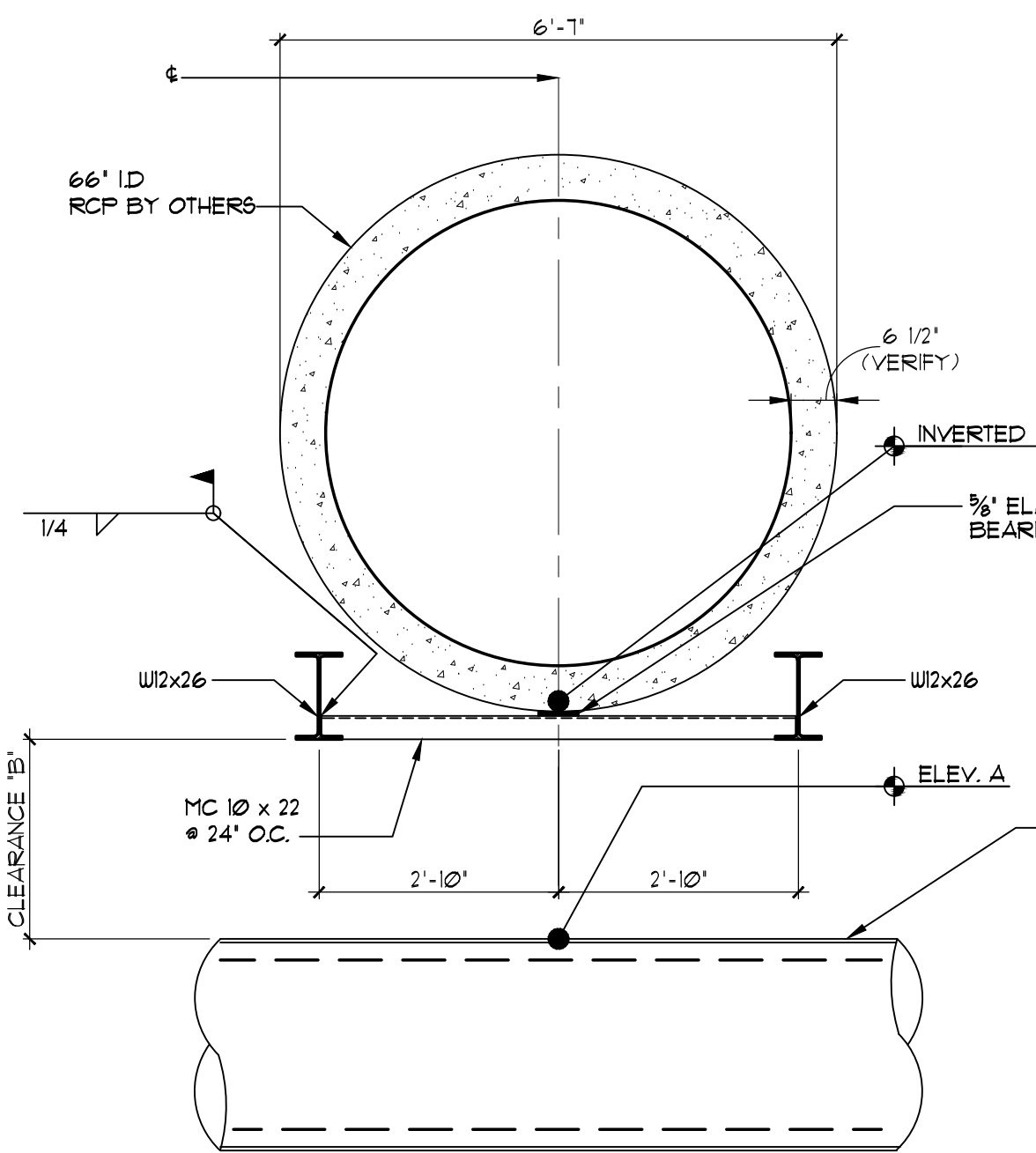
B DRILLED PIER DETAIL

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C 30\"/>

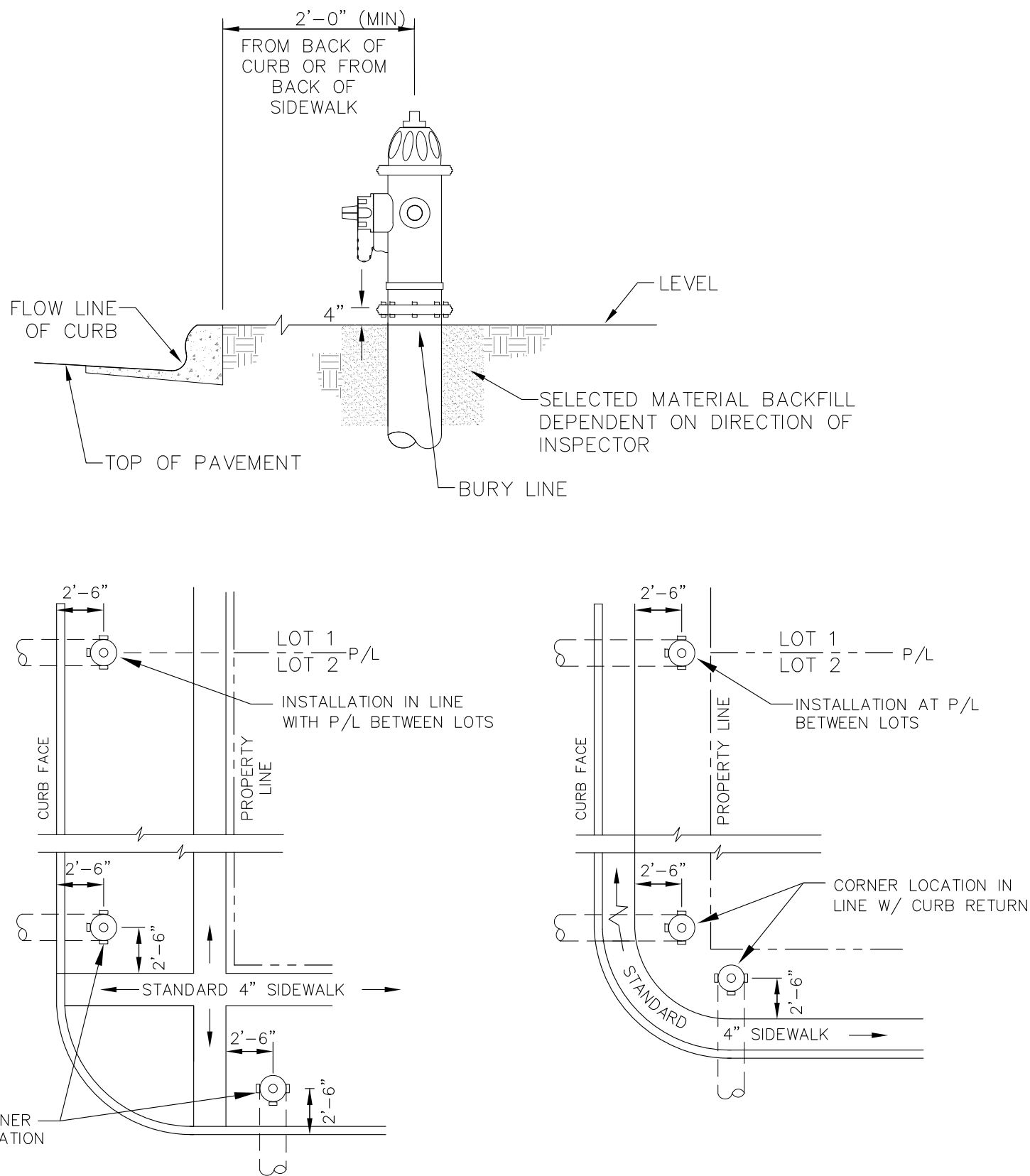
SCALE: 1/2" = 1'-0"



D RCP SUPPORT OVER SDS

SCALE: 1/2" = 1'-0"

DIMENSIONS		
CROSSING	NO. 19	NO.17
