

**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

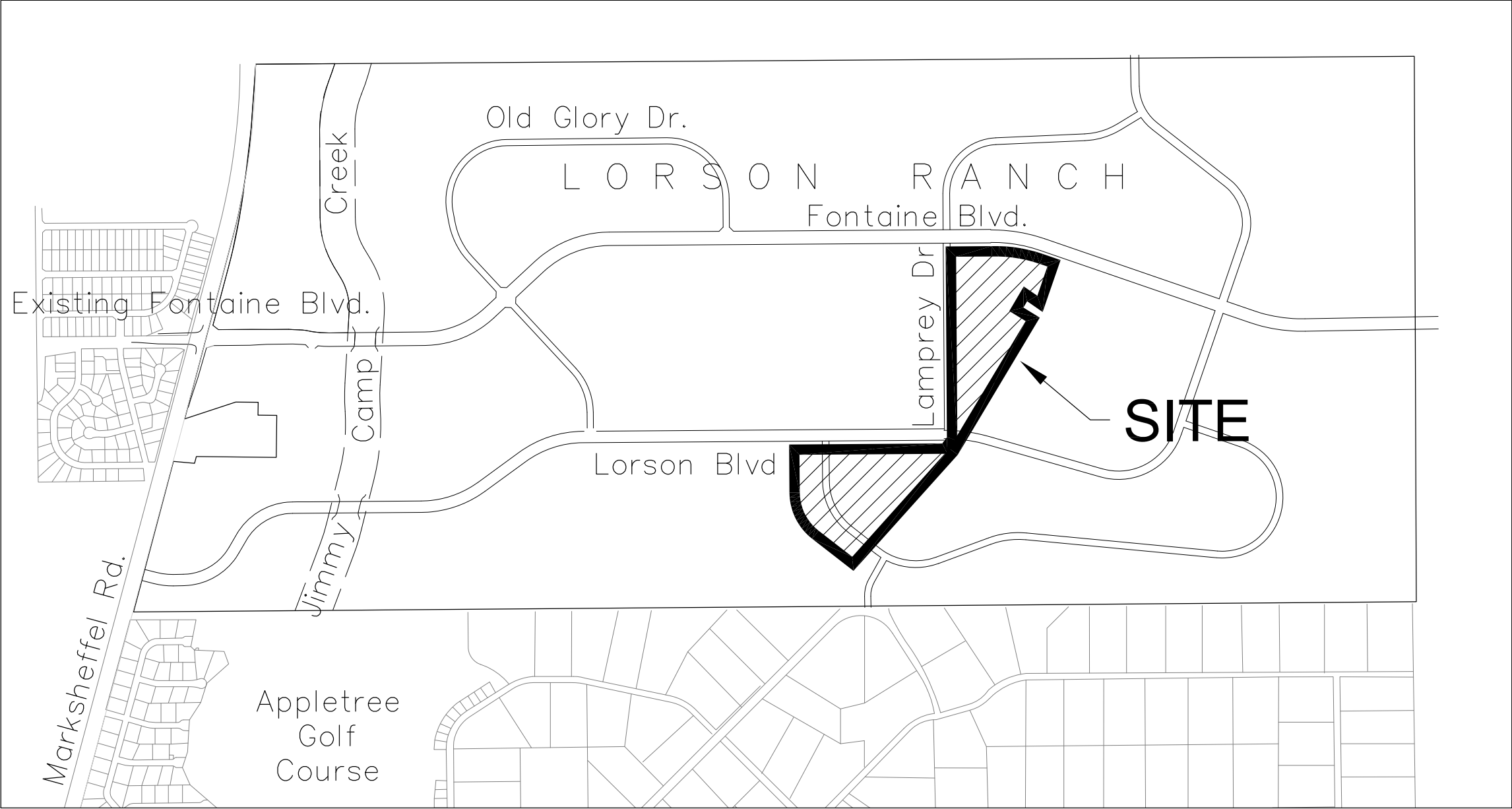
**BENCHMARK**

FIMS MONUMENT F204 LOCATED AT THE NORTHWEST CORNER OF FONTAINE BLVD AND COTTONWOOD GROVE DR. ELEVATION 5724.072 (N.G.V.D. 29)

**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.

CONSTRUCTION PLANS  
FOR  
**LORSON RANCH EAST FILING NO. 4**  
STREET AND STORM SEWER  
CONSTRUCTION PLANS



PREPARED FOR:  
**LORSON, LLC**  
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.

- LEGEND**
- SUBDIVISION BOUNDARY
  - EXISTING AND PROPOSED RIGHT OF WAY
  - EXISTING AND PROPOSED LOT LINES
  - EXISTING AND PROPOSED EASEMENTS
  - STREET CENTERLINE
  - PROPOSED CURB AND GUTTER
  - EXISTING WATERMAIN
  - PROPOSED WATERMAIN
  - EXISTING SANITARY SEWER
  - PROPOSED SANITARY SEWER
  - EXISTING 24" SANITARY SEWER
  - EXISTING GASMAIN
  - EXISTING UNDERGROUND ELECTRIC
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING CABLE TV
  - EXISTING PHONE OR FIBER OPTIC
  - EXISTING STORM DRAIN
  - PROPOSED STORM SEWER
  - EXISTING MANHOLES
  - PROPOSED SANITARY AND STORM MANHOLES
  - EXISTING AND PROPOSED WATERMAIN VALVES
  - EXISTING AND PROPOSED FIRE HYDRANT
  - EXISTING UTILITY POLE
  - PROPOSED STORM SEWER INLET



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 SECTIONS
C2.1-C2.2	STREET HORIZONTAL CONTROL
C5.1-C5.3	SIGNING/STRIPING PLANS
C6.1-C6.20	STREET/STORM PLAN AND PROFILES
C6.21	LORSON BLVD/LAMPREY DRIVE SIDEWALK PLAN
C7.1-C7.4	STORM SEWER LATERALS
C9.1-C9.3	DETENTION POND E2 DETAILS
C10.1-C10.3	STREET/STORM DETAILS
S1	SDS DRILLED PIER CROSSING STRUCTURAL 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: 2019--

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

JENNIFER IRVINE, COUNTY ENGINEER/ECM ADMINISTRATOR  
CONDITIONS:

DATE

**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

SF-19-0X

**CORE  
ENGINEERING GROUP**

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

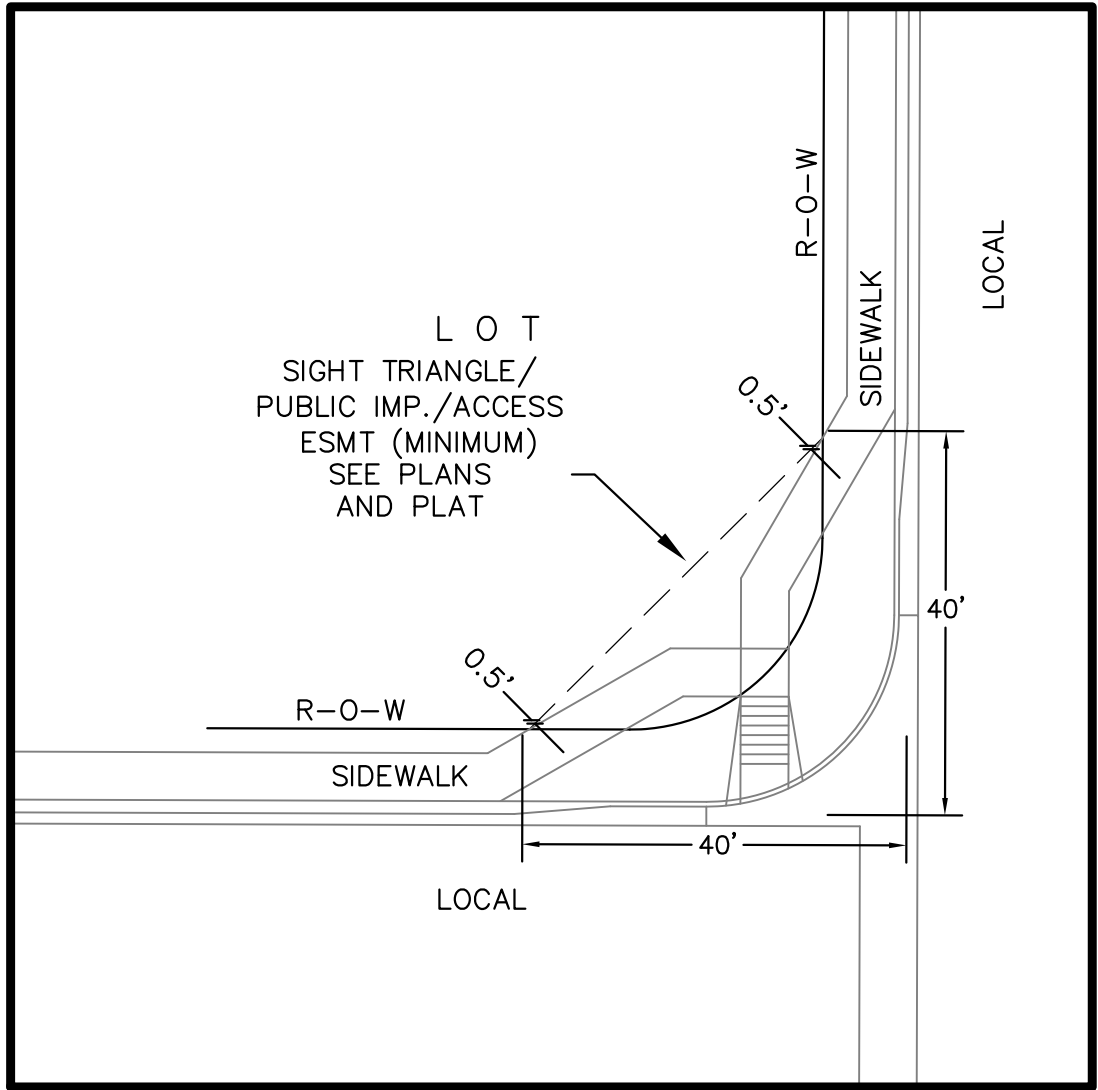
DATE  
DESCRIPTION  
NO.  
PROJECT: LORSON RANCH EAST FILING NO. 4  
PREPARED FOR: LORSON, LLC  
212 N. WAHSATCH AVE. SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: JEFF MARK

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

LORSON RANCH EAST FIL. NO. 4  
STREET / STORM SEWER  
CONSTRUCTION PLANS

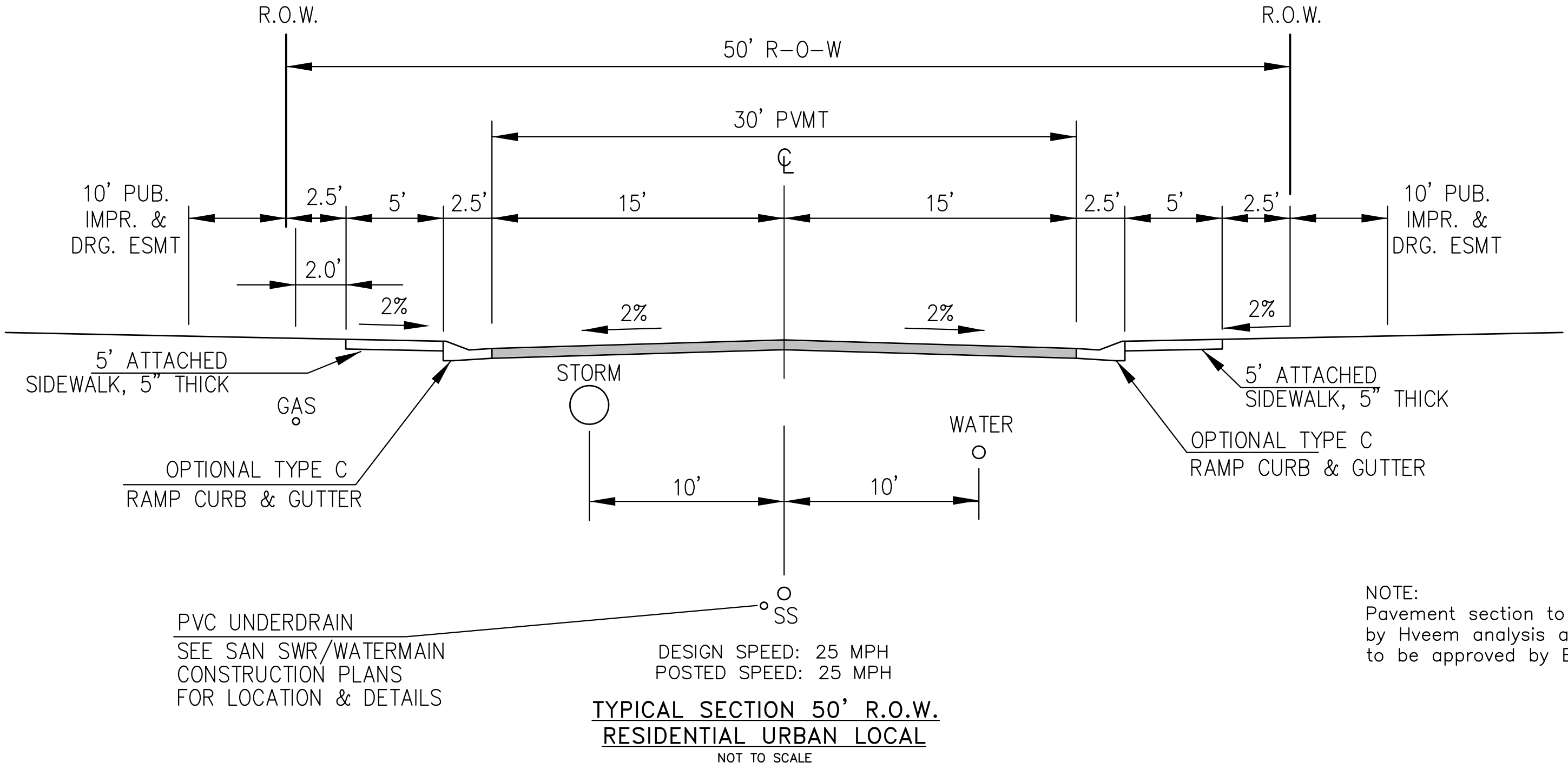
DATE:  
FEBRUARY 28, 2019  
PROJECT NO.  
100.048  
SHEET NUMBER  
C0.1  
TOTAL SHEETS: 40

<div>CONSTRUCTION NOTES</div> <div><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 &amp; CO., JULY, 2005. SUPPLEMENTAL SURVEY DATA WAS OBTAINED FOR MARKSHEFFEL ROAD FROM M&amp;S CIVIL GROUP IN NOVEMBER, 2016. 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 (ASTM 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. SUBGRADE FILL SHALL BE PLACED IN SIX–INCH LIFTS AND UNIFORMLY COMPACTED, MEETING THE REQUIREMENTS AS PREVIOUSLY DESCRIBED.</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 PAVEMENT SUBGRADES ARE BASED ON THE COMPOSITE ASPHALT PAVEMENT RECOMMENDATIONS MADE IN THE "GEOTECHNICAL STUDY" FOR LORSON RANCH.</div></div></div> <div><div>EL PASO COUNTY STANDARD CONSTRUCTION NOTES:</div><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 &amp; 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 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 WORKS DEPARTMENT AND MUTCD CRITERIA.</div><div>14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY PUBLIC WORKS DEPARTMENT, 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><div>STORM SEWER NOTES:</div><div><div>1. CONTRACTOR SHALL USE "TYLOX SUPER SEAL" OR APPROVED EQUAL JOINT GASKET FOR ALL RCP STORM SEWER JOINTS</div></div></div>	
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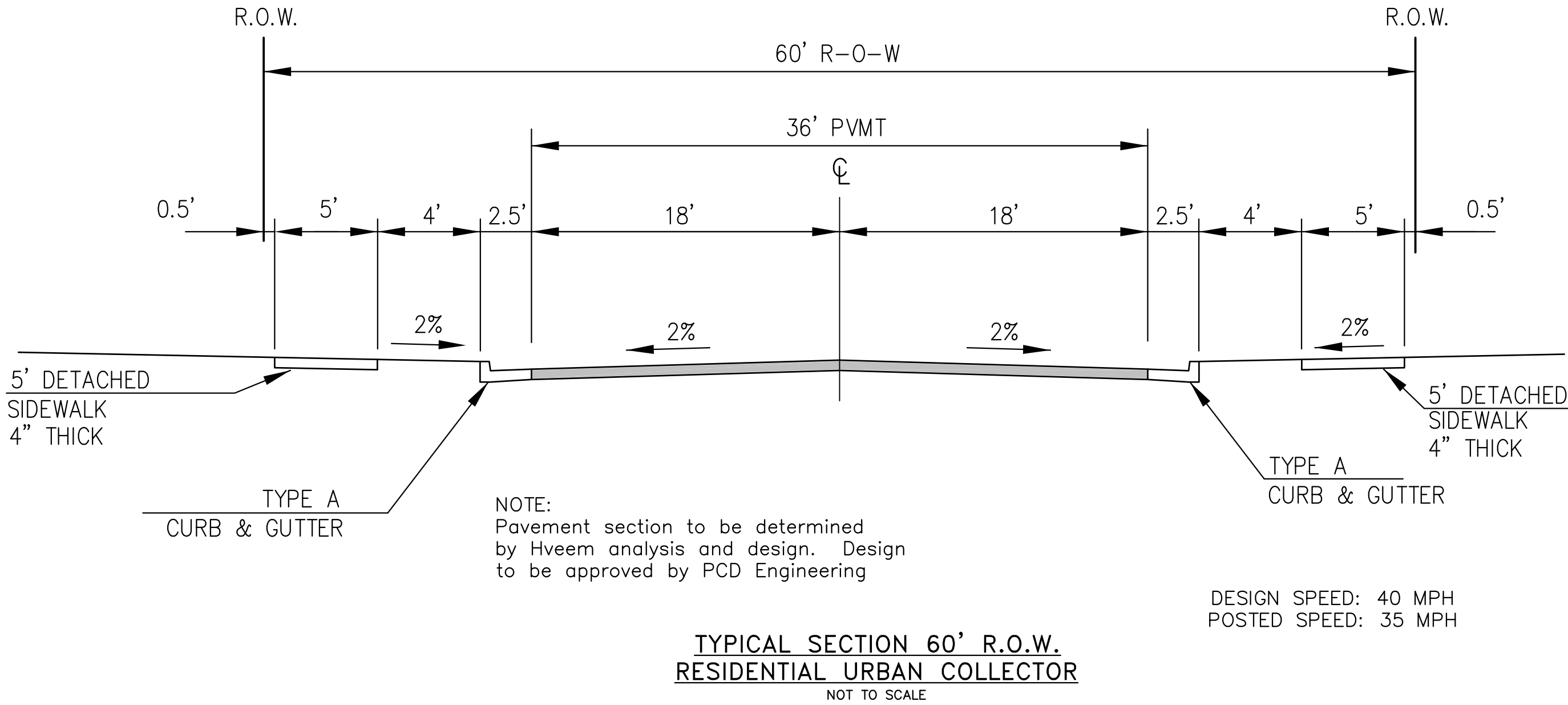
LOCAL ROADWAY SIGHT TRIANGLE  
PUBLIC IMPROVEMENT ESMT.  
NOT TO SCALE

NOTE:  
ADDITIONAL PUBLIC IMPROVEMENT EASEMENTS ARE REQUIRED WHERE  
SIDEWALK ENCROACHES INTO THE PRIVATE LOTS. SEE CONSTRUCTION DRAWINGS  
AND THE FINAL PLAT. SEE CONSTRUCTION DRAWINGS AND PLAT FOR SIGHT TRIANGLES



NOTE:  
Pavement section to be determined  
by Hveem analysis and design. Design  
to be approved by El Paso County PCD Engineering

VEDDER DRIVE, ROCKCASTLE DRIVE, TILLAMOOK DRIVE, TIFFIN DRIVE, NOLIN DRIVE, ALISO DRIVE,  
MAGOTHY DRIVE, VOLGA DRIVE, WITCHER DRIVE, HORTON DRIVE, YOCONA DRIVE,  
ABITA DRIVE, SKUNA DRIVE