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B	2.73	5.43
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DETACHED SIDEWALK LOCATION
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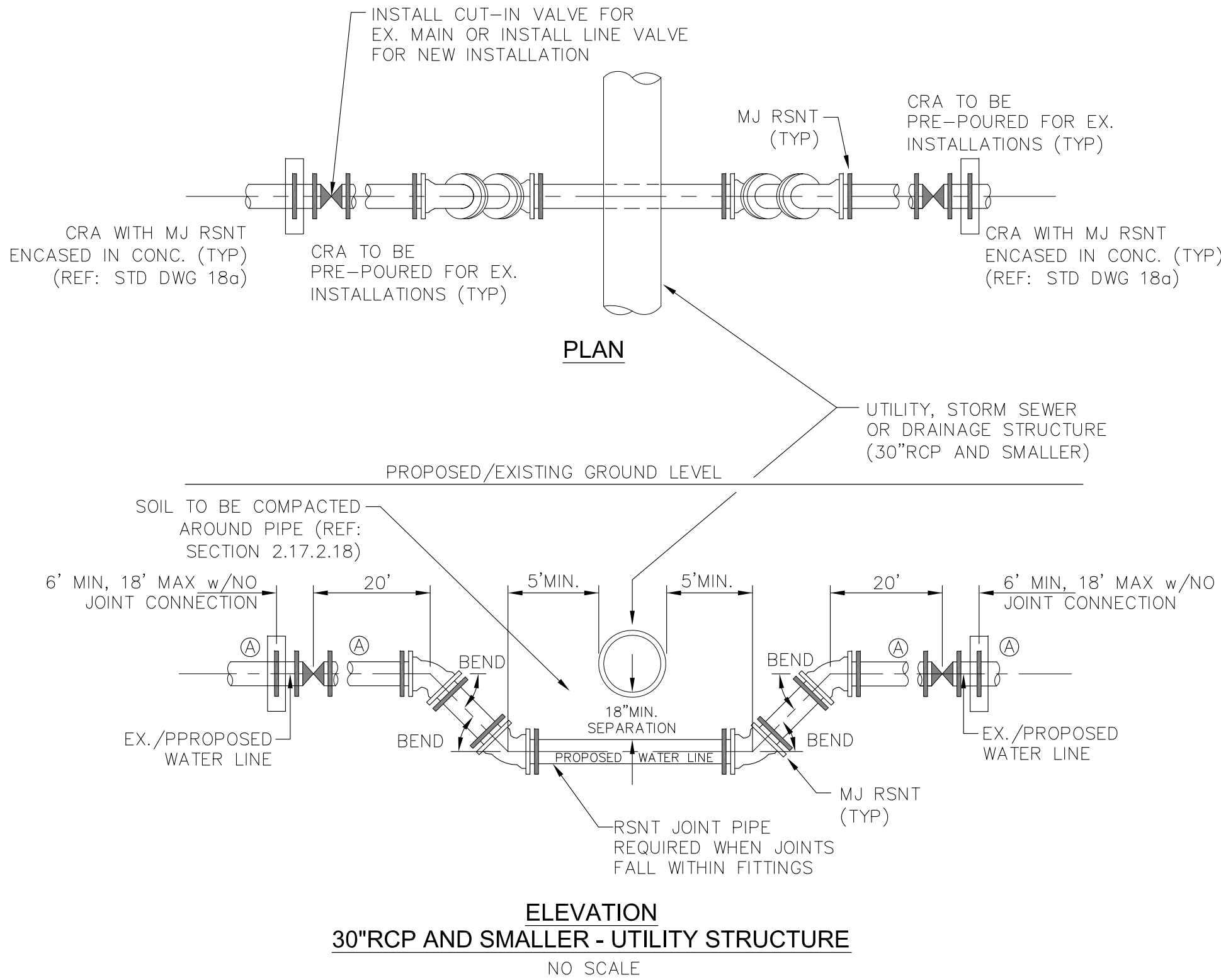
ATTACHED SIDEWALK LOCATION
NO SCALE

NOTE
ALL HYDRANTS SHALL BE MEULLER SUPER CENTURION 200.

NOTES

1. HYDRANT NOZZLE SHALL BE POSITIONED AT RIGHT ANGLES TO CURB. IF NO CURB OR SIDEWALK EXIST, NOZZLE SHALL BE PLACED AT RIGHT ANGLE TO STREET OR ALLEY.
2. HYDRANTS WILL BE PLACED A MINIMUM OF 5.0 FEET FROM ANY UTILITY OR DRAINAGE STRUCTURE (TO BE CO-ORDINATED WITH JOINT TRENCH INSTALLATION)
3. ANY HYDRANT BEING INSTALLED WITH CONDITIONS OTHER THAN THOSE MENTIONED AND/OR DETAILED BELOW WILL REQUIRE SIGNED APPROVAL FROM SECURITY FIRE PROTECTION DISTRICT.

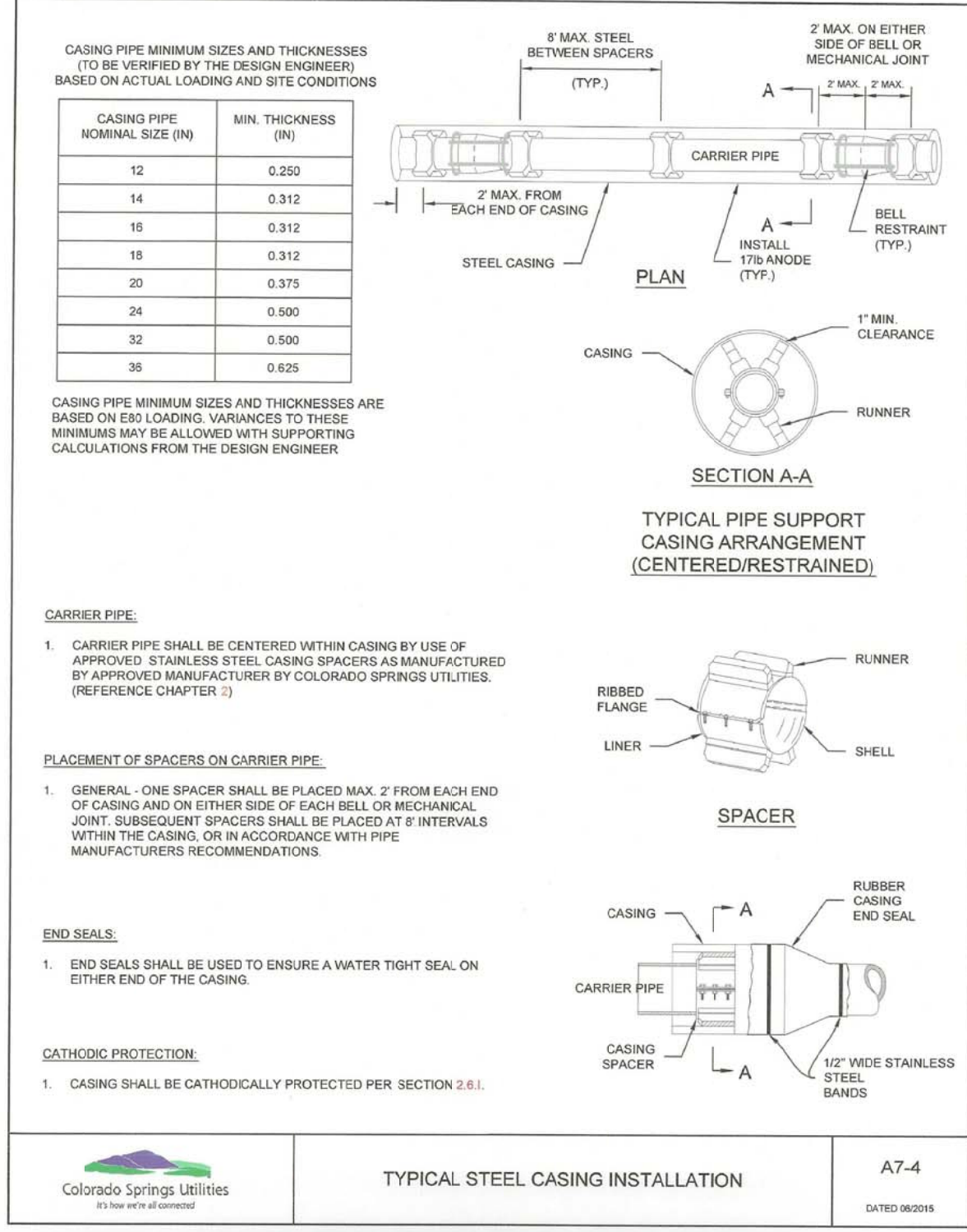
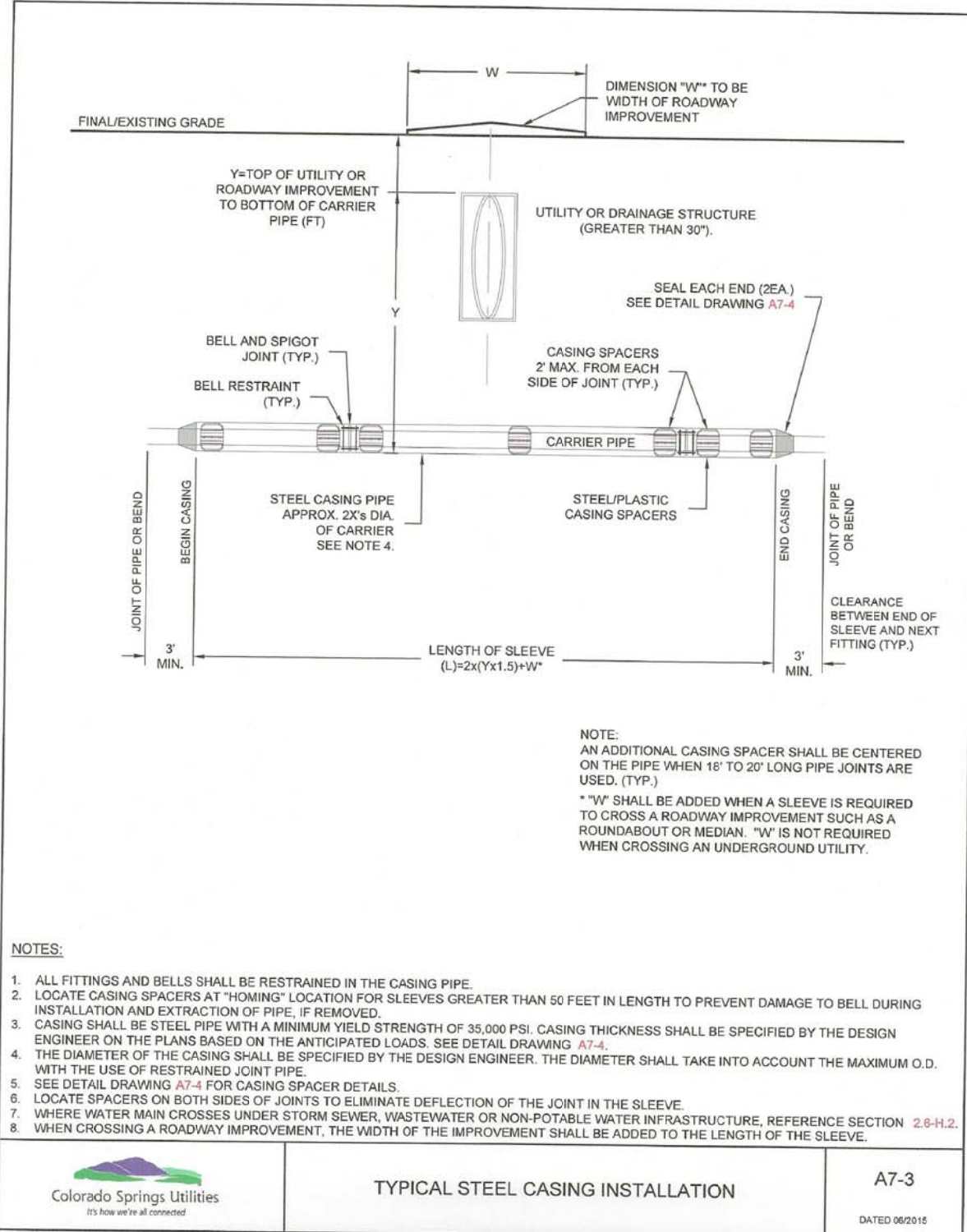
FIRE HYDRANT LOCATIONS
NO SCALE