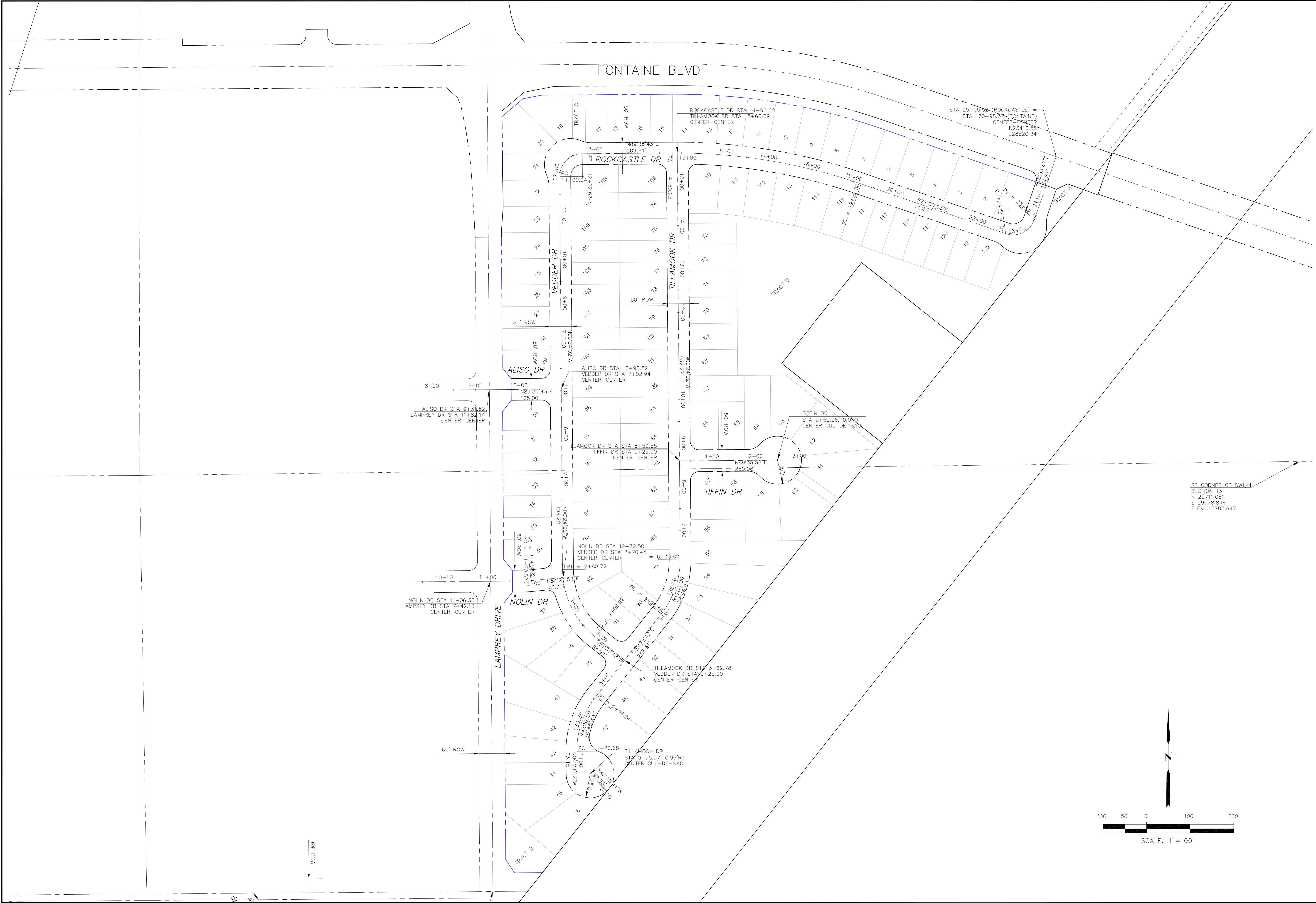
TYPICAL SECTION 60' R.O.W.  
RESIDENTIAL URBAN COLLECTOR  
NOT TO SCALE

TRAPPE DRIVE

DESIGN SPEED: 40 MPH  
POSTED SPEED: 35 MPH

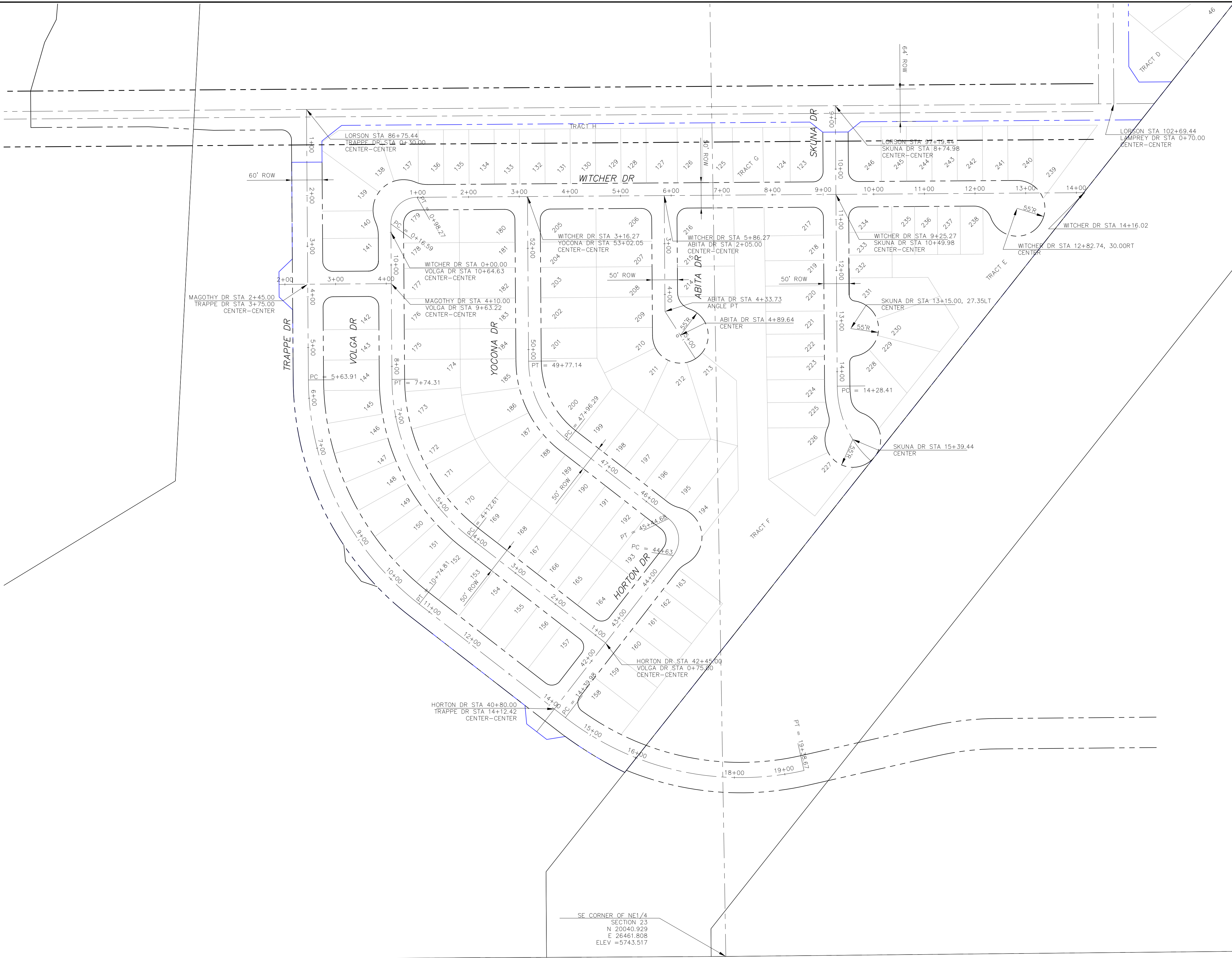
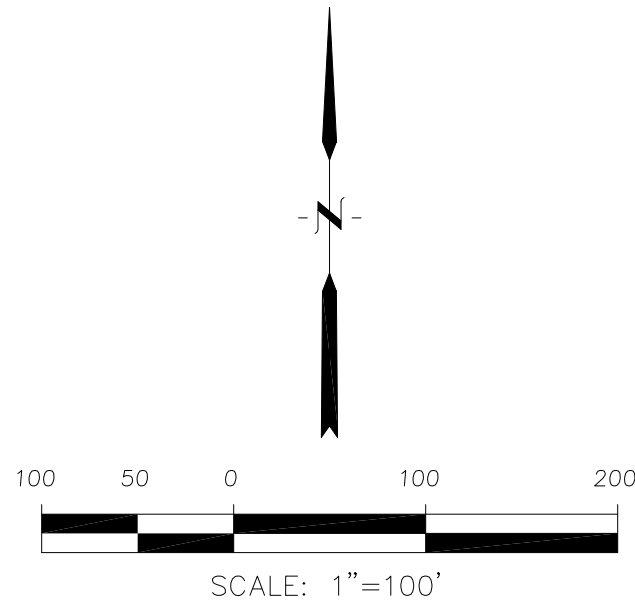
CORE		ENGINEERING GROUP	
15004 1ST AVENUE S. BURNSVILLE, MN 55306 PH: 763.570.1100 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: rich@cegi.com		15004 1ST AVENUE S. BURNSVILLE, MN 55306 PH: 763.570.1100 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: rich@cegi.com	
DATE		DATE	
DESCRIPTION		DESCRIPTION	
NO.		NO.	
DRAWN: RLS DESIGNED: RLS CHECKED: RLS		DRAWN: RLS DESIGNED: RLS CHECKED: RLS	
PROJECT: LORSON RANCH EAST FILING NO. 4 LORSON BLVD - LAMPREY DR COLORADO SPRINGS, COLORADO		PROJECT: LORSON RANCH EAST FILING NO. 4 LORSON BLVD - LAMPREY DR COLORADO SPRINGS, COLORADO	
PREPARED FOR: LORSON, LLC 212 N. WAHATCH AVE, SUITE 301 COLORADO SPRINGS, COLORADO 80903 CONTACT: JEFF MARK		PREPARED FOR: LORSON, LLC 212 N. WAHATCH AVE, SUITE 301 COLORADO SPRINGS, COLORADO 80903 CONTACT: JEFF MARK	
TYPICAL SECTIONS		TYPICAL SECTIONS	
DATE: FEBRUARY 28, 2019		DATE: FEBRUARY 28, 2019	
PROJECT NO. 100.048		PROJECT NO. 100.048	
SHEET NUMBER C1.3		SHEET NUMBER C1.3	
TOTAL SHEETS: 40		TOTAL SHEETS: 40	





<b>CORE</b> <b>ENGINEERING GROUP</b> 15004 1ST AVENUE S, BURNING WOOD, MO 65506 PHONE: 636.455.1100 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@ceg.com	
NO.	DATE
DESCRIPTION	
PROJECT FOR: <b>LORSON RANCH EAST FILING NO. 4</b> LORSON, LLC 212 N. WAHSATCH AVE, SUITE 301 COLORADO SPRINGS, COLORADO 80903 CONTACT: JEFF MARK	
DRAWN: RLS DESIGNED: RLS CHECKED: RLS	
<b>LORSON RANCH EAST FILING NO. 4 HORIZONTAL CONTROL PLAN NORTH AREA</b>	
DATE: FEBRUARY 28, 2019	
PROJECT NO. 100.048	
SHEET NUMBER C2.1	
TOTAL SHEETS: 40	



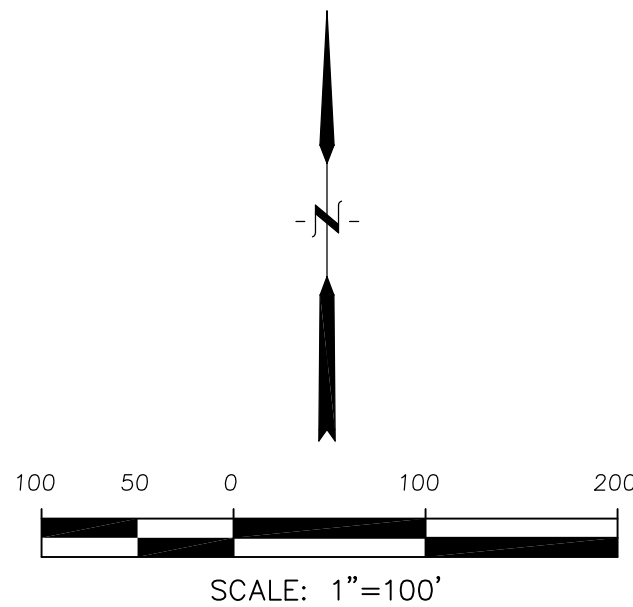


<b>CORE</b> <b>ENGINEERING GROUP</b> 15004 1ST AVENUE S. BURNING WOOD, MO 65506 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@ceg1.com	
NO.	DATE
DESCRIPTION	
DRAWN: RLS DESIGNED: RLS CHECKED: RLS	
PROJECT: LORSON RANCH EAST FILING NO. 4 LORSON BLVD - LAMPREY DR COLORADO SPRINGS, COLORADO	
PREPARED FOR: LORSON, LLC 212 N. WAHSATCH AVE, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: JEFF MARK	
DATE: FEBRUARY 28, 2019	
PROJECT NO. 100.048	
SHEET NUMBER C2.2	
TOTAL SHEETS: 40	

LORSON RANCH EAST FILING NO. 4  
HORIZONTAL CONTROL PLAN

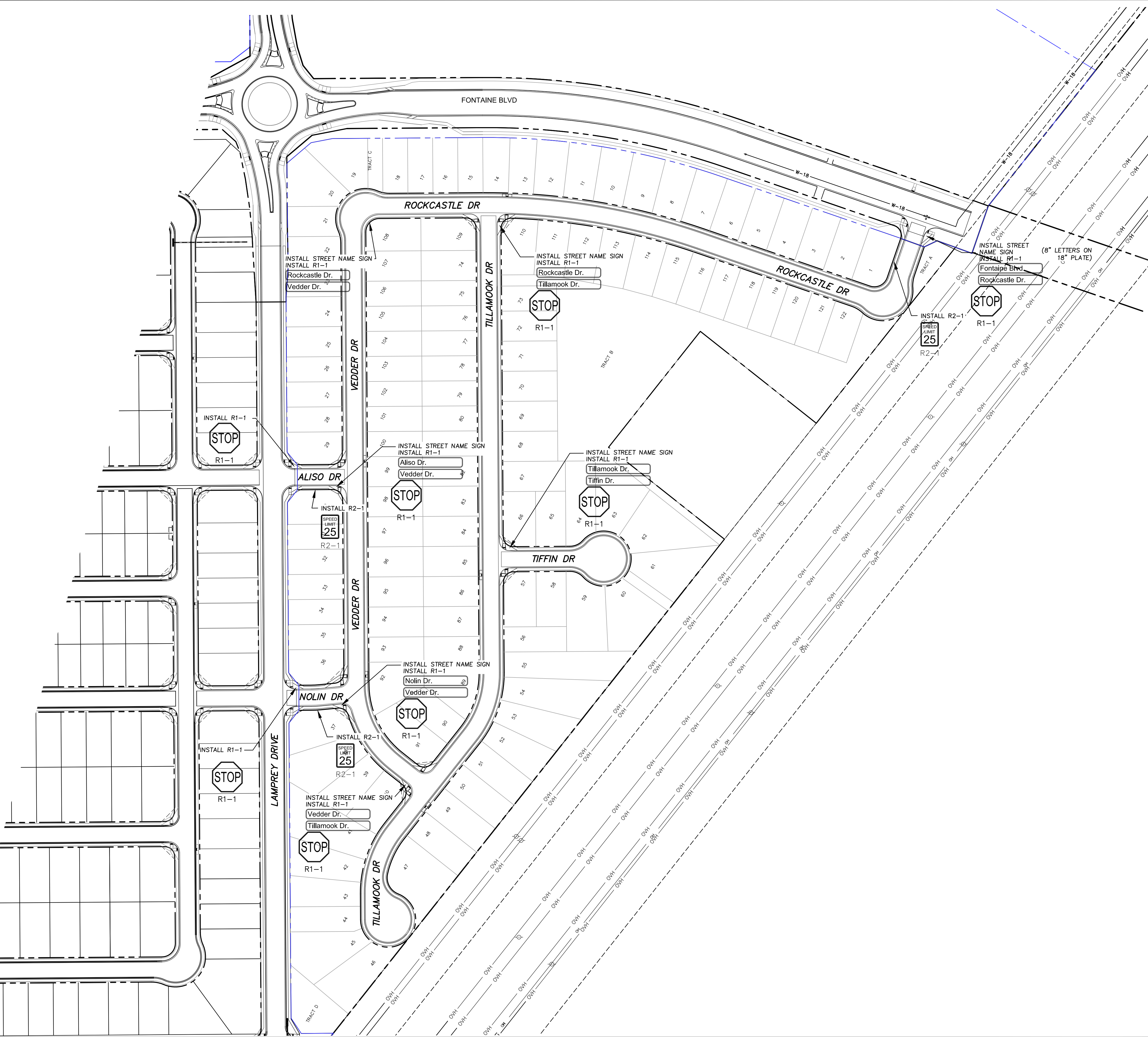


Notes:  
1. Contractor must submit shop drawings to the engineer and to the county for approval prior to ordering signs



Signing and Striping Notes:

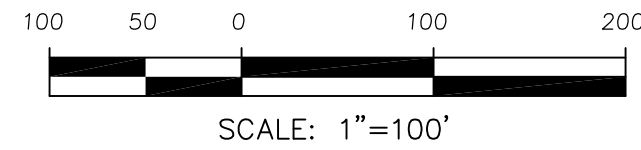
1. All signs and pavement markings shall be in compliance with the current Manual on Uniform Traffic Control Devices (MUTCD).
2. Removal of existing pavement markings shall be accomplished by a method that does not materially damage the pavement. The pavement markings shall be removed to the extent that 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.