GENERAL NOTES

1. D.I.P. PIPE REQUIRED IN LOWERINGS (AT THE DISCRETION OF THE WRD/INSPECTOR PVC PIPE MAYBE APPROVED).
2. Ⓐ LOWERINGS TO BE CATHODIC PROTECTED UNDER THE DIRECTION OF THE WRD INSPECTOR. (17 lb).
3. ALL FITTINGS SHALL HAVE MJ RSNTS. SEE DRAWINGS NO. 27, 28 & SECTION 5.14 OF THE WRD SPECIFICATIONS.
4. EXAMPLE CAN VARY DUE TO SITE CONDITIONS AND INSPECTOR'S DIRECTION'S.

**LOWERING DETAIL WITH
MJ RSNT FITTINGS AND RSNT JOINT PIPE
(w/APPROVAL OF W.R.D.)**
(PER CSU STANDARD # 20a)
NO SCALE



Markup Summary

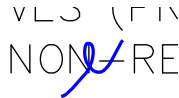
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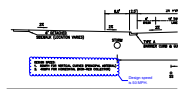
Full-depth asphalt is not allowed.

3 (5)



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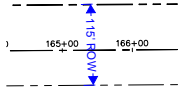


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4 (2)

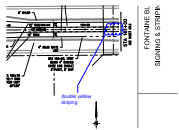


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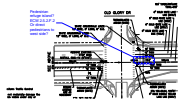
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5 (9)



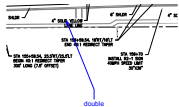
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double yellow striping



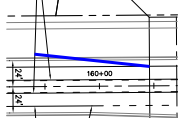
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Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 1:02:13 PM
Color: ■

Pedestrian refuge island?
ECM 2.5.2.F.2
Or direct pedestrians to west side?

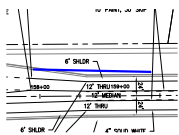


Subject: Callout
Page Label: 5
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 11:22:42 AM
Color: ■

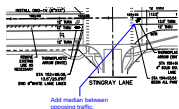
double



Subject: Line
Page Label: 5
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/14/2018 12:30:53 PM
Color: ■

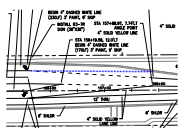


Subject: Line
Page Label: 5
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/14/2018 12:31:56 PM
Color: ■



Subject: Callout
Page Label: 5
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/14/2018 12:39:21 PM
Color: ■

Add median between opposing traffic.

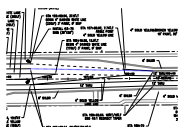


Subject: Line
Page Label: 5
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/14/2018 12:33:34 PM
Color: ■



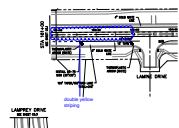
Subject: Callout
Page Label: 5
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/14/2018 12:36:03 PM
Color: ■

A WB split to 2 through lanes is needed to avoid 4 decisions to the west. Verify tapers and dimensions.



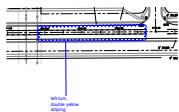
Subject: Line
Page Label: 5
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/14/2018 12:33:17 PM
Color: ■

6 (9)



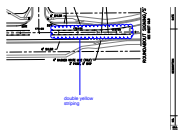
Subject: Cloud+
Page Label: 6
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 11:33:24 AM
Color: ■

double yellow striping



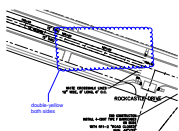
Subject: Cloud+
Page Label: 6
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 9:14:25 AM
Color: ■

left-turn, double yellow striping



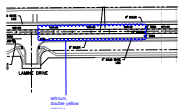
Subject: Cloud+
Page Label: 6
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 9:15:27 AM
Color: ■

double yellow striping



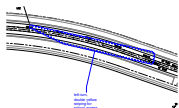
Subject: Cloud+
Page Label: 6
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 9:20:26 AM
Color: ■

double-yellow both sides



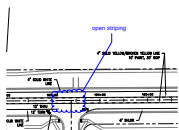
Subject: Cloud+
Page Label: 6
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 9:13:56 AM
Color: ■

left-turn, double yellow striping



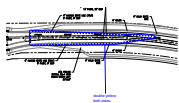
Subject: Cloud+
Page Label: 6
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 11:34:21 AM
Color: ■

left-turn, double yellow striping for school access



Subject: Cloud+
Page Label: 6
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 9:12:43 AM
Color: ■

open striping



Subject: Cloud+
Page Label: 6
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 11:34:32 AM
Color: ■

double-yellow both sides.

- No-parking signs?

Subject: Text Box
Page Label: 6
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 12:05:24 PM
Color: ■

- No-parking signs?

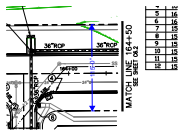
7 (1)

Provide centerline station labels

Subject: Text Box
Page Label: 7
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 12:48:25 PM
Color: ■

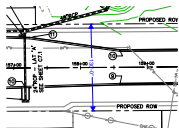
Provide centerline station labels

8 (6)



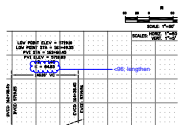
Subject: Length Measurement
Page Label: 8
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 11:50:30 AM
Color: ■

115'-0"



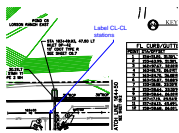
Subject: Length Measurement
Page Label: 8
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 11:49:47 AM
Color: ■

130'-0"



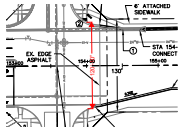
Subject: Cloud+
Page Label: 8
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 12:44:02 PM
Color: ■

<96; lengthen



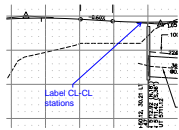
Subject: Callout
Page Label: 8
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 11:46:31 AM
Color: ■

Label CL-CL stations



Subject: Length Measurement
Page Label: 8
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 12:47:06 PM
Color: ■

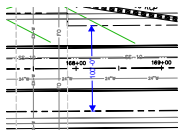
120'-10"



Subject: Callout
Page Label: 8
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 1:03:46 PM
Color: ■

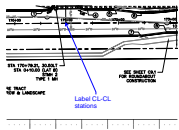
Label CL-CL stations

9 (2)



Subject: Length Measurement
Page Label: 9
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 1:07:16 PM
Color: ■

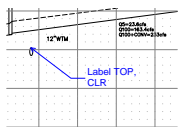
100'-0"



Subject: Callout
Page Label: 9
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/8/2018 1:08:58 PM
Color: ■

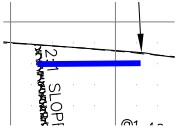
Label CL-CL stations

10 (4)



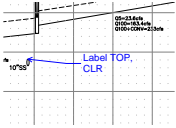
Subject: Callout
Page Label: 10
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/9/2018 7:59:18 AM
Color: ■

Label TOP, CLR



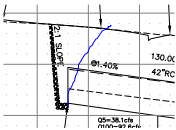
Subject: Line
Page Label: 10
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/9/2018 8:30:18 AM
Color: ■

show inlet headwater



Subject: Callout
Page Label: 10
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/9/2018 7:59:31 AM
Color: ■

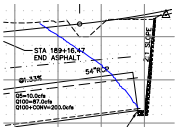
Label TOP, CLR



Subject: Pen
Page Label: 10
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/9/2018 8:05:16 AM
Color: ■

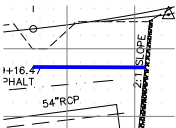
• show interim grade

11 (3)



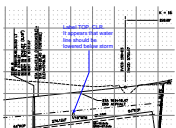
Subject: Pen
Page Label: 11
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/9/2018 8:05:24 AM
Color: ■

• show interim grade



Subject: Line
Page Label: 11
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/9/2018 8:29:24 AM
Color: ■