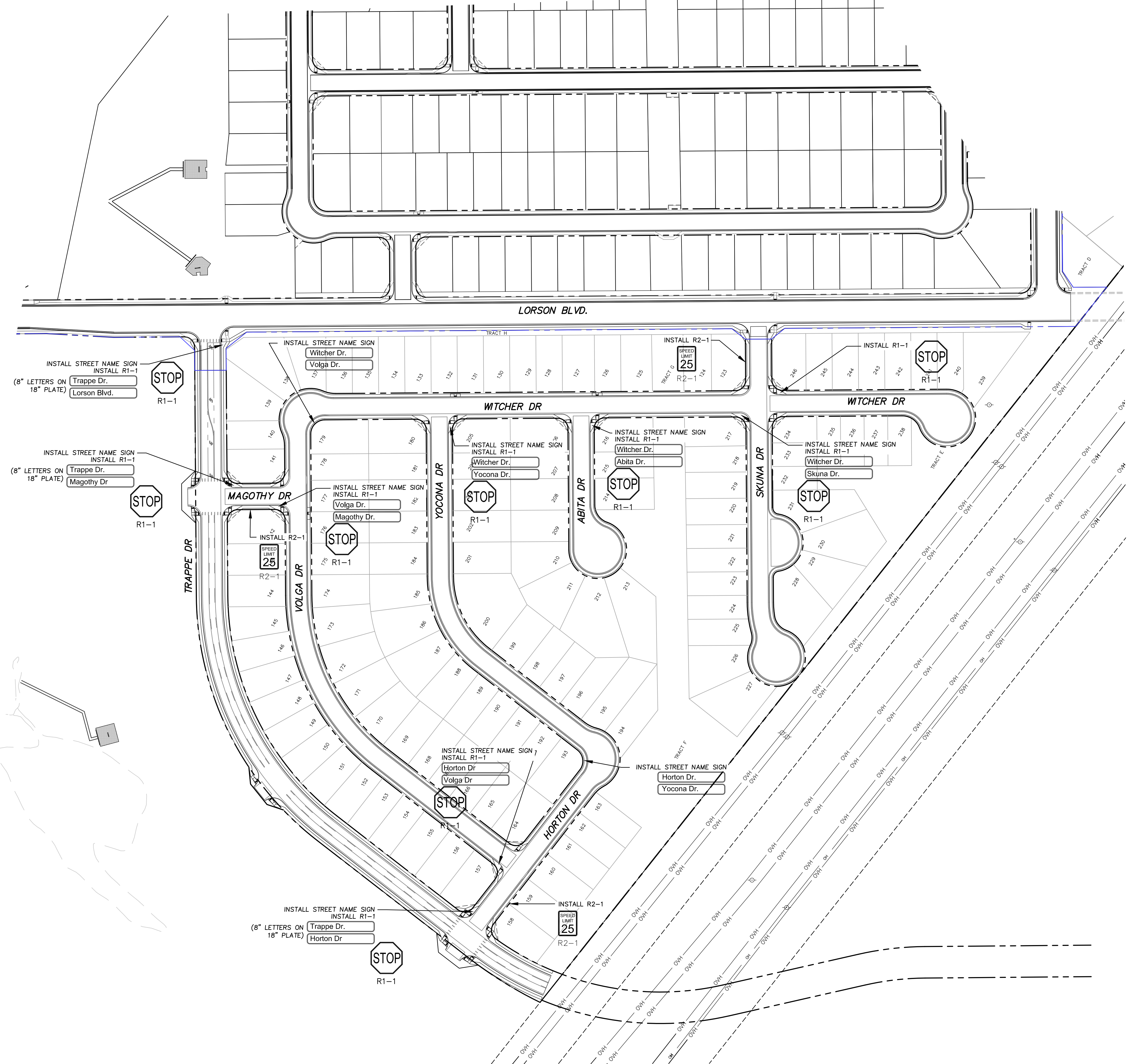
<b>CORE</b>	
<b>ENGINEERING GROUP</b>	
15004 1ST AVENUE S. BURNING WOOD, CO 80903 PHONE: 719.570.1100 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@ceg.com	
DATE:	
DESCRIPTION:	
NO:	
DRAWN: RLS DESIGNED: RLS CHECKED: RLS	
PROJECT: <b>LORSON RANCH EAST FILING NO. 4</b> NORTH AREA	
PREPARED FOR: <b>LORSON, LLC</b> 212 N. WAHSATCH AVE., SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: JEFF MARK	
DATE: FEBRUARY 28, 2019	
PROJECT NO. 100.048	
SHEET NUMBER C5.1	
TOTAL SHEETS: 40	



1. Contractor must submit shop drawings to the engineer and to the county for approval prior to ordering signs



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 slpbase 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.
12. 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.
13. The contractor shall notify El Paso County Planning and Community Development (719) 520-6819 prior to and upon completion of signing and striping.
14. 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

[illegible]

DRAWN: RLS  
 DESIGNED: RLS  
 CHECKED: RLS

SIGNING AND STRIPING PLAN  
LORSON RANCH EAST FILING NO. 4  
SOUTH AREA

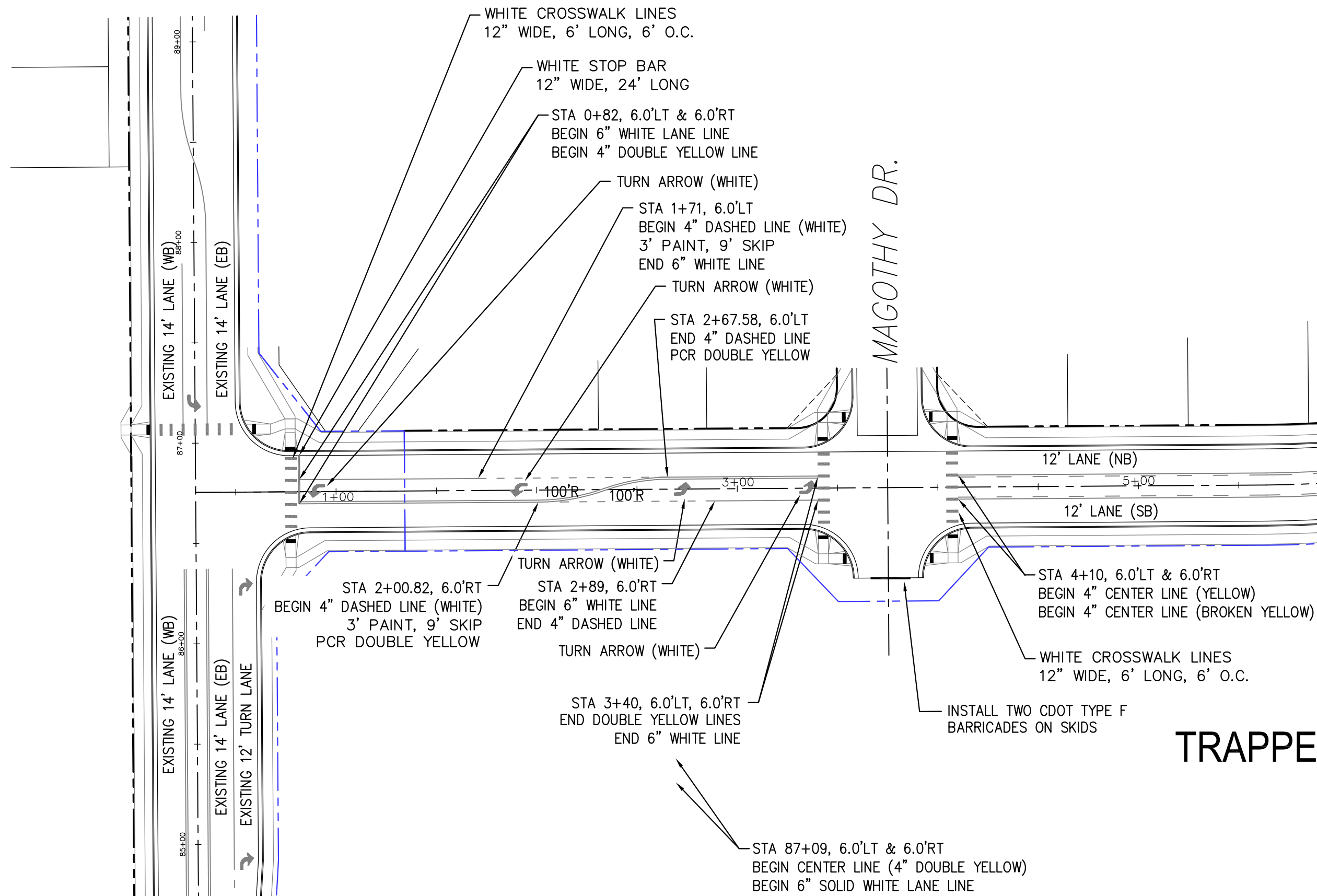
DATE:  
FEBRUARY 28, 2019

PROJECT NO.  
100.048

SHEET NUMBER  
C5.2

TOTAL SHEETS: 40



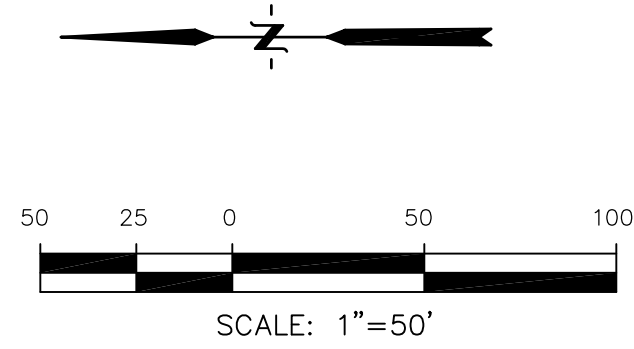


EXISTING LORSON BLVD  
SEE SF 18-008

TRAPPE DRIVE

EUTURE STREET

HORTON DR.



STA 15+90, 6.0'LT, 6.0'RT  
END YELLOW LINES

STA 14+55  
INSTALL 4-CDOT TYPE F  
BARRICADES ON SKIDS  
WITH R11-2 "ROAD CLOSED"  
SIGN, 48"x30"

STA 14+48, 6.0'LT & 6.0'RT  
BEGIN 4" CENTER LINE (YELLOW)  
BEGIN 4" CENTER LINE (BROKEN  
YELLOW)

WHITE CROSSWALK LINES  
12" WIDE, 6' LONG, 6' O.C.

INSTALL TWO CDOT TYPE F  
BARRICADES ON SKIDS

WHITE CROSSWALK LINES  
12" WIDE, 6' LONG, 6' O.C.

STA 13+76, 6.0'LT, 6.0'RT  
END YELLOW LINES

STA 9+74, 6.0'LT & 6.0'RT  
BEGIN 4" CENTER LINE (YELLOW)  
BEGIN 4" CENTER LINE (BROKEN YELLOW)

INSTALL TWO CDOT TYPE F  
BARRICADES ON SKIDS

STA 9+08, 6.0'LT, 6.0'RT  
END YELLOW LINES

STA 4+10, 6.0'LT & 6.0'RT  
BEGIN 4" CENTER LINE (YELLOW)  
BEGIN 4" CENTER LINE (BROKEN YELLOW)

WHITE CROSSWALK LINES  
12" WIDE, 6' LONG, 6' O.C.

INSTALL TWO CDOT TYPE F  
BARRICADES ON SKIDS

STA 2+67.58, 6.0'LT  
END 4" DASHED LINE  
PCR DOUBLE YELLOW

TURN ARROW (WHITE)

STA 2+89, 6.0'RT  
BEGIN 6" WHITE LINE  
END 4" DASHED LINE

TURN ARROW (WHITE)

STA 2+00.82, 6.0'RT  
BEGIN 4" DASHED LINE (WHITE)  
3' PAINT, 9' SKIP  
PCR DOUBLE YELLOW

TURN ARROW (WHITE)

STA 3+40, 6.0'LT, 6.0'RT  
END DOUBLE YELLOW LINES  
END 6" WHITE LINE

INSTALL TWO CDOT TYPE F  
BARRICADES ON SKIDS

STA 87+09, 6.0'LT & 6.0'RT  
BEGIN CENTER LINE (4" DOUBLE YELLOW)  
BEGIN 6" SOLID WHITE LANE LINE

WHITE CROSSWALK LINES  
12" WIDE, 6' LONG, 6' O.C.

WHITE STOP BAR  
12" WIDE, 24' LONG

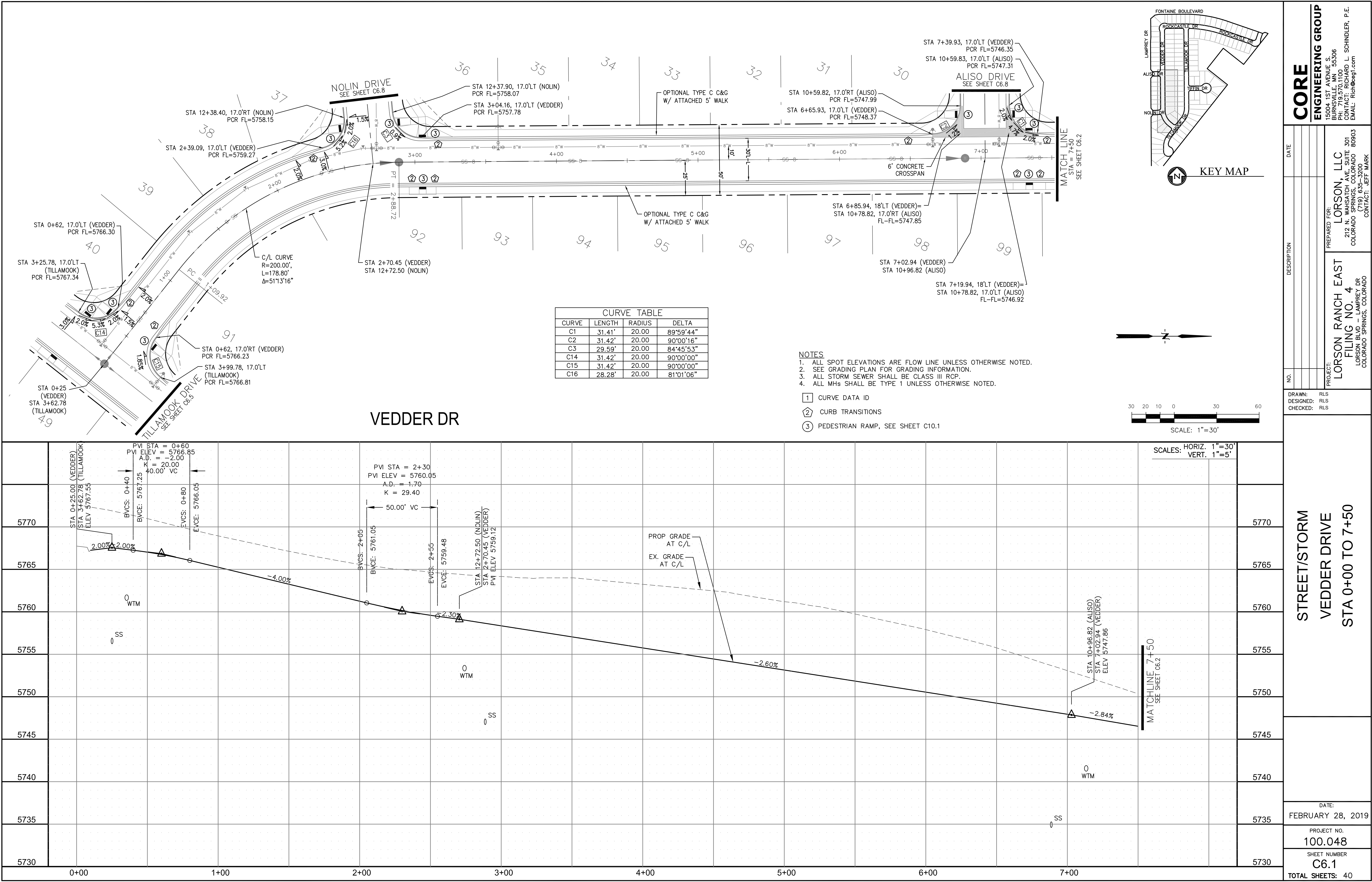
STA 0+82, 6.0'LT & 6.0'RT  
BEGIN 6" WHITE LANE LINE  
BEGIN 4" DOUBLE YELLOW LINE

TURN ARROW (WHITE)

STA 1+71, 6.0'LT  
BEGIN 4" DASHED LINE (WHITE)  
3' PAINT, 9' SKIP  
END 6" WHITE LINE

TURN ARROW (WHITE)

<b>CORE</b>	
<b>ENGINEERING GROUP</b>	
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: LORSON RANCH EAST FILING NO. 4 LORSON BLVD - LAMPREY DR COLORADO SPRINGS, COLORADO	
PREPARED FOR: LORSON, LLC 212 N. WAHSATCH AVE. SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: JEFF MARK	
LORSON RANCH EAST FILING NO. 4 SIGNING/STRIPING PLAN TRAPPE DRIVE	
DATE: FEBRUARY 28, 2019	
PROJECT NO. 100.048	
SHEET NUMBER C5.3	
TOTAL SHEETS: 40	



**CORE**  
ENGINEERING GROUP

15004 1ST AVENUE S.  
BURNSVILLE, MN 55306  
PHONE: 612.891.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

DATE: \_\_\_\_\_

DESCRIPTION: \_\_\_\_\_

NO.: \_\_\_\_\_

PROJECT: **LORSON RANCH EAST**  
**FILING NO. 4**  
LORSON BLVD - LAMPREY DR  
COLORADO SPRINGS, COLORADO

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

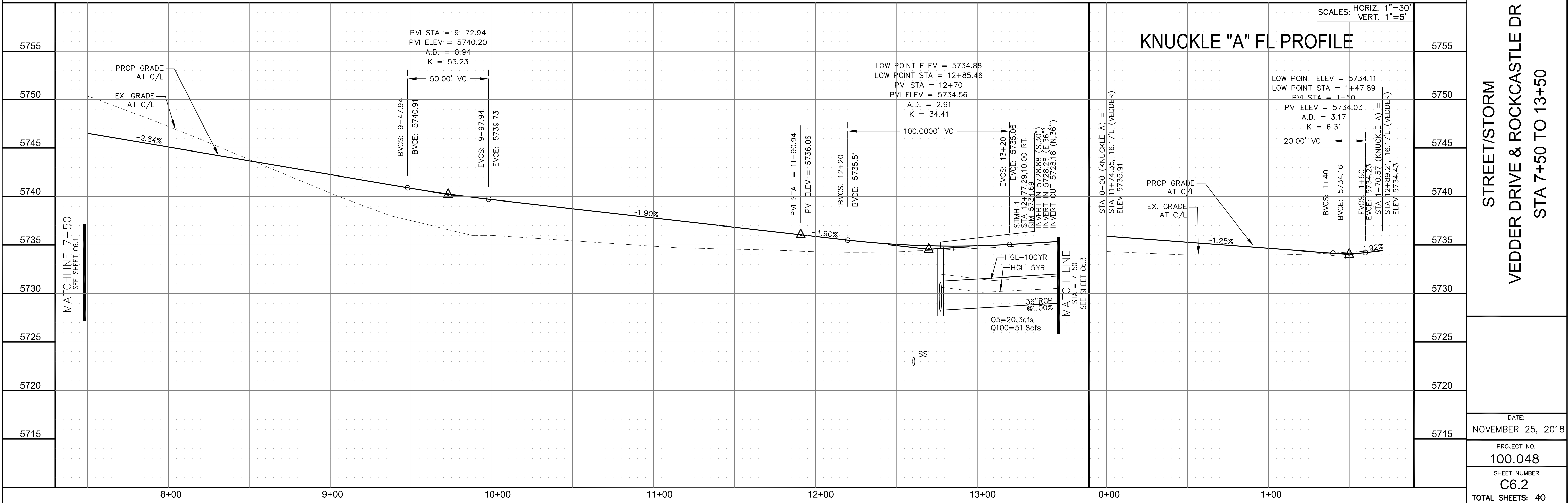
STREET/STORM  
VEDDER DRIVE  
STA 0+00 TO 7+50

DATE: \_\_\_\_\_  
FEBRUARY 28, 2019

PROJECT NO.  
**100.048**

SHEET NUMBER  
**C6.1**

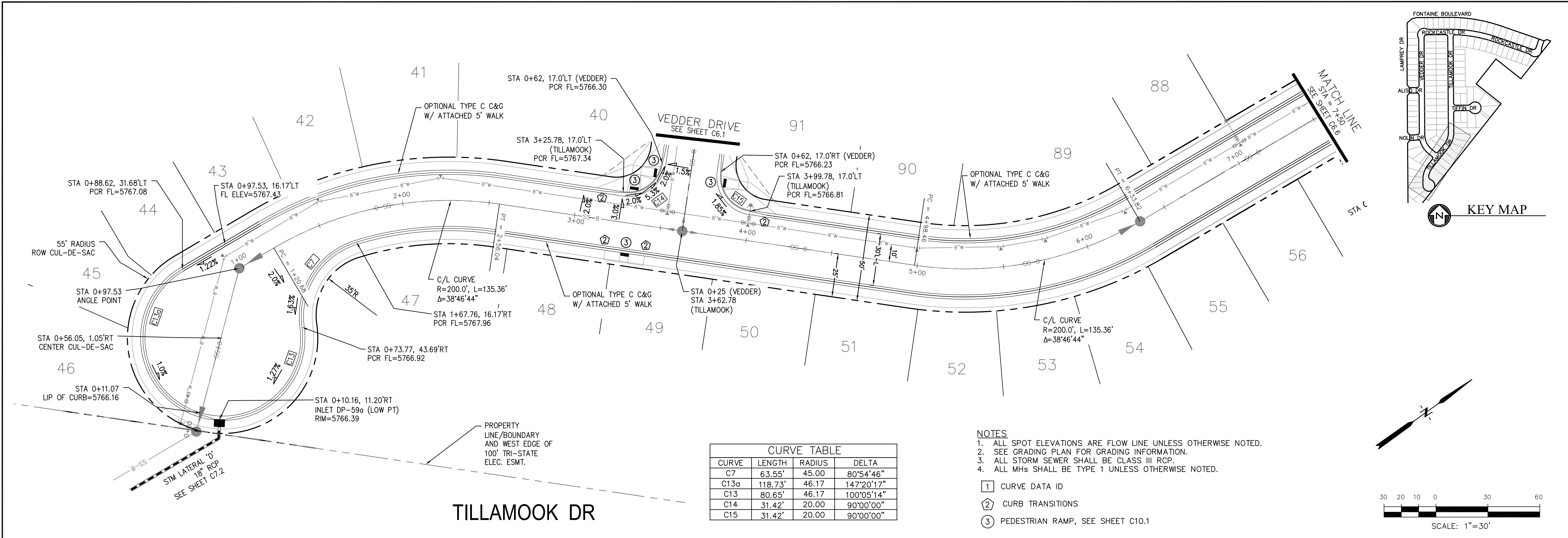
TOTAL SHEETS: 40





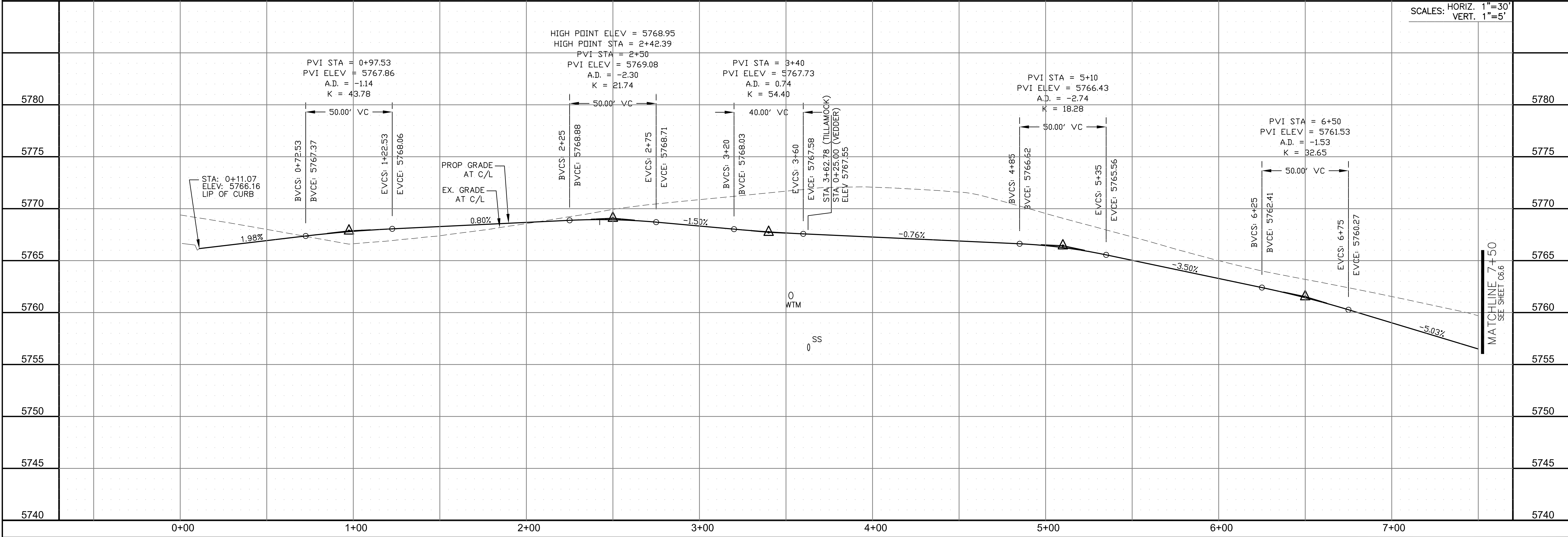
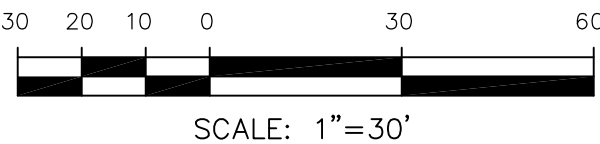






CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C7	63.55'	45.00	80°54'46"
C13a	118.73'	46.17	147°20'17"
C13	80.65'	46.17	100°05'14"
C14	31.42'	20.00	90°00'00"
C15	31.42'	20.00	90°00'00"

- NOTES
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
  2. SEE 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 CURB TRANSITIONS  
3 PEDESTRIAN RAMP, SEE SHEET C10.1



CORE

ENGINEERING GROUP

15004 1ST AVENUE S.  
BURNING WOOD, CO 80903  
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:  
LORSON RANCH EAST  
FILING NO. 4  
LORSON BLVD - LAMPREY DR  
COLORADO SPRINGS, COLORADO

STREET/STORM  
TILLAMOOK DRIVE  
STA 0+00 TO 7+50

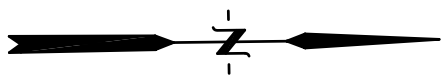
DATE:  
FEBRUARY 28, 2019

PROJECT NO.  
100.048

SHEET NUMBER  
C6.5

TOTAL SHEETS: 40

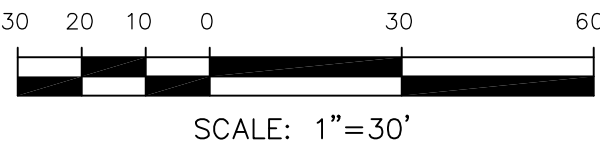




NOTES

1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
2. SEE 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 CURB TRANSITIONS  
3 PEDESTRIAN RAMP, SEE SHEET C10.1

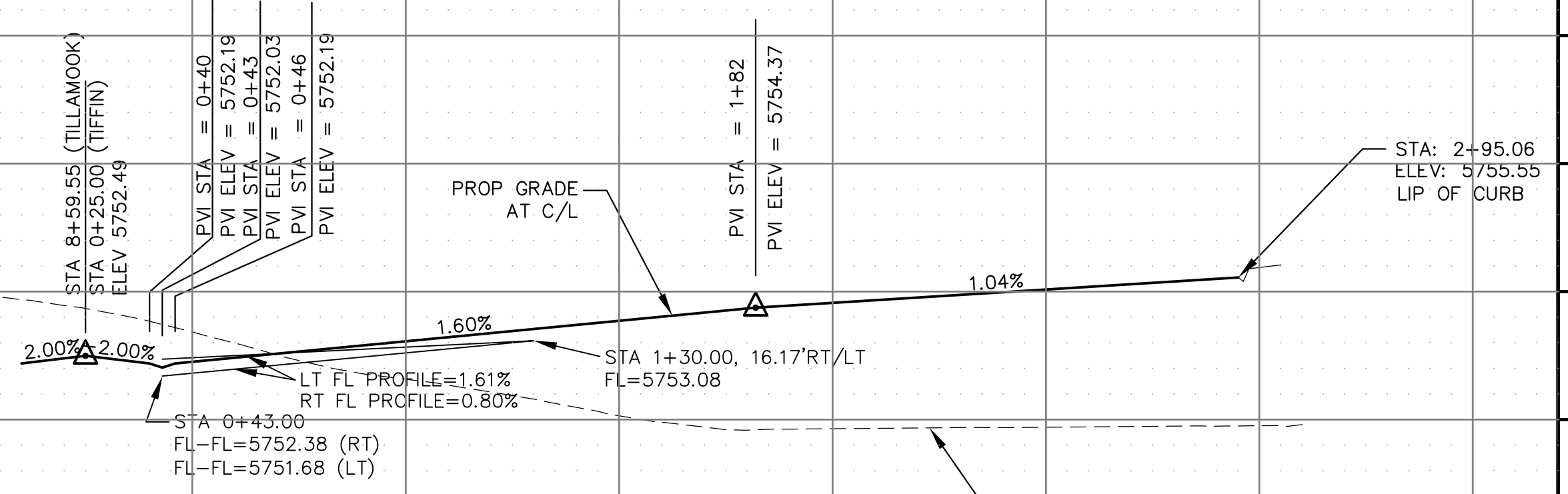
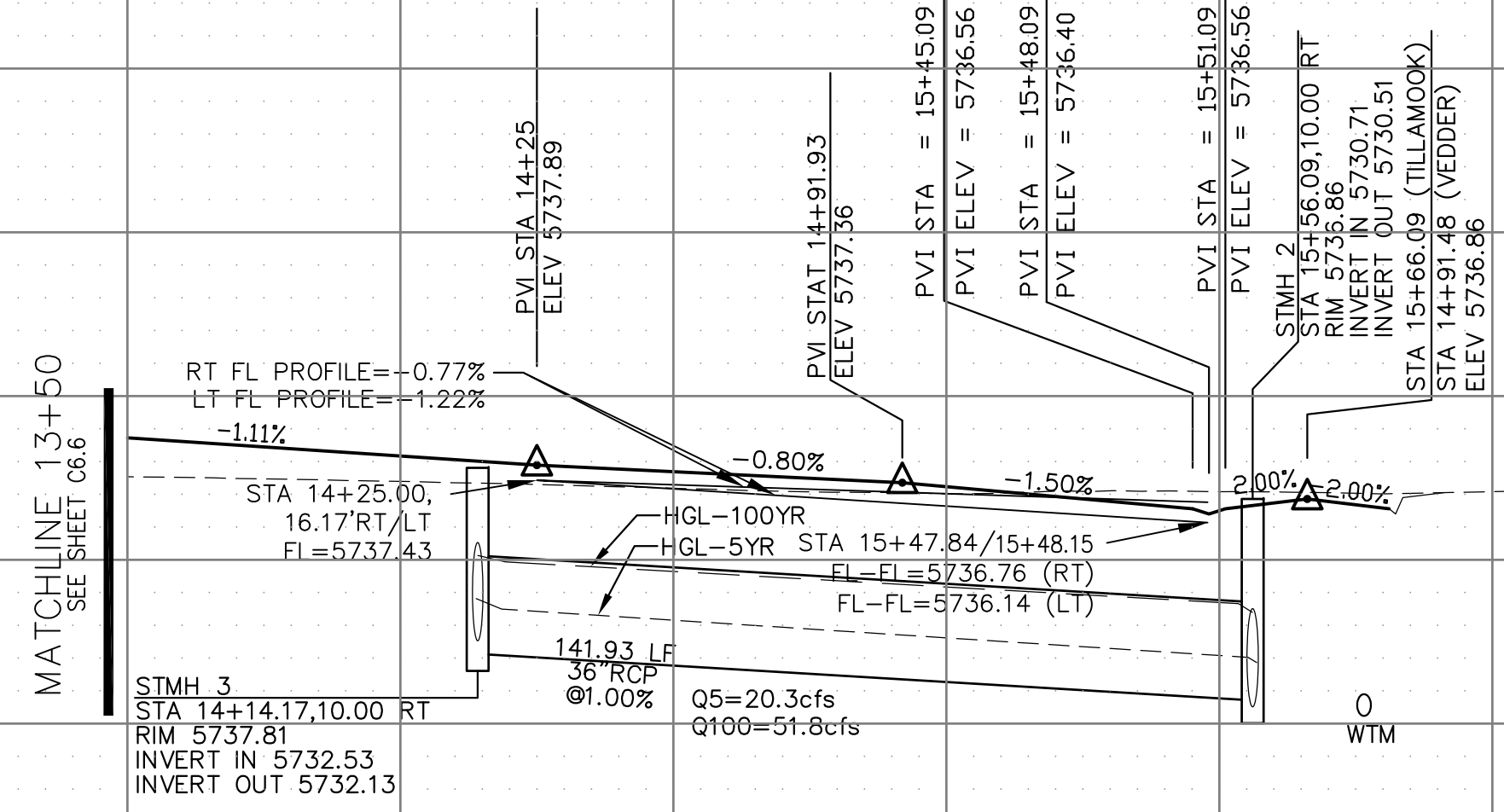
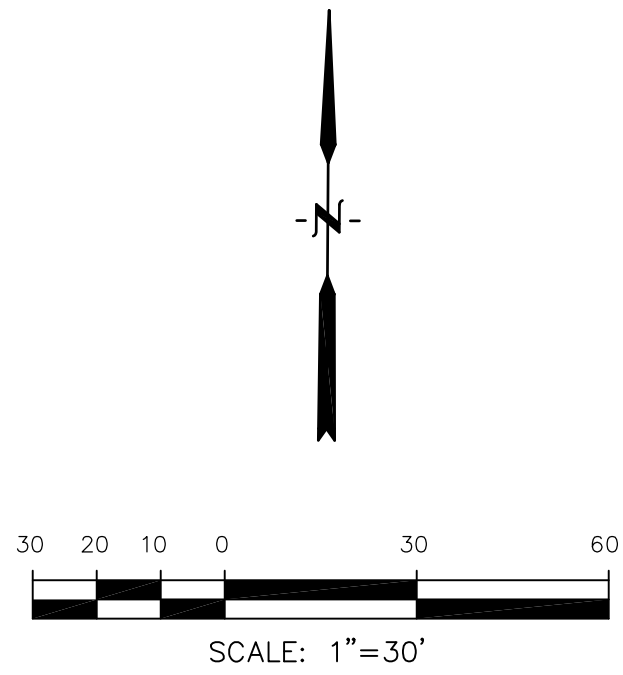




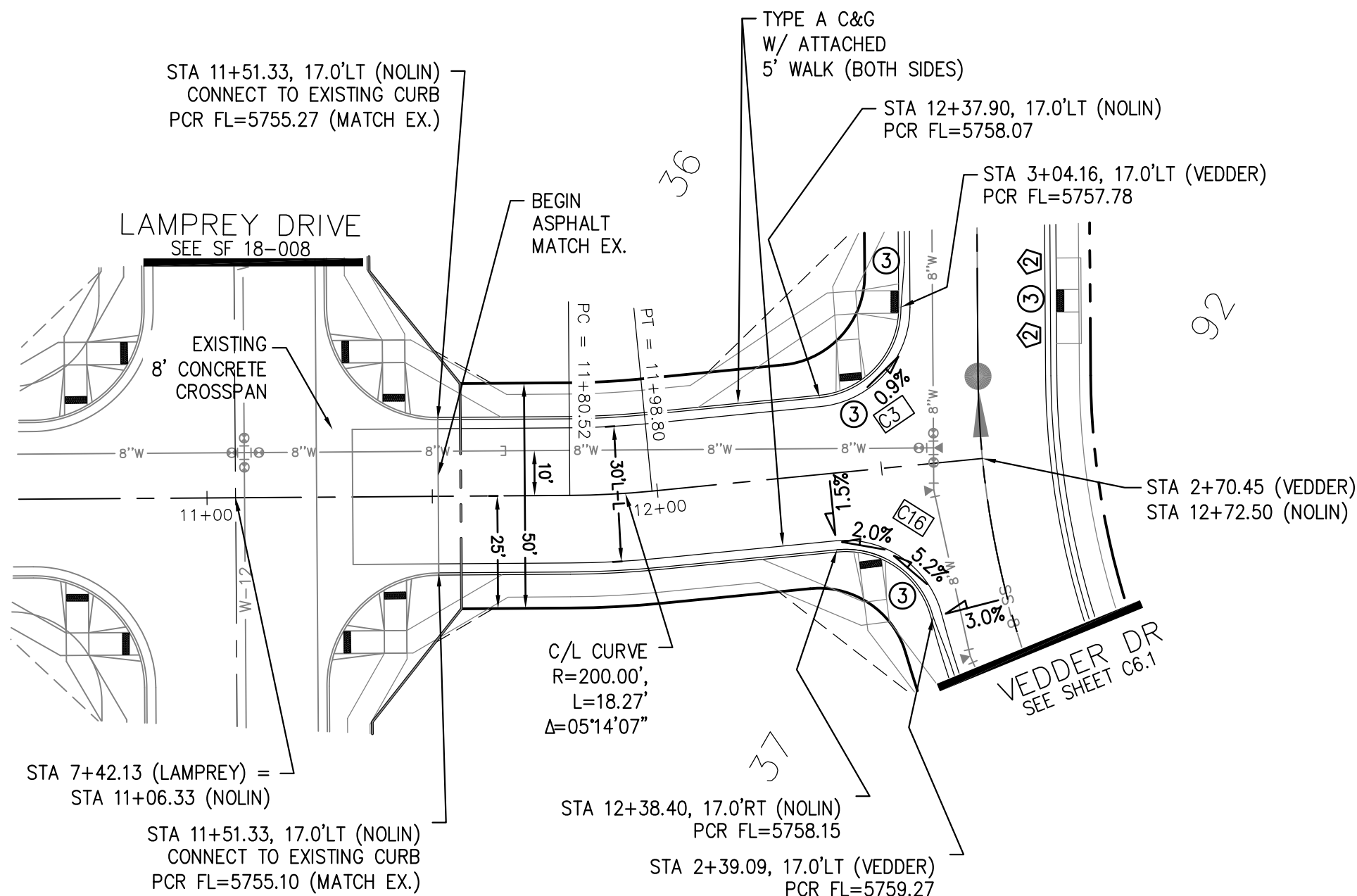
CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C8	37.59'	45.00	47°51'31"
C9	31.42'	20.00	89°59'58"
C10	31.42'	20.00	90°00'02"
C11	37.59'	45.00	47°51'41"
C12	111.09'	46.17	137°51'40"
C12a	111.09'	46.17	137°51'32"
C21	31.42'	20.00	90°00'16"
C22	32.17'	20.00	92°09'02"



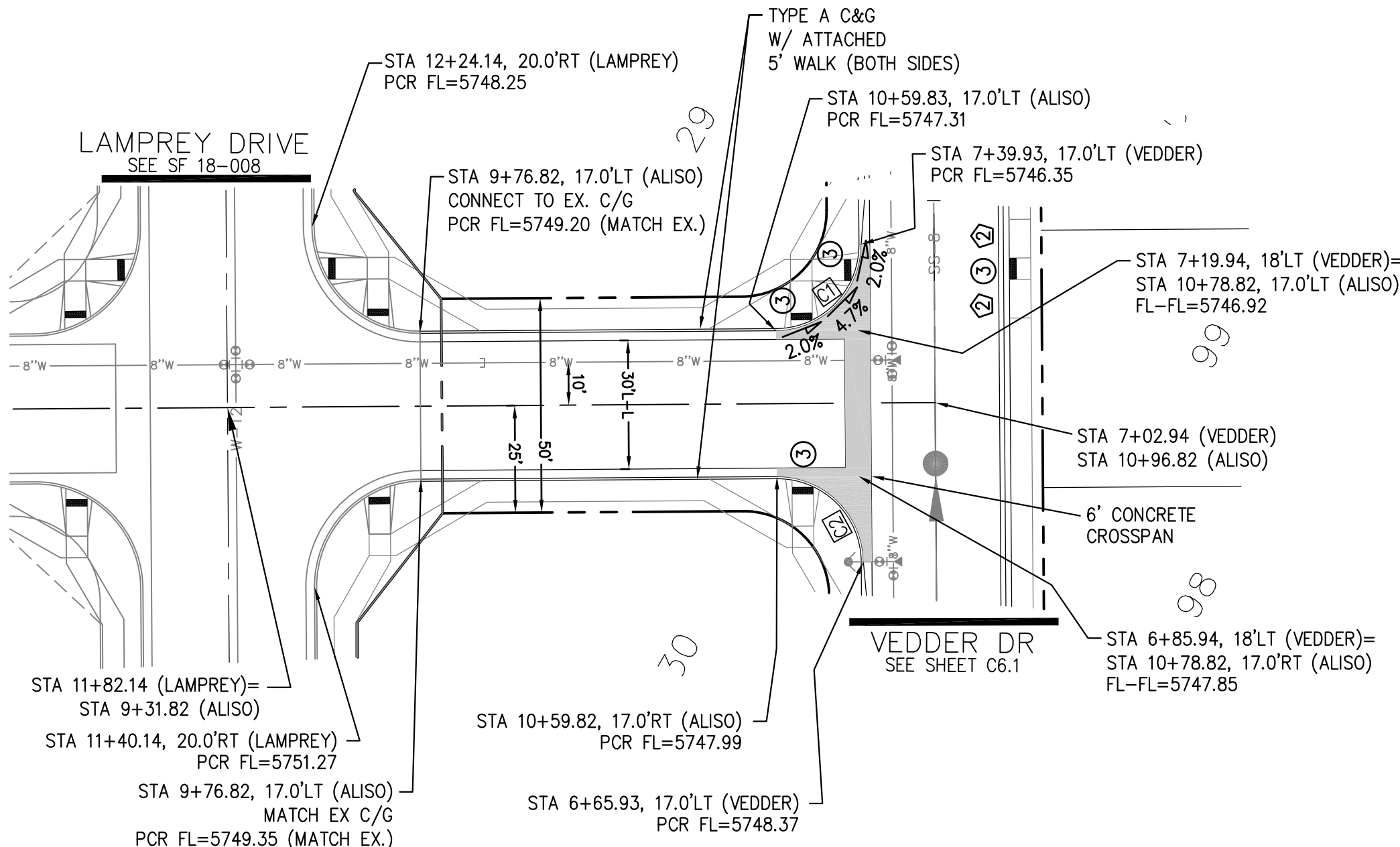
- 
- Fontaine Boulevard
- Rockcastle Dr
- Lamprey Dr
- Violet Dr
- Aluso Dr
- Noun Dr
- Tullahoma Dr
- Tiffin Dr
- KEY MAP

[illegible]

STREET/STORM  TILLAMOOK DRIVE & TIFFIN DRIVE  STA 13+50 TO 15+66		DATE: FEBRUARY 28, 2019	
		PROJECT NO. 100.048	
		SHEET NUMBER C6.7	
		TOTAL SHEETS: 40	
DRAWN: RLS DESIGNED: RLS CHECKED: RLS		NO.	
		DESCRIPTION	
		DATE	
PROJECT: LORSON RANCH EAST FILING NO. 4 LORSON BLVD - LAMPREY DR COLORADO SPRINGS, COLORADO		PREPARED FOR: LORSON, LLC 212 N. WAHSATCH AVE. SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: JEFF MARK	
		15004 1ST AVENUE S DENVER, CO 80202 PH: 719.570.1000 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@csg1.com	
<b>CORE</b>		<b>ENGINEERING GROUP</b>	

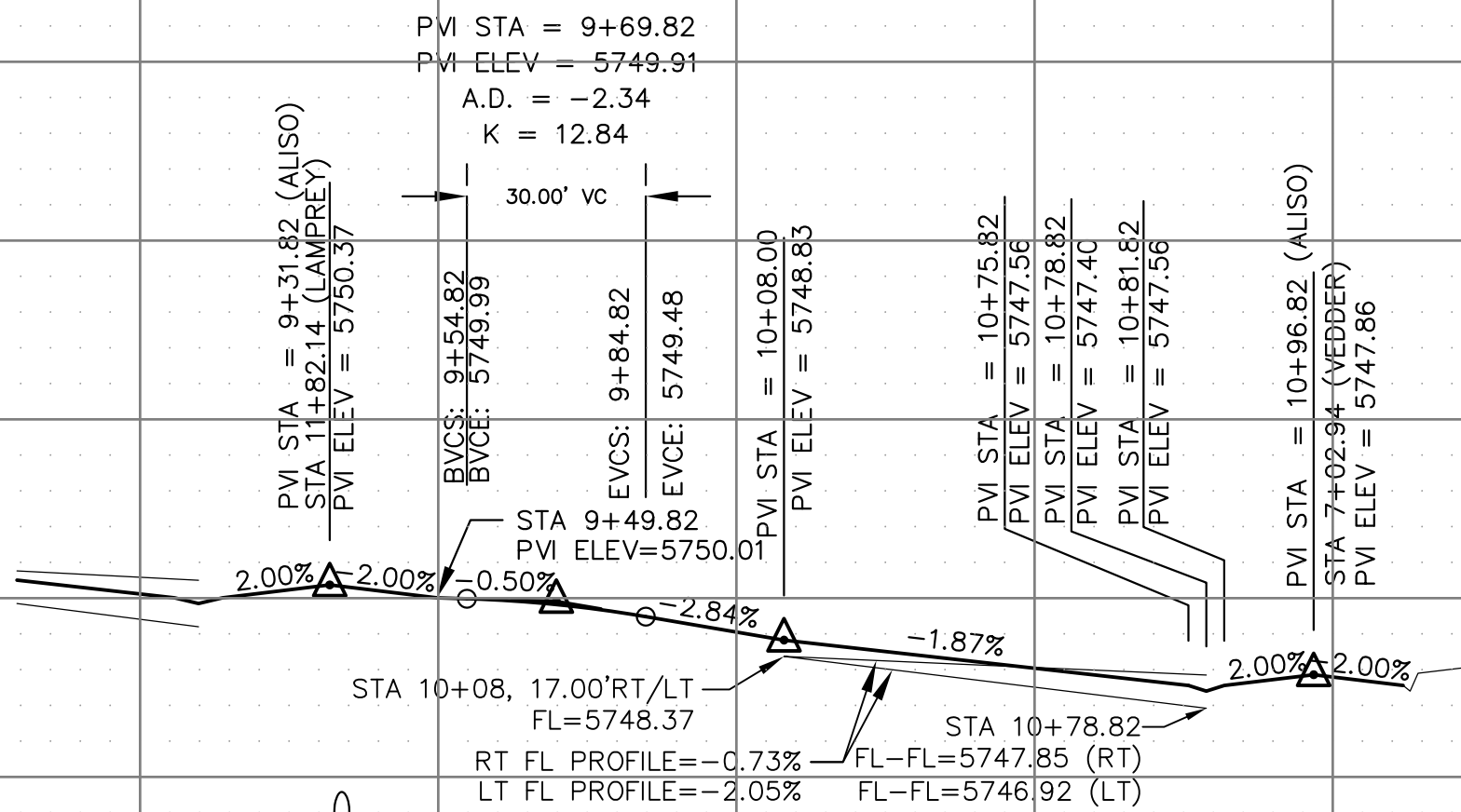
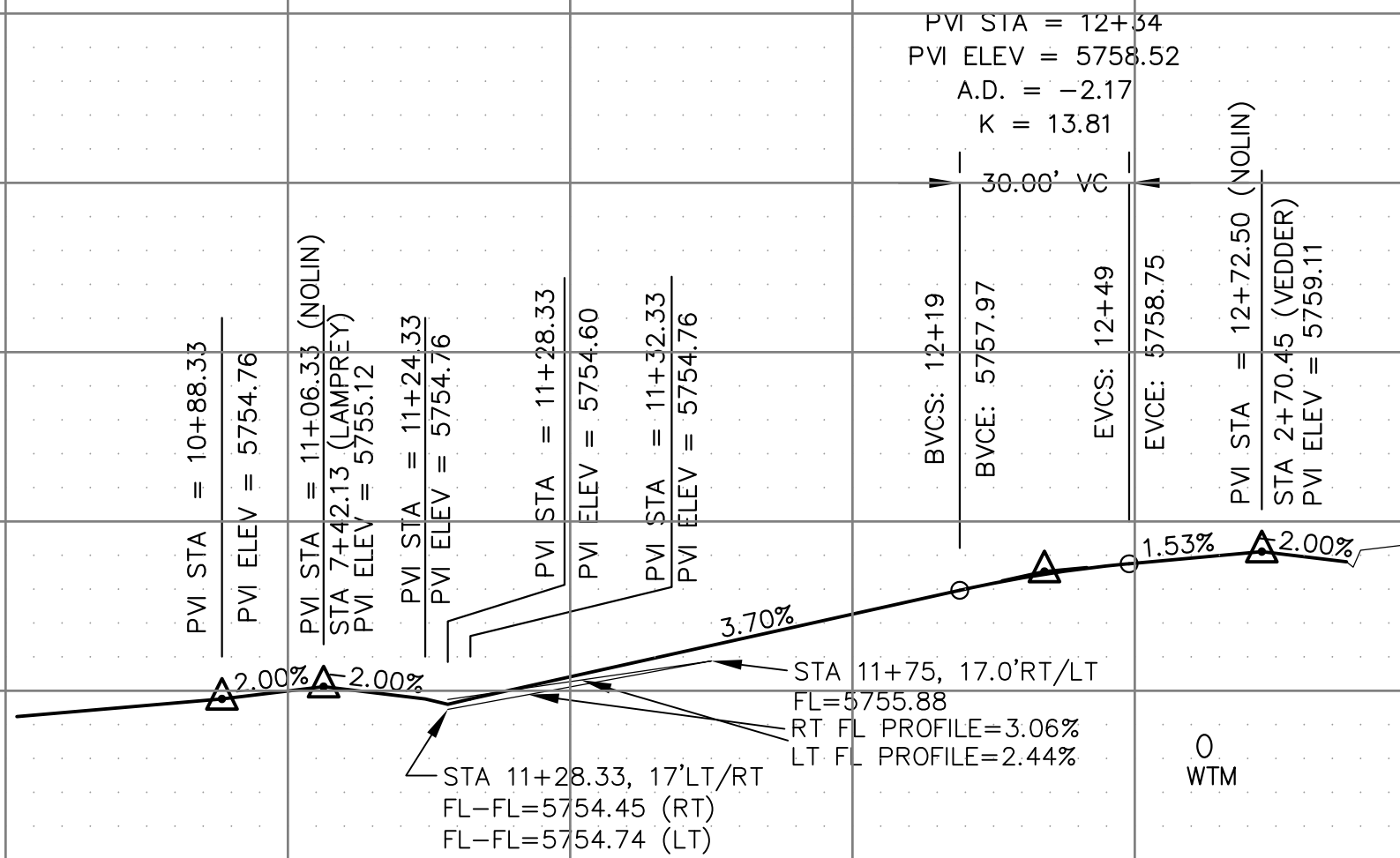
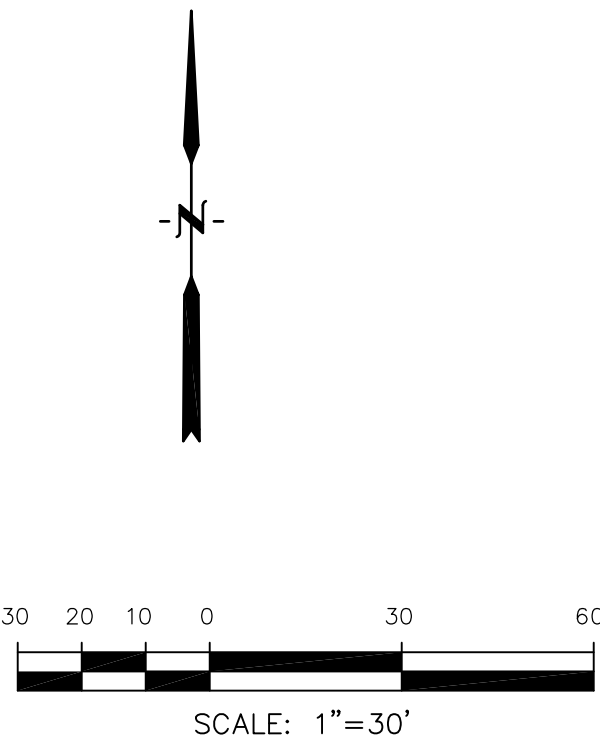
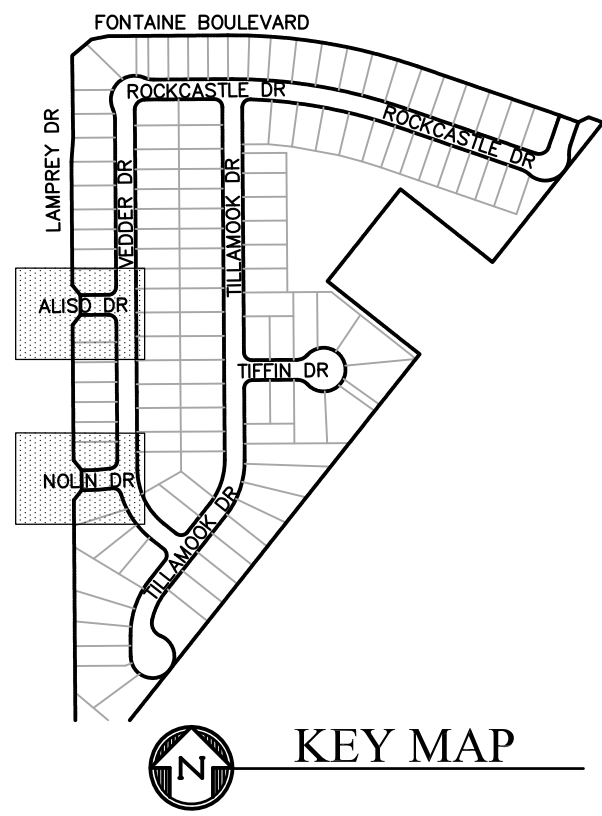


CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	31.41'	20.00	89°59'44"
C2	31.42'	20.00	90°00'16"
C3	29.59'	20.00	84°45'53"
C16	28.28'	20.00	81°01'06"



- NOTES
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
  2. SEE 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 CURB TRANSITIONS  
③ PEDESTRIAN RAMP, SEE SHEET C10.1



SCALES: HORIZ. 1"=30'  
VERT. 1"=5'

**CORE**  
**ENGINEERING GROUP**  
15004 1ST AVENUE S.  
BURNESVILLE, MO 65306  
PHONE: 660.444.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO.: \_\_\_\_\_  
PROJECT: **LORSON RANCH EAST**  
**FILING NO. 4**  
212 N. WAHSATCH AVE. SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: JEFF MARK

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

**STREET/STORM**  
**NOLIN DR & ALISO DR**

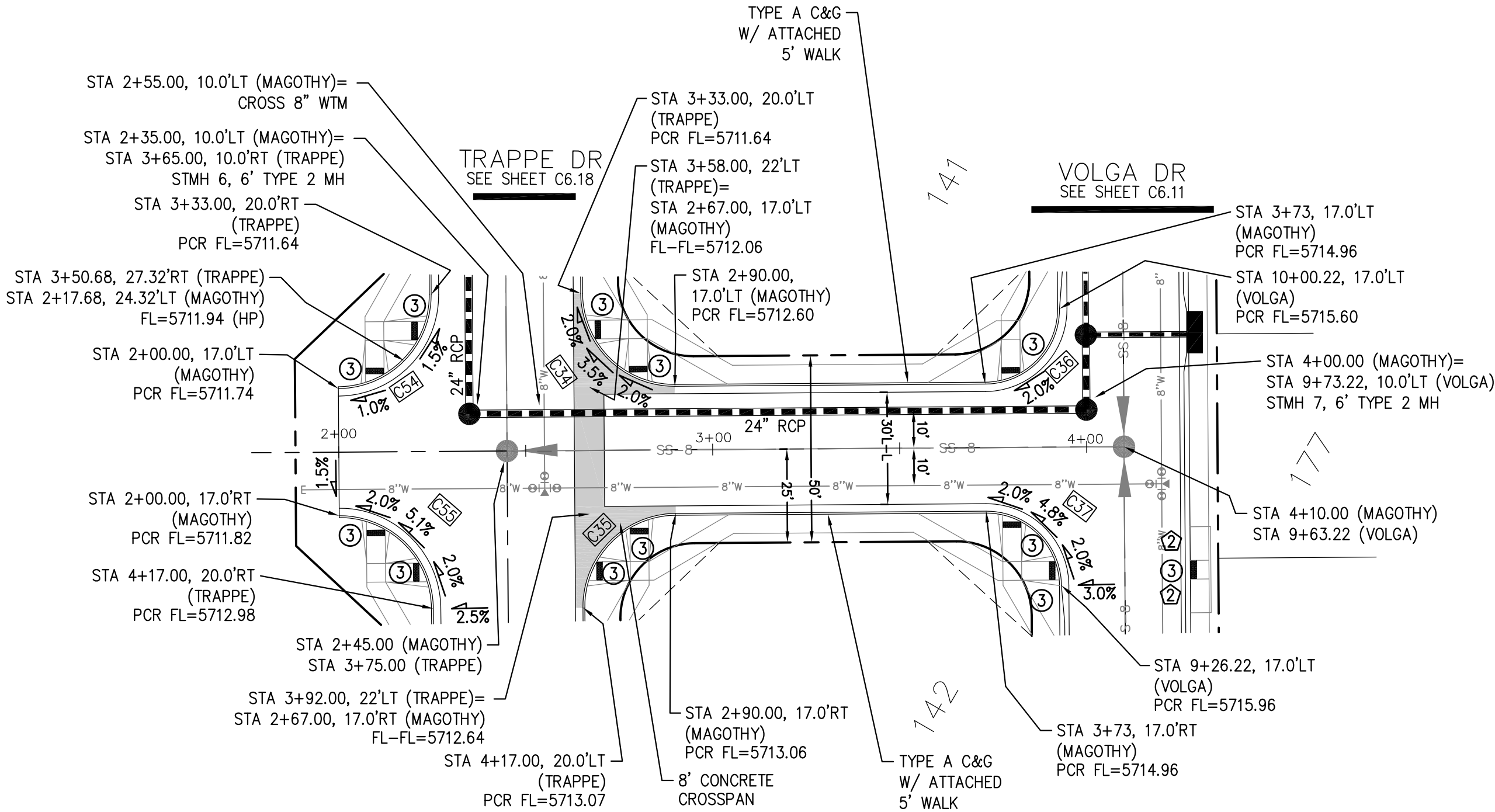
DATE:  
FEBRUARY 28, 2019

PROJECT NO.  
**100.048**

SHEET NUMBER  
**C6.8**

TOTAL SHEETS: 40

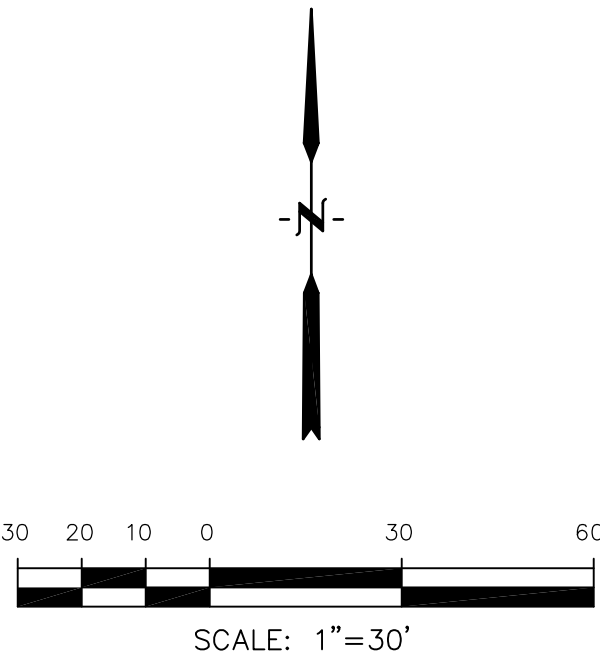
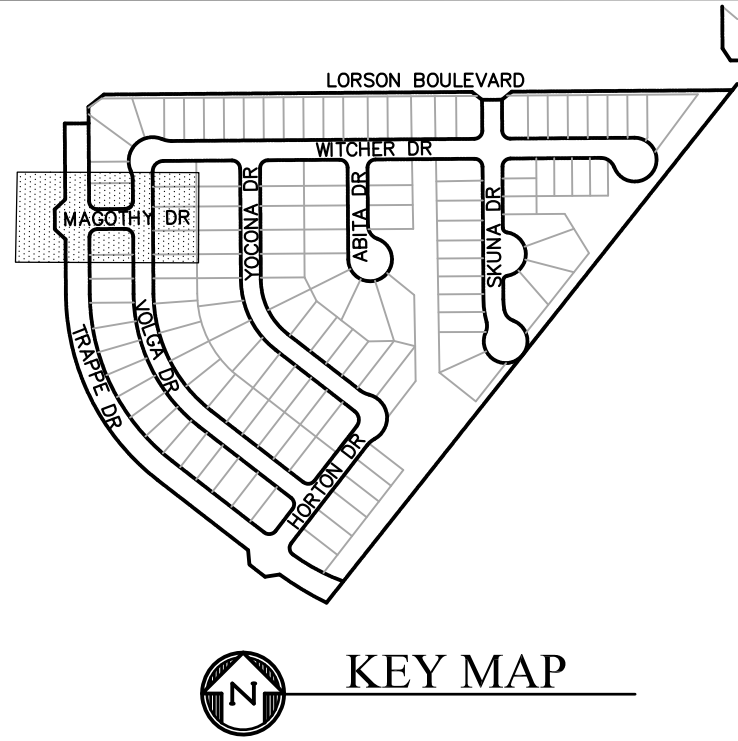




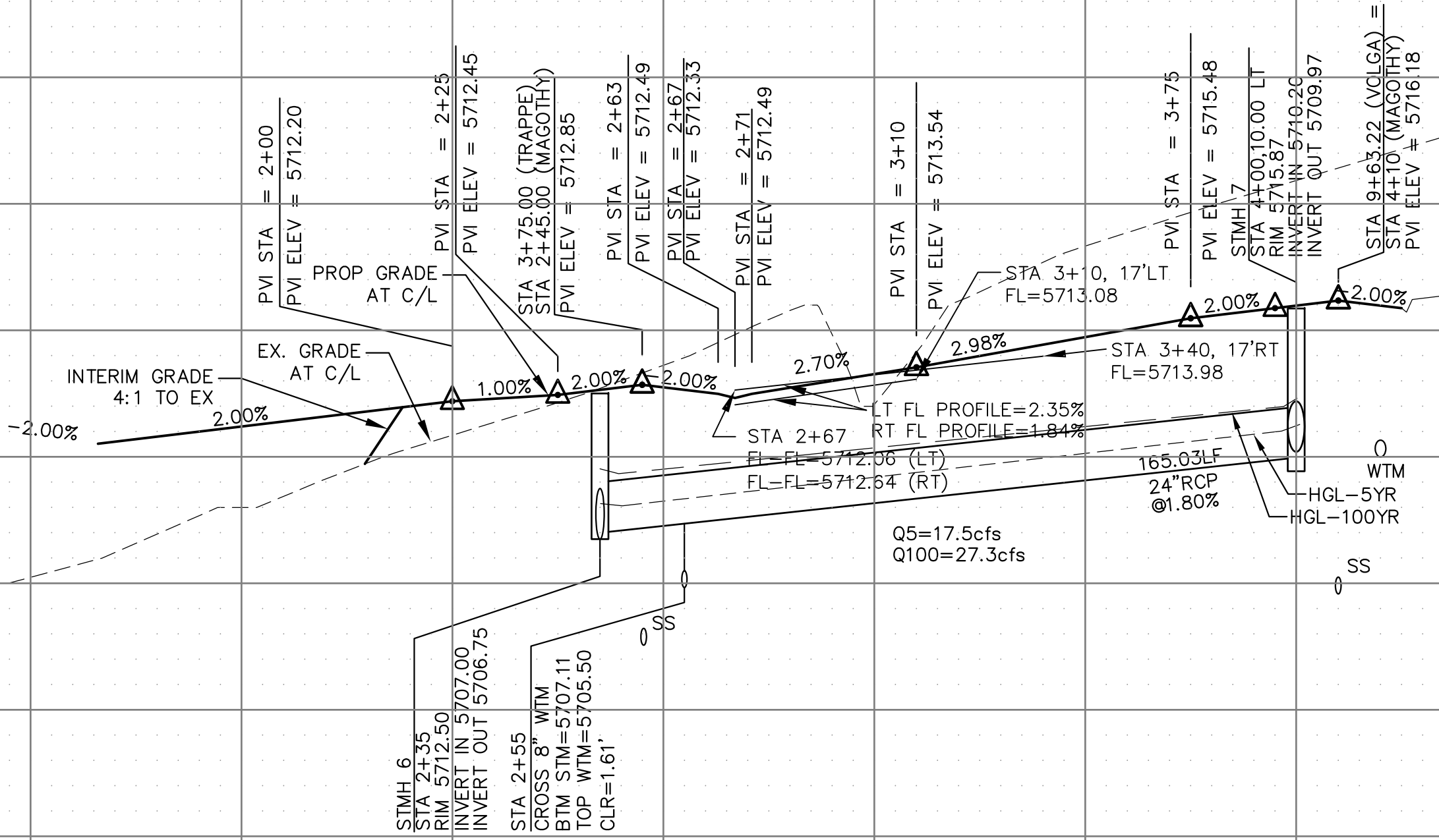
MAGOTHY DR

- NOTES
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
  2. SEE 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 CURB TRANSITIONS
- 3 PEDESTRIAN RAMP, SEE SHEET C10.1



CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C34	39.27'	25.00	90°00'00"
C35	39.27'	25.00	90°00'00"
C36	31.42'	20.00	90°00'00"
C37	31.42'	20.00	90°00'00"
C54	39.27'	25.00	90°00'00"
C55	39.27'	25.00	90°00'00"



SCALES: HORIZ. 1"=30'  
VERT. 1"=5'

CORE

ENGINEERING GROUP

15004 1ST AVENUE S.  
BURNING WOOD, MO 63306  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

DATE

DESCRIPTION

NO.

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

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

PROJECT:  
LORSON RANCH EAST  
FILING NO. 4  
LORSON BLVD - LAMPREY DR  
COLORADO SPRINGS, COLORADO

STREET/STORM  
MAGOTHY DR  
STA 1+90 TO 4+10

DATE:  
FEBRUARY 28, 2019

PROJECT NO.  
100.048

SHEET NUMBER  
C6.9

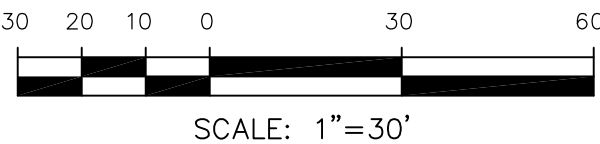
TOTAL SHEETS: 40



NOTES

1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
2. SEE 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 CURB TRANSITIONS  
3 PEDESTRIAN RAMP, SEE SHEET C10.1



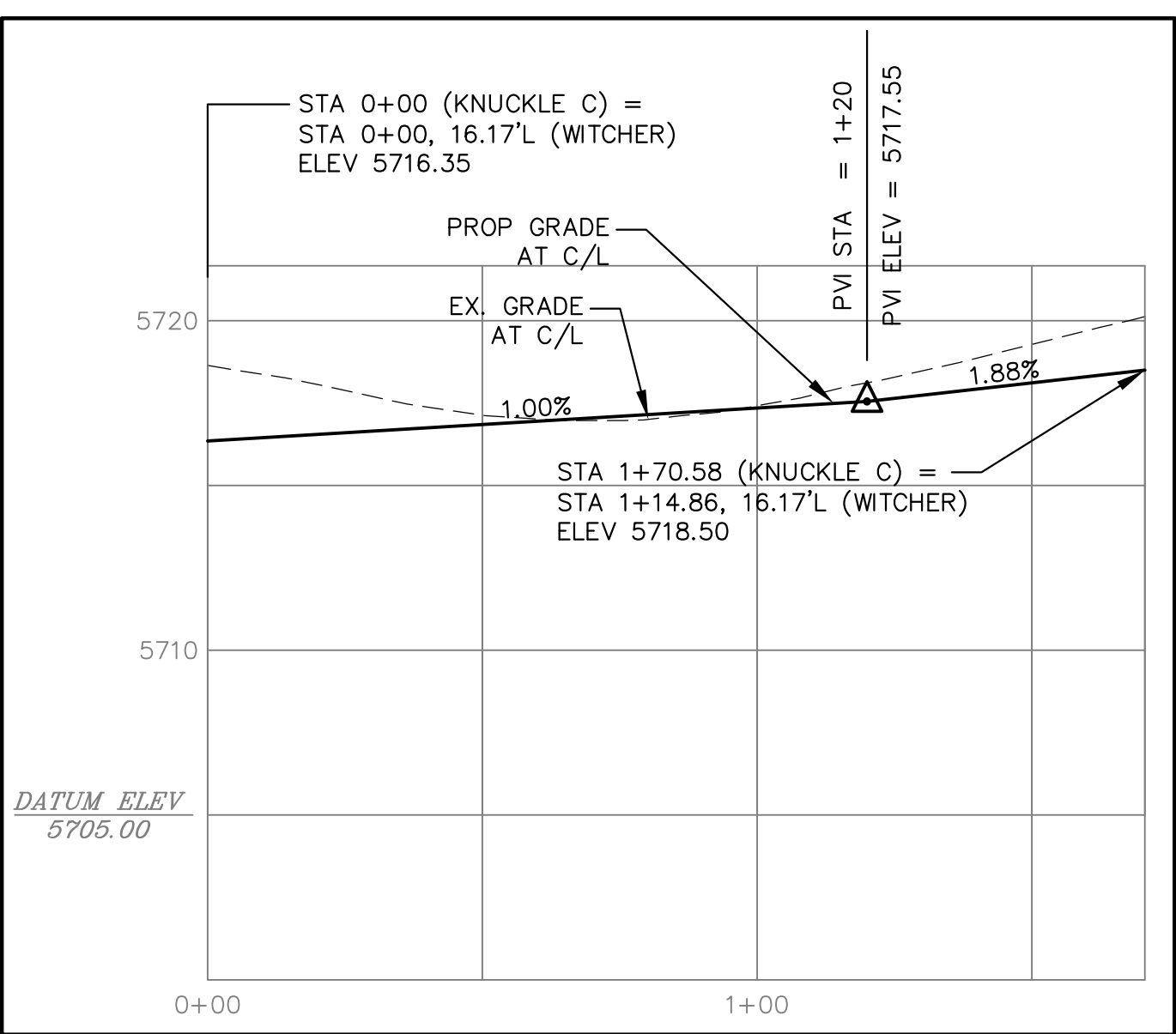
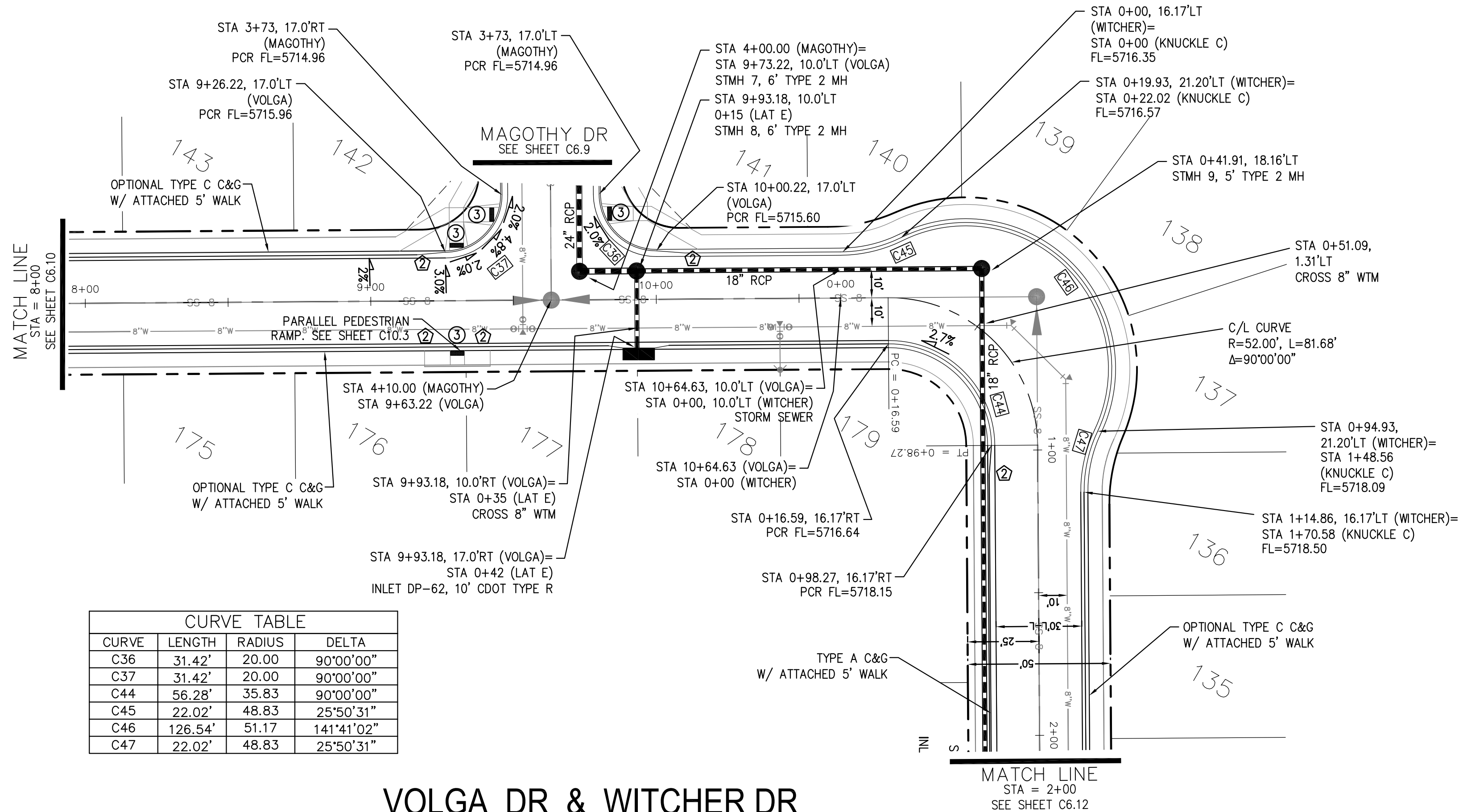
STREET/STORM  
VOLGA DRIVE  
STA 0+00 TO 8+00

DATE:  
FEBRUARY 28, 2019

PROJECT NO.  
100.048

SHEET NUMBER  
C6.10

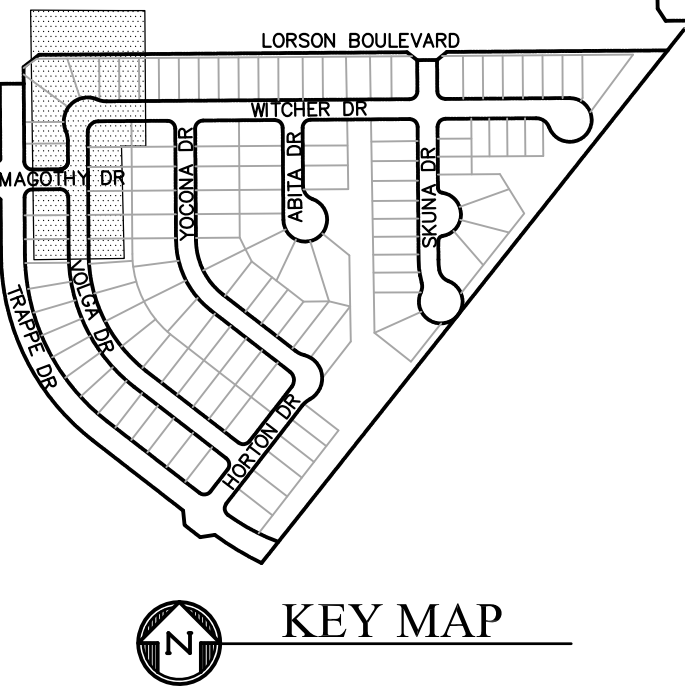
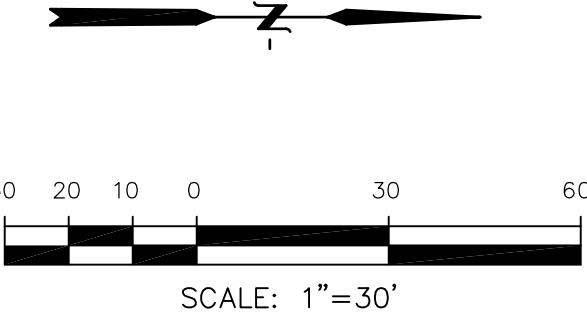
**TOTAL SHEETS: 40**



KNUCKLE 'C' PROFILE

- NOTES**
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
  2. SEE 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 CURB TRANSITIONS  
③ PEDESTRIAN RAMP, SEE SHEET C10.1

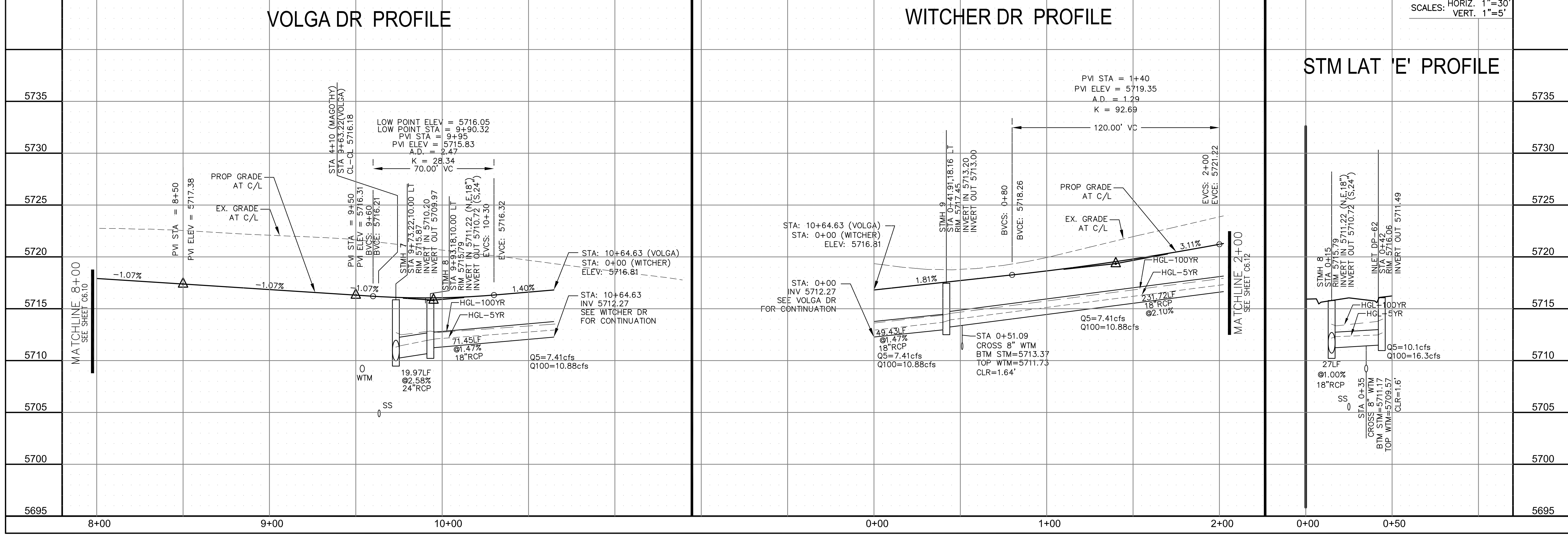


VOLGA DR & WITCHER DR

VOLGA DR PROFILE

WITCHER DR PROFILE

STM LAT 'E' PROFILE



**CORE ENGINEERING GROUP**  
15004 1ST AVENUE S.  
BURNING WOOD, CO 80903  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

**PROJECT:** LORSON RANCH EAST  
FILING NO. 4  
LORSON BLVD - LAMPREY DR  
COLORADO SPRINGS, COLORADO

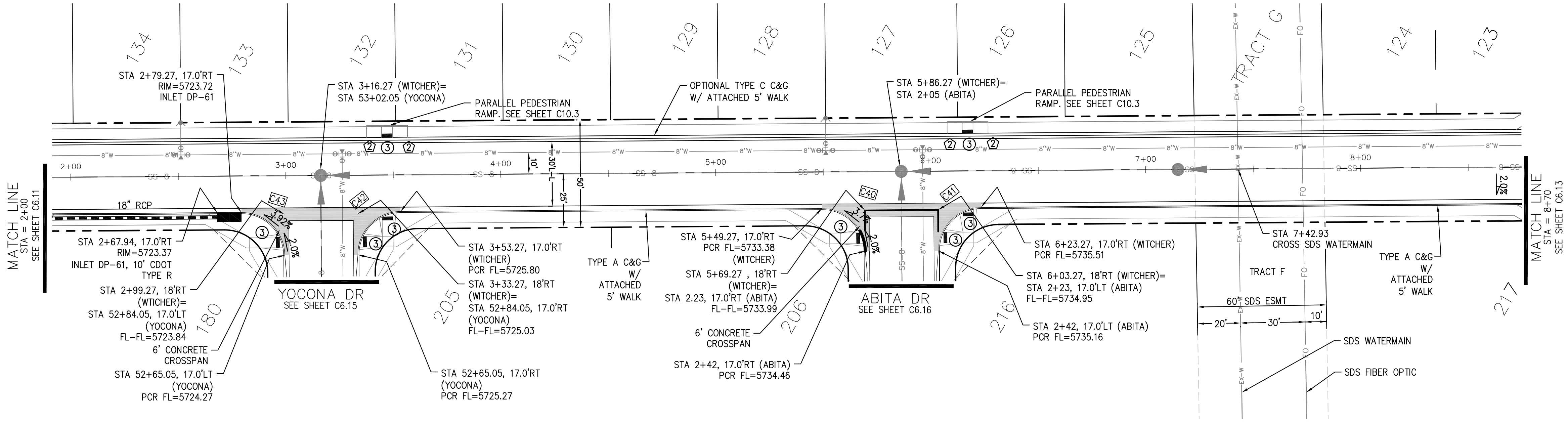
**DATE:** FEBRUARY 28, 2019

**PROJECT NO.** 100.048

**SHEET NUMBER** C6.11

**TOTAL SHEETS:** 40



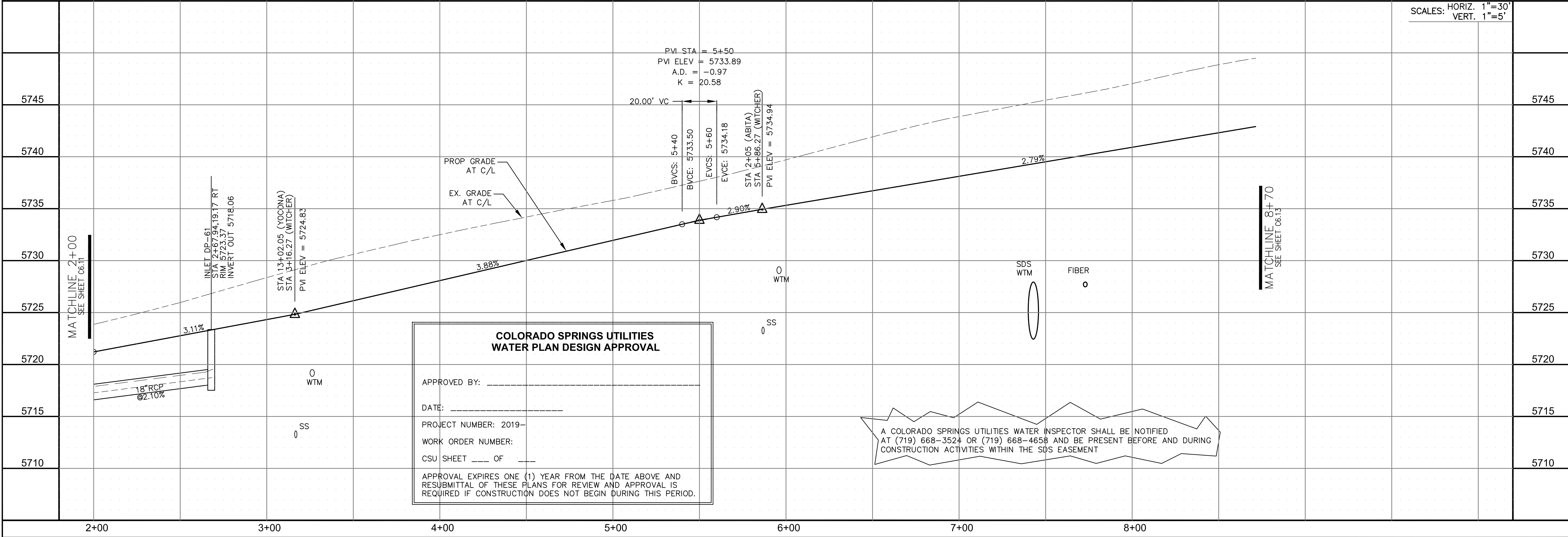
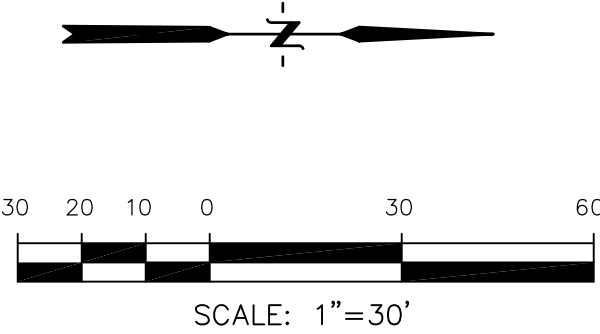
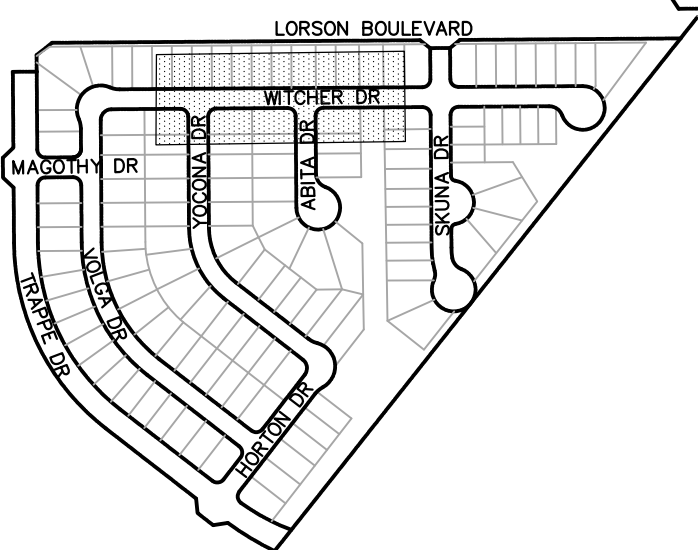


CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C40	31.42'	20.00	90°00'00"
C41	31.42'	20.00	90°00'00"
C42	31.42'	20.00	90°00'00"
C43	31.42'	20.00	90°00'00"

- NOTES
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
  2. SEE 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 CURB TRANSITIONS  
3 PEDESTRIAN RAMP, SEE SHEET C10.1

WITCHER DR



CORE

ENGINEERING GROUP

15004 1ST AVENUE S.  
BURNING WOOD, MO 65506  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg.com

DATE

DESCRIPTION

NO.

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

PROJECT NO. 100.048  
SHEET NUMBER C6.12  
TOTAL SHEETS: 40

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

PROJECT:  
LORSON RANCH EAST  
FILING NO. 4  
LORSON BLVD - LAMPREY DR  
COLORADO SPRINGS, COLORADO

DATE:  
FEBRUARY 28, 2019

PROJECT NO.  
100.048

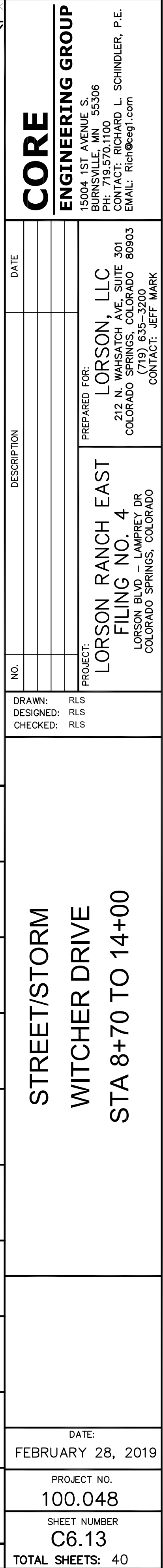
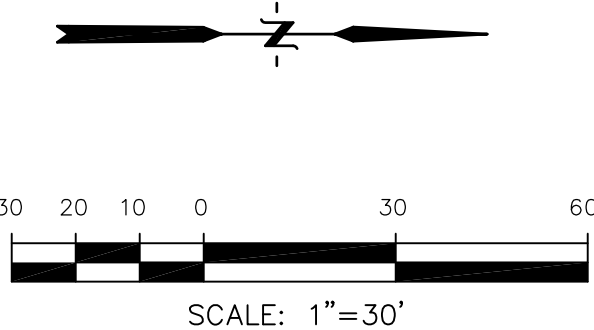
SHEET NUMBER  
C6.12

TOTAL SHEETS: 40

STREET/STORM  
WITCHER DRIVE  
STA 2+00 TO 8+70

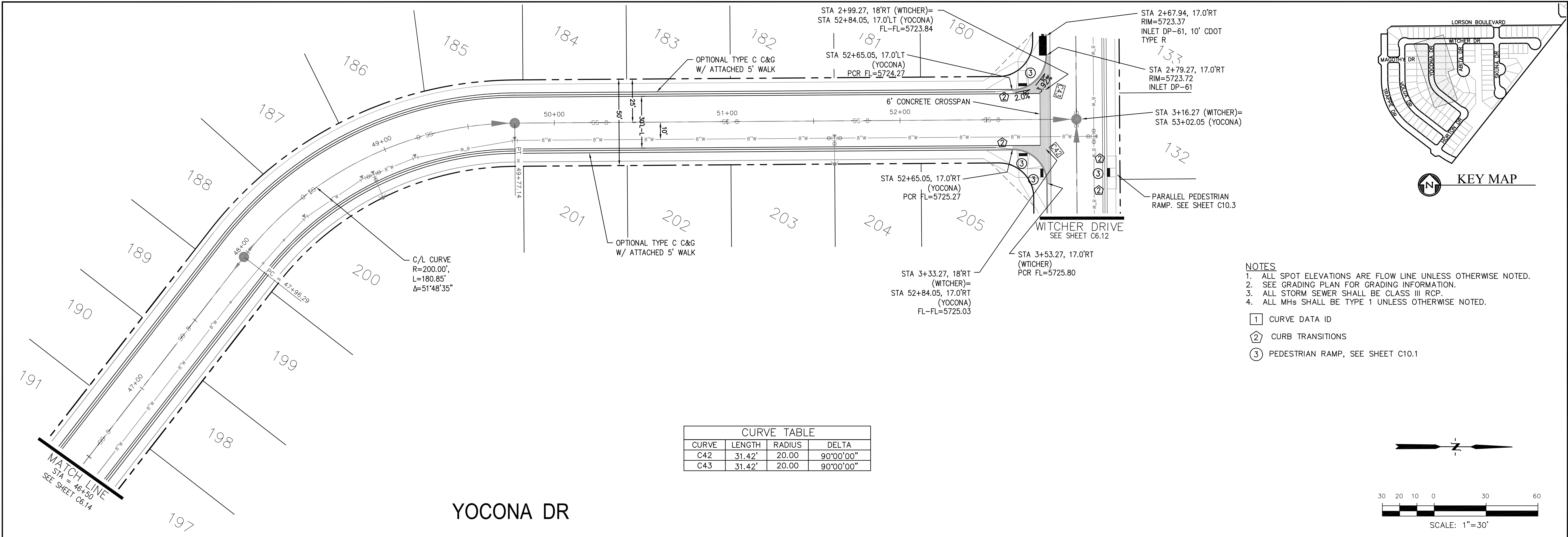


- 1 CURVE DATA ID  
2 CURB TRANSITIONS  
3 PEDESTRIAN RAMP, SEE SHEET C10.1





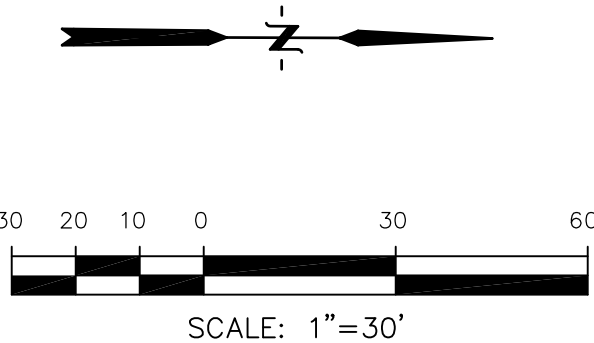




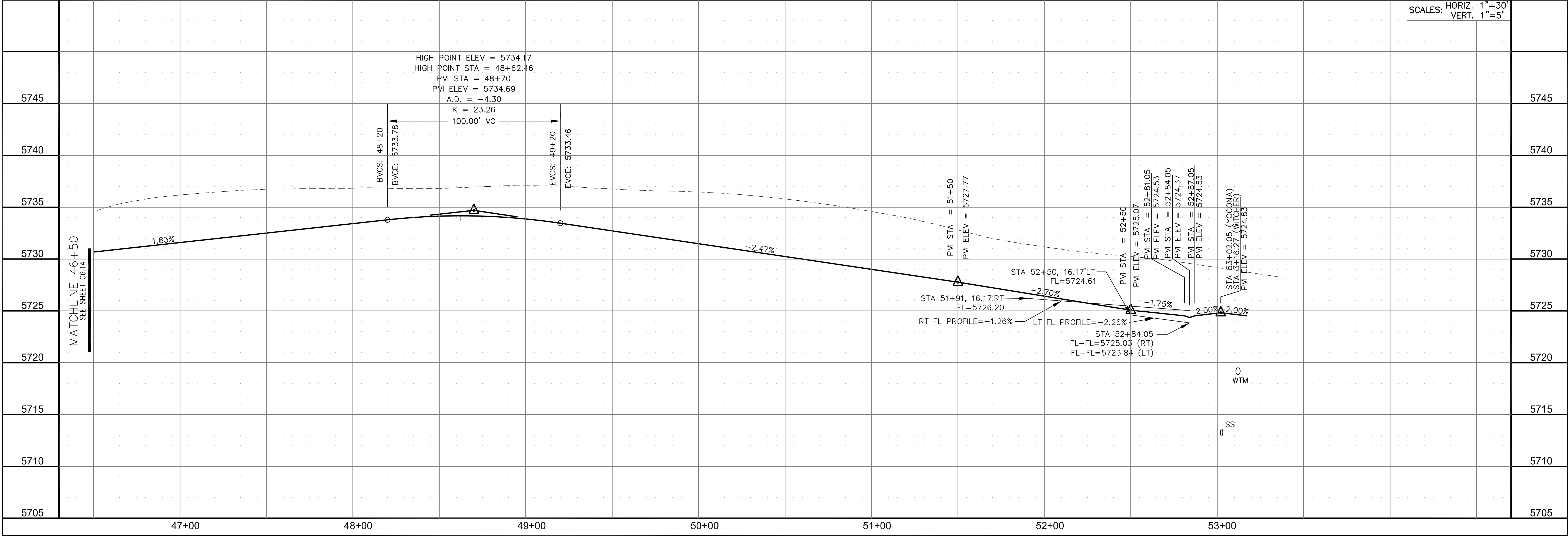
CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C42	31.42'	20.00	90°00'00"
C43	31.42'	20.00	90°00'00"

- NOTES
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
  2. SEE 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 CURB TRANSITIONS  
③ PEDESTRIAN RAMP, SEE SHEET C10.1



SCALES: HORIZ. 1"=30'  
VERT. 1"=5'



CORE

ENGINEERING GROUP

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

DATE

DESCRIPTION

NO.

PREPARED FOR:

LORSON, LLC

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

PROJECT:

LORSON RANCH EAST  
FILING NO. 4  
LORSON BLVD - LAMPREY DR  
COLORADO SPRINGS, COLORADO

DRAWN:

RLS

DESIGNED:

RLS

CHECKED:

RLS

STREET/STORM

YOCONA DRIVE

STA 46+50 TO 53+02

DATE:

FEBRUARY 28, 2019

PROJECT NO.

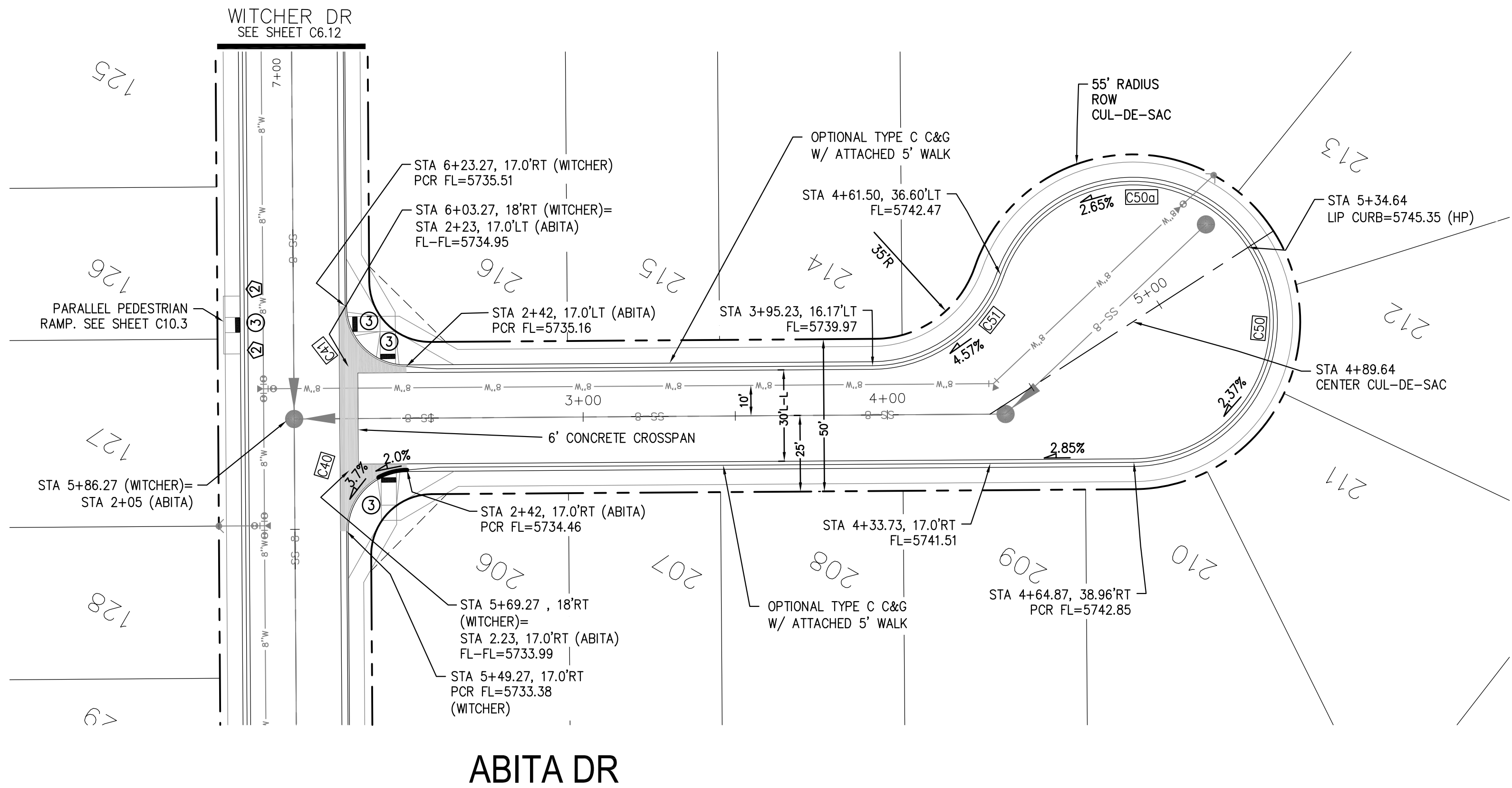
100.048

SHEET NUMBER

C6.15

TOTAL SHEETS:

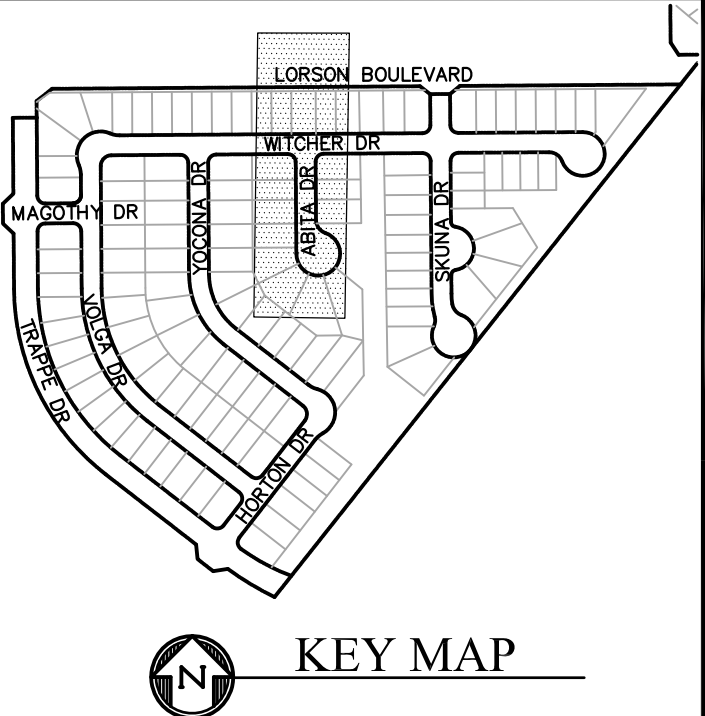
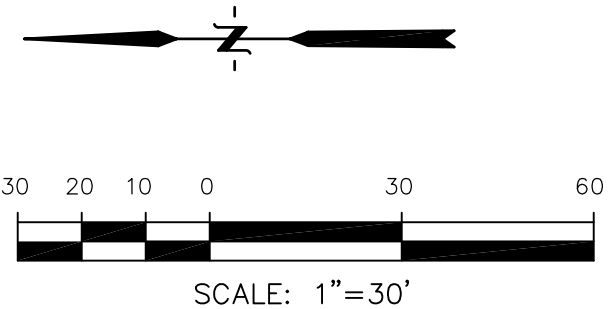
40



- NOTES
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
  2. SEE 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 CURB TRANSITIONS  
3 PEDESTRIAN RAMP, SEE SHEET C10.1

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C40	31.42'	20.00	90°00'00"
C41	31.42'	20.00	90°00'00"
C50	98.67'	46.17	122°27'11"
C50a	102.79'	46.17	127°33'18"
C51	54.98'	45.00	70°00'29"



CORE

ENGINEERING GROUP

15004 1ST AVENUE S.  
BURNING WOOD, MO 65506  
PHONE: 636.261.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

DATE

DESCRIPTION

NO.

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

PROJECT:

LORSON RANCH EAST  
FILING NO. 4  
LORSON BLVD - LAMPREY DR  
COLORADO SPRINGS, COLORADO

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

STREET/STORM  
ABITA DRIVE  
STA 2+00 TO 5+44

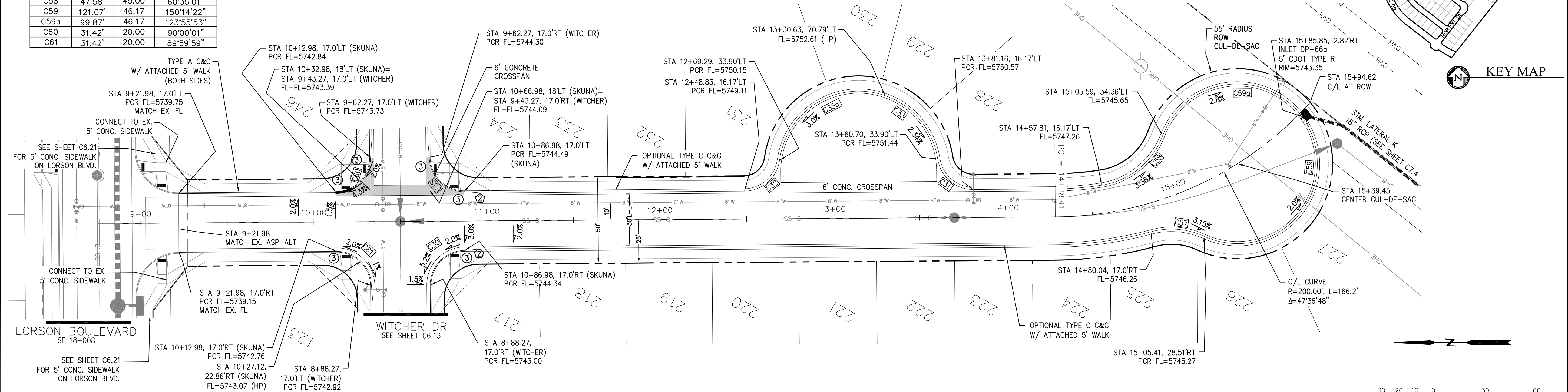
DATE:  
FEBRUARY 28, 2019

PROJECT NO.  
100.048

SHEET NUMBER  
C6.16

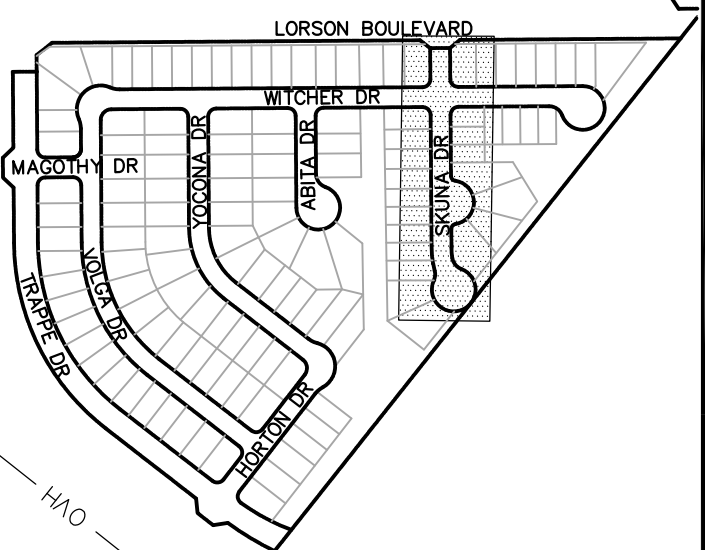
TOTAL SHEETS: 40

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C31	29.52'	20.67	81°50'08"
C32	29.52'	20.67	81°50'08"
C33	49.99'	46.17	62°02'20"
C33a	81.90'	46.17	101°37'55"
C38	31.42'	20.00	89°59'59"
C39	31.42'	20.00	90°00'01"
C57	31.38'	45.00	39°57'29"
C58	47.58'	45.00	60°35'01"
C59	121.07'	46.17	150°14'22"
C59a	99.87'	46.17	123°55'53"
C60	31.42'	20.00	90°00'01"
C61	31.42'	20.00	89°59'59"



- NOTES
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
  2. SEE 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 CURB TRANSITIONS  
③ PEDESTRIAN RAMP, SEE SHEET C10.1



CORE

ENGINEERING GROUP

15004 1ST AVENUE S.  
BURNING WOOD, MO 63306  
PHONE: 636.251.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

DATE

DESCRIPTION

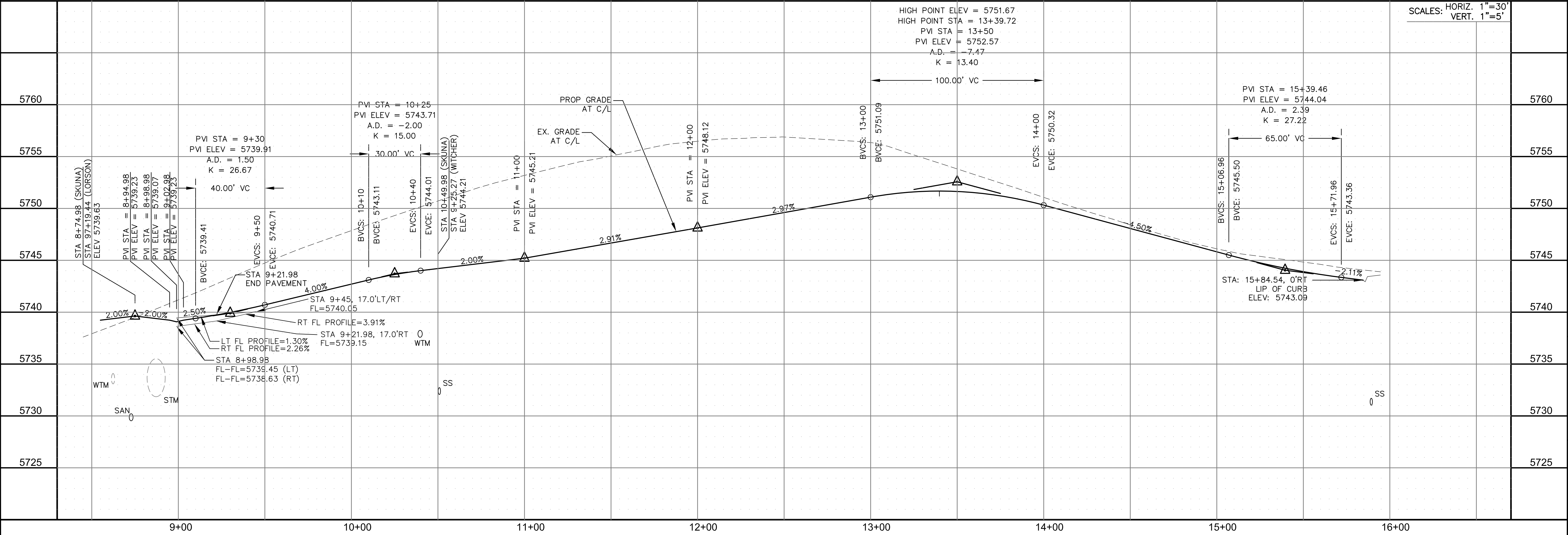
NO.

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

PROJECT FOR:  
LORSON RANCH EAST  
FILING NO. 4  
LORSON BLVD - LAMPREY DR  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: JEFF MARK

PREPARED FOR:  
LORSON, LLC  
212 N. WAHSATCH AVE. SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

## SKUNA DR



STREET/STORM

SKUNA DRIVE

STA 8+74 TO 15+88

DATE:

FEBRUARY 28, 2019

PROJECT NO.

100.048

SHEET NUMBER

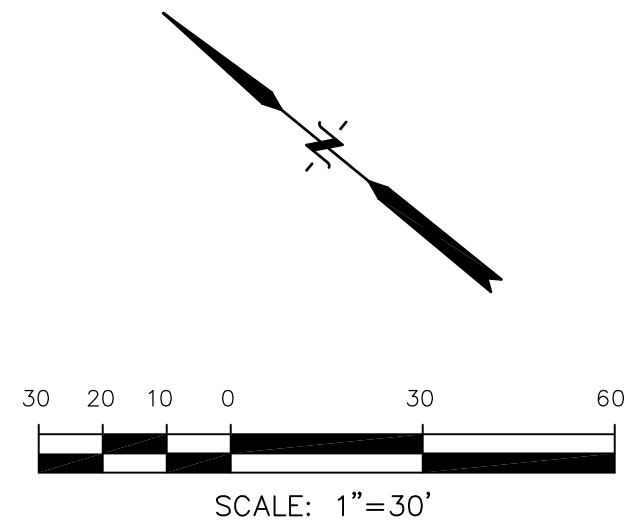
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TOTAL SHEETS: 40

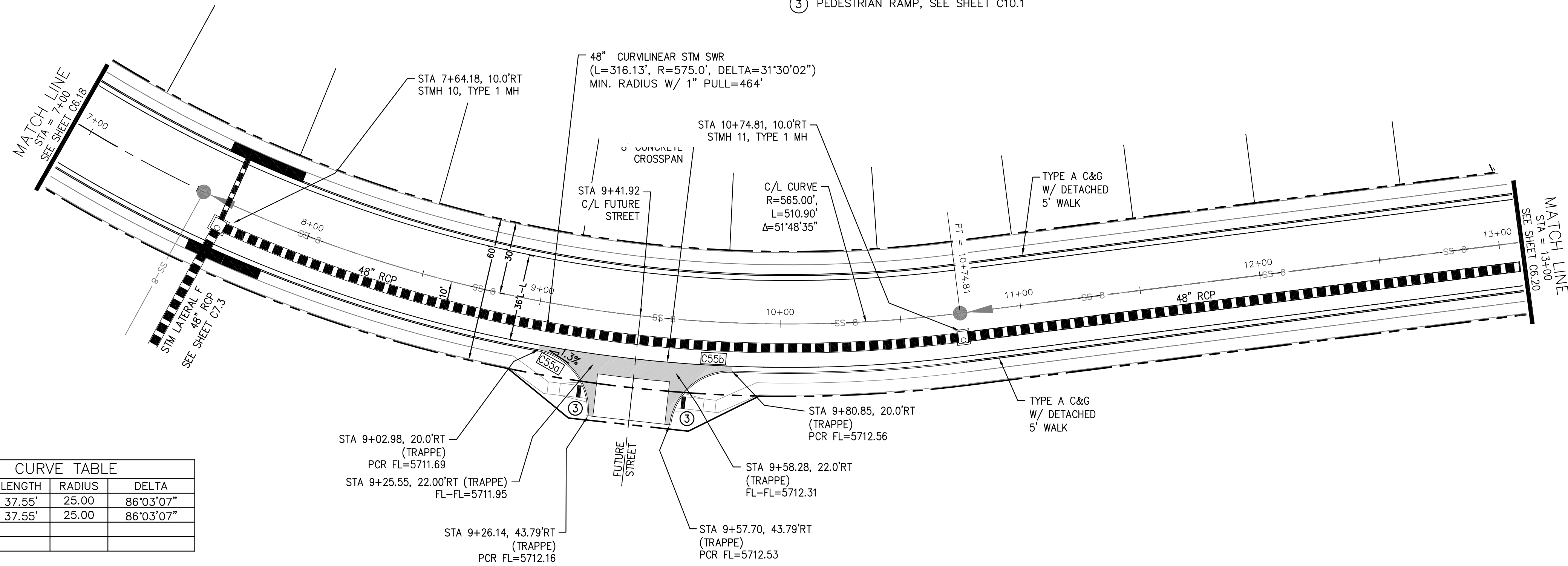


SHEET NUMBER  
C6.18

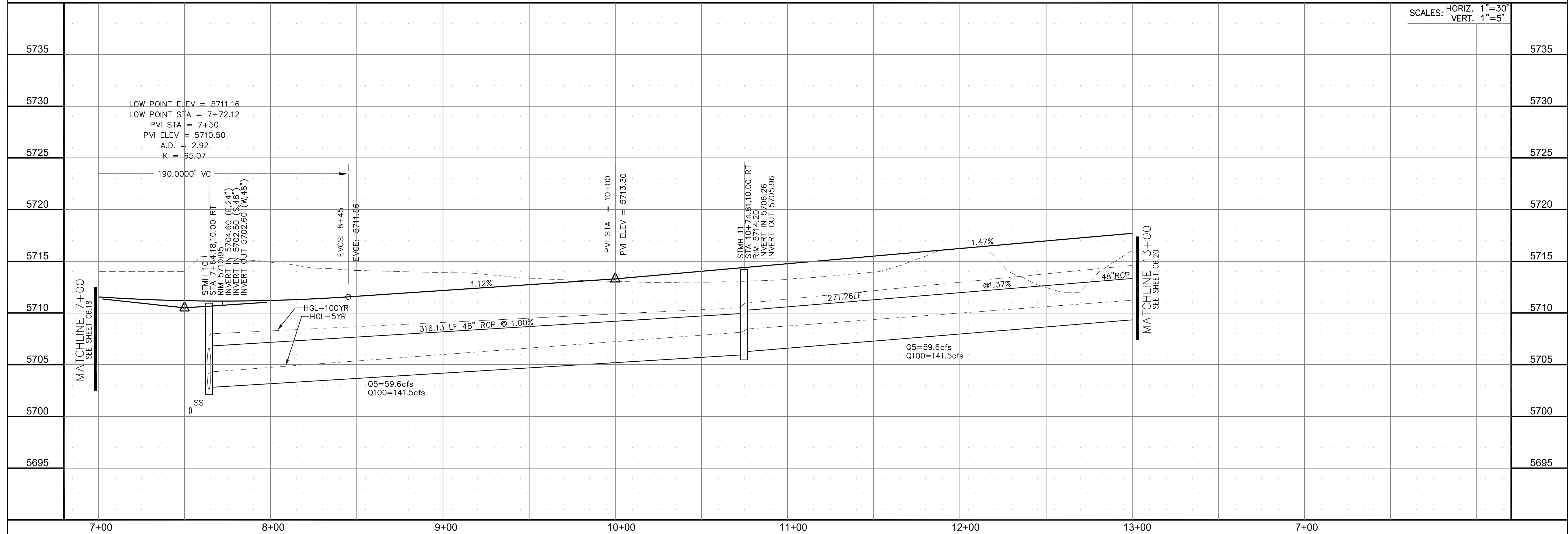
1 CURVE DATA ID  
2 CURB TRANSITIONS  
3 PEDESTRIAN RAMP, SEE SHEET C10.1



CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
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C55b	37.55'	25.00	86°03'07"

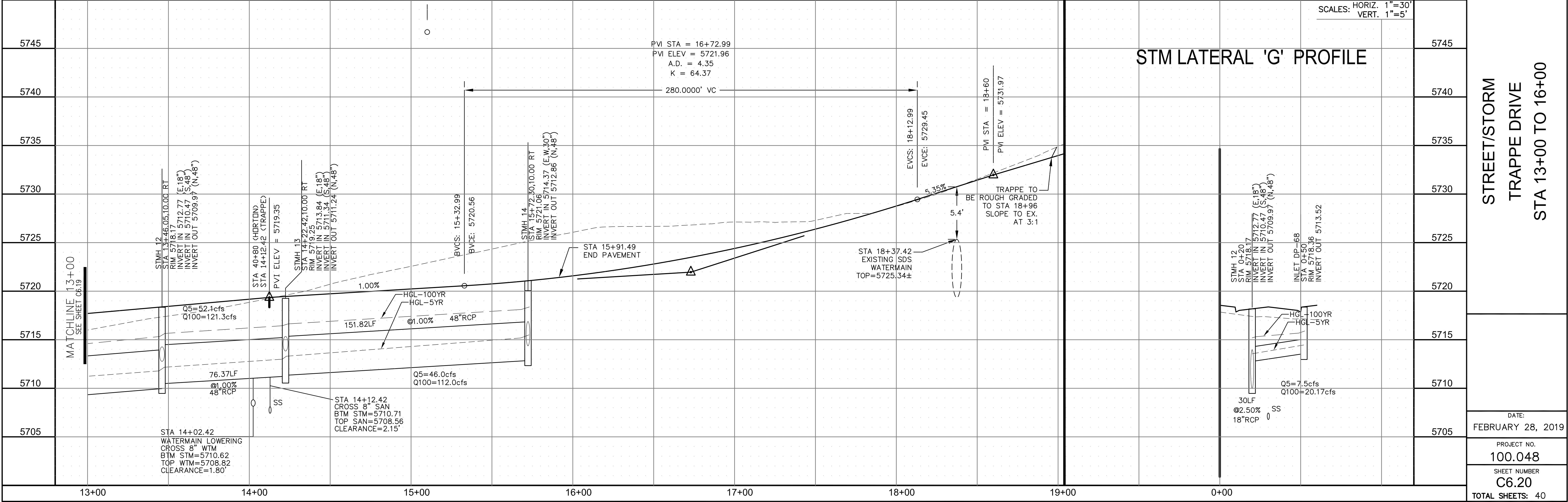