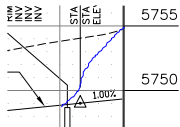
show inlet headwater



Subject: Callout
Page Label: 11
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/9/2018 8:03:14 AM
Color: ■

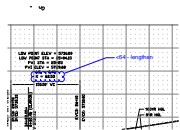
Label TOP, CLR.
It appears that water line should be lowered below storm

13 (2)



Subject: Pen
Page Label: 13
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/9/2018 8:23:55 AM
Color: ☐

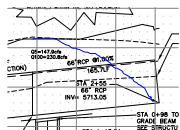
• show interim grade



Subject: Cloud+
Page Label: 13
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/9/2018 8:20:48 AM
Color: ☐

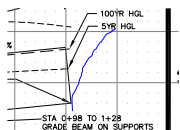
<64 - lengthen

16 (2)



Subject: Pen
Page Label: 16
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/14/2018 2:52:01 PM
Color: ☐

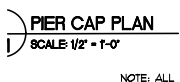
• show interim grade



Subject: Pen
Page Label: 16
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: dsdrice
Date: 2/14/2018 2:51:02 PM
Color: ☐

• show interim grade

33 (96)



Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

PIER CAP PLAN



Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

DIMENSIONS

ELEV. 'A'

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

ELEV. "A"

5709.90

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

5709.90

C

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

C

PIER CAP PLA
SCALE: 1/2" = 1'-0"

NOTE
△△△

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

SCALE: 1/2" = 1'-0"

C
S1

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

C

S1

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

S1

CROSSING

A

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

CROSSING

B

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

B



Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

DRILLED PIER DETAIL

STEEL EMBED
12 3/4" x 2'-0" x 1'-6"
W/ (6) 3/4" x 8"
HEADED ANCHOR STUD

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

STEEL EMBED > " x 2'-0" x 1'-6" 3/4" x 2'-0" x
1'-6" W/ (6) " x 8" 3/4" x 8" HEADED ANCHOR
STUD



Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

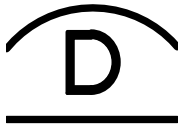
D

30" CONC PIER

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

30"~ CONC PIER

<div>NO. 19</div>	<div> <div>Subject:</div> <div>Page Label: 33</div> <div>Lock: Unlocked</div> <div>Status:</div> <div>Checkmark: Unchecked</div> <div>Author: AutoCAD SHX Text</div> <div>Date:</div> <div>Color: <input type="checkbox"/></div> </div> <div>NO. 19</div>
<div> <div>3'-0"</div> <div>Σ</div> </div>	<div> <div>Subject:</div> <div>Page Label: 33</div> <div>Lock: Unlocked</div> <div>Status:</div> <div>Checkmark: Unchecked</div> <div>Author: AutoCAD SHX Text</div> <div>Date:</div> <div>Color: <input type="checkbox"/></div> </div> <div>3'-0"</div>
<div>A</div>	<div> <div>Subject:</div> <div>Page Label: 33</div> <div>Lock: Unlocked</div> <div>Status:</div> <div>Checkmark: Unchecked</div> <div>Author: AutoCAD SHX Text</div> <div>Date:</div> <div>Color: <input type="checkbox"/></div> </div> <div>A</div>
<div> <div>3/4 CONC PIER @ 0.8'</div> <div>NOTE: CASING MAY BE REQUIRED TO PREVENT SLOUGHING SOILS & WATER FROM ENTERING HOLE.</div> </div>	<div> <div>Subject:</div> <div>Page Label: 33</div> <div>Lock: Unlocked</div> <div>Status:</div> <div>Checkmark: Unchecked</div> <div>Author: AutoCAD SHX Text</div> <div>Date:</div> <div>Color: <input type="checkbox"/></div> </div> <div>NOTE: CASING MAY BE REQUIRED TO PREVENT SLOUGHING SOILS & WATER FROM ENTERING HOLE.</div>
<div> <div>30"φ DRILLED</div> <div>SCALE: 1/2" = 1'-0"</div> </div>	<div> <div>Subject:</div> <div>Page Label: 33</div> <div>Lock: Unlocked</div> <div>Status:</div> <div>Checkmark: Unchecked</div> <div>Author: AutoCAD SHX Text</div> <div>Date:</div> <div>Color: <input type="checkbox"/></div> </div> <div>SCALE: 1/2" = 1'-0"</div>
<div>W12x26 —</div>	<div> <div>Subject:</div> <div>Page Label: 33</div> <div>Lock: Unlocked</div> <div>Status:</div> <div>Checkmark: Unchecked</div> <div>Author: AutoCAD SHX Text</div> <div>Date:</div> <div>Color: <input type="checkbox"/></div> </div> <div>W12x26</div>



Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

D

RE: CIVIL —

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

RE: CIVIL

— (8) #6

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

(8) #6

1/4

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

1/4

— W12

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

W12

— 5/8" ELASTIC
BEARING F

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

58" ELASTOMERIC BEARING PAD



Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

S1



Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

S1



Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

4. STRUCTURAL STEEL: : A. Structural steel, including cast in angles, plates or other sections shall be detailed and A. Structural steel, including cast in angles, plates or other sections shall be detailed and Structural steel, including cast in angles, plates or other sections shall be detailed and erected in accordance with the American Institute of Steel Construction (AISC) Specifications and Code of Standard Practice, latest edition. B. All wide flange and channel structural steel shall conform to ASTM A992. All other B. All wide flange and channel structural steel shall conform to ASTM A992. All other All wide flange and channel structural steel shall conform to ASTM A992. All other structural shapes and miscellaneous steel shall conform to ASTM A36 unless otherwise noted. Tube steel columns shall conform to ASTM A500, Grade-B. Pipe columns shall conform to ASTM A53. C. Shop connections shall be welded with E70xx electrodes and ground smooth where C. Shop connections shall be welded with E70xx electrodes and ground smooth where Shop connections shall be welded with E70xx electrodes and ground smooth where exposed. Field connections shall be made with bolts conforming to ASTM A325N unless otherwise noted. Field welds shall be made with E70xx electrodes. All welding shall be in accordance with AWS "Structural Welding Code", latest edition and performed by certified, licensed welder. D. Headed stud anchors shall conform to AWS D1.1 and shall be automatically end welded. D. Headed stud anchors shall conform to AWS D1.1 and shall be automatically end welded. Headed stud anchors shall conform to AWS D1.1 and shall be automatically end welded.



Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

SCALE: 1/2" = 1'-0"

— STA 14+26

Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

STA 14+26



Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

A



Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

ELEV. "C"



Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

A

— SIDES OF
PENETRATION
IN BEDROCK
SHALL BE
ARTIFICIALLY
ROUGHEN

NOTES

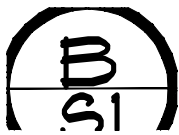
Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

SIDES OF PENETRATION IN BEDROCK SHALL
BE ARTIFICIALLY ROUGHEN



Subject:
Page Label: 33
Lock: Unlocked
Status:
Checkmark: Unchecked
Author: AutoCAD SHX Text
Date:
Color: ☐

S1



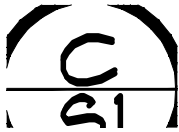
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MC 10 x 22
@ 24" O.C.

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MC 10 x 22 @ 24" O.C.



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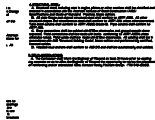
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8'-0"



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5. FIELD OBSERVATIONS: : A. The Contractor shall inform the Engineer of Record at least 24 hours prior to casting A. The Contractor shall inform the Engineer of Record at least 24 hours prior to casting The Contractor shall inform the Engineer of Record at least 24 hours prior to casting any concrete so as to allow the Engineer of Record the opportunity to review the placement of reinforcing and/or embedded items. Contact Rocky Mountain Group: (719) 548-0600.Rocky Mountain Group: (719) 548-0600.: (719) 548-0600.



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(6) #1 VERT —

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(6) #7 VERT



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2. CONCRETE: : A. Concrete has been designed and shall be constructed in accordance with the American A. Concrete has been designed and shall be constructed in accordance with the American Concrete has been designed and shall be constructed in accordance with the American Concrete Institute "Building Code Requirement Reinforced Concrete" and "Specifications for Structural Concrete for Buildings" (ACI 318 and ACI 301) latest editions. Section 1.3 "Inspection" of ACI 318 is deleted in its entirety, see "Field Observations" paragraph. All concrete shall be of stone aggregate, unless noted otherwise. B. Concrete mixes: B. Concrete mixes: Concrete mixes: Concrete mixes: : See specifications for any additional durability requirements. Mix 'A' For drilled piers Mix 'A' For drilled piers For drilled piers For drilled piers 3,000 psi minimum compressive strength at age of 28 days. Type I/II Cement, minimum of 470 pounds per cubic yard. Fly ash not allowed. 3/4" maximum aggregate size. 6" minimum- 8" maximum slump. Mix 'B' For footings, grade beams, and miscellaneous concrete: Mix 'B' For footings, grade beams, and miscellaneous concrete: Mix 'B' For footings, grade beams, and miscellaneous concrete: For footings, grade beams, and miscellaneous concrete: For footings, grade beams, and miscellaneous concrete: For footings, grade beams, and miscellaneous concrete: : 4,000 psi minimum compressive strength at age of 28 days. Type I/II Cement, minimum of 564 pounds per cubic yard. 3/4" maximum aggregate size. 6%; 1 % Entrained air. 12% Entrained air. 4" (8" with superplasticizer) maximum slump. C. Reinforcing is to be new billet steel ASTM A615, Grade-60, except ties and bars to C. Reinforcing is to be new billet steel ASTM A615, Grade-60, except ties and bars to Reinforcing is to be new billet steel ASTM A615, Grade-60, except ties and bars to be welded shall be Grade-40. Provide not less than (2) #5 around all sides of all openings in concrete and extend 2'-0" past edges of openings. No splices of reinforcement are permitted except as detailed or authorized by structural engineer. Where permitted, use contact lap splices, (36) bar diameters minimum. Welded Wire Fabric (W.W.F.) shall be in accordance with ASTM A185. Lap (1) full mesh minimum at splices. No welding of reinforcement permitted unless detailed. D. Placing of Reinforcement: Provide chairs, bolsters, additional reinforcement, and D. Placing of Reinforcement: Provide chairs, bolsters, additional reinforcement, and Placing of Reinforcement: Provide chairs, bolsters, additional reinforcement, and accessories necessary to support reinforcement at position shown on drawings. Support of reinforcement on form ties, wood, brick, brickbat or other unacceptable material, will not be permitted. E. Reinforcement shall be placed so that the following minimum concrete protection is E. Reinforcement shall be placed so that the following minimum concrete protection is Reinforcement shall be placed so that the following minimum concrete protection is provided, unless noted otherwise: 1) Concrete surfaces poured against ground3" Clear 1) Concrete surfaces poured against ground3" Clear Concrete surfaces poured against ground3" Clear 2) Formed surfaces exposed to ground or weather: 2) Formed surfaces exposed to ground or weather: Formed



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3'-0"

 ELEV. A

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ELEV. A

 MAP PLAN
7-14

NOTE: ALL EXPOSED STEEL BE COATED IN ASPHALT COATING

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NOTE: ALL EXPOSED STEEL BE COATED IN ASPHALT COATING

— W12x26

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W12x26



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3'-0"

— STA 14+56

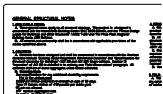
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STA 14+56



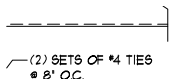
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1. APPLICABLE CODES: : A. These general notes apply to all structural drawings. This project is designed in A. These general notes apply to all structural drawings. This project is designed in These general notes apply to all structural drawings. This project is designed in accordance with the International Building Code (IBC), 2009 Edition, and the 'Minimum Design Loads for Buildings and Other Structures" (ASCE 7-05) and The Pikes Peak Regional Building Code. (2011 Edition). B. All material and workmanship shall be in accordance with applicable provisions of the B. All material and workmanship shall be in accordance with applicable provisions of the All material and workmanship shall be in accordance with applicable provisions of the codes specified above.



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(2) SETS OF #4 TIES @ 8" O.C.

TOP OF BEDROCK
VARIES

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TOP OF BEDROCK VARIES

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SDS

B

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B

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#3 CIRCULAR
TIES @ 24" O.C.

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#3 CIRCULAR TIES @ 24" O.C.



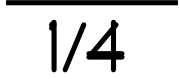
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1/4

STEEL SUPPORT
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CLARITY



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STEEL SUPPORT NOT SHOWN FOR CLARITY



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EMBED RE
RE" A/S1

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EMBED > RE" A/S1

66" I.D.
RCP BY OTHERS

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66" I.D RCP BY OTHERS

30" DRILLED PIER DETAIL
8/10/10 10' - 10'

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30" DRILLED PIER DETAIL

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INVERTED 'C'
5/4" FI DETAIL

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INVERTED "C"

SDS CROSSING ELEVATION
8/10/10 10' - 10'

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SDS CROSSING ELEVATION

8'-0" PENETR

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8'-0"

1st MC10 CHANNEL

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1 MC10 CHANNELST MC10 CHANNEL

GENERAL STRUCTURAL NOTES
1. APPLICABLE CODES
A. These general notes apply to all structural steel
assemblies with the International Building Code (IBC)
Local for Building and Other Structures (IBC Local)
Building Code (IBC Edition)
B. All material and workmanship shall be in accordance
with specifications above.

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GENERAL STRUCTURAL NOTES



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3. DRILLED PIER FOUNDATIONS: : A. The foundation design has been completed in accordance with pertinent standards, A. The foundation design has been completed in accordance with pertinent standards, The foundation design has been completed in accordance with pertinent standards, recommended design soil parameters, accepted engineering design procedures, and is based on the best information available at the time of completion. The design is intended to minimize differential movement as described in the reference Geotechnical Report. It . It must be recognized that foundation components will undergo movement. It shall be the responsibility of the contractor and/or present owner to inform any subsequent owners of the soil condition and advised to maintain good practices in the future with regard to surface and subsurface drainage, framing of partitions above floor slabs, and finish work above the floor slabs, etc. B. Foundation design is based on soil report No. 159665 prepared by RMG B. Foundation design is based on soil report No. 159665 prepared by RMG Foundation design is based on soil report No. 159665 prepared by RMG 159665 prepared by RMG 159665 prepared by RMG prepared by RMG RMG Engineers dated 11/7/17. The Contractor shall thoroughly review and understand dated 11/7/17. The Contractor shall thoroughly review and understand 11/7/17. The Contractor shall thoroughly review and understand . The Contractor shall thoroughly review and understand all pertinent construction aspects of this report before beginning any work. C. The structure is to be founded on concrete grade beams bearing on C. The structure is to be founded on concrete grade beams bearing on The structure is to be founded on concrete grade beams bearing on drilled piers. Design of drilled piers is based on the following criteria:
Maximum allowable end bearing pressure. 35,000 psf 35,000 psf psf Maximum allowable side shear 3,200 psf 3,200 psf psf (For the portion of the pier in bedrock and at least ??'-??" below bottom of grade beam) ??'-??" below bottom of grade beam) below bottom of grade beam) Maximum penetration into bedrock. 8'-0" 8'-0" Minimum total length 40'-0" 40'-0" Minimum spacing 3 PIER DIA. 3 PIER DIA. D. The maximum variation of the center of any drilled pier at its top from the The maximum variation of the center of any drilled pier at its top from the required location shall not be more than 5% of its diameter, and no pier shall be out of plumb more than 1% of its overall length. E. A representative of the Geotechnical engineer shall provide full time E. A representative of the Geotechnical engineer shall provide full time A representative of the Geotechnical engineer shall provide full time observation of the drilling operation and reinforcement / concrete placement to verify that the soil type and conditions are consistent with design criteria of the soil report. If the soil properties are found to be different from this criteria, the foundation engineer shall be promptly notified so that the foundation design may be reviewed. F. The bottom of all piers shall be thoroughly cleaned and dewatered prior F. The bottom of all piers shall be thoroughly cleaned and



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8'-0"

NO.17

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NO.17

SDS CROSSING
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SCALE: 1/4" = 1'-0"

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30"~ CONC PIER

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30"~ CONC PIER

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— 30" CONC PIER
RE: C/S1

NOTE: C/S1

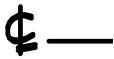
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30"~ CONC PIER RE: C/S1



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66"φ RCP
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66"~ RCP RE: CIVIL

(4) #7 DOWELS x 6'-0"
3'-0"

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(4) #7 DOWELS x 6'-0"

RCP SUPPORT
SCALE: 1/2" = 1'-0"
DIMENSIONAL

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SCALE: 1/2" = 1'-0"

RCP SUPPORT OVER SDS
SCALE 1/2" = 1'-0"
DIMENSIONS
DRAWING NO. 18 NOT

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RCP SUPPORT OVER SDS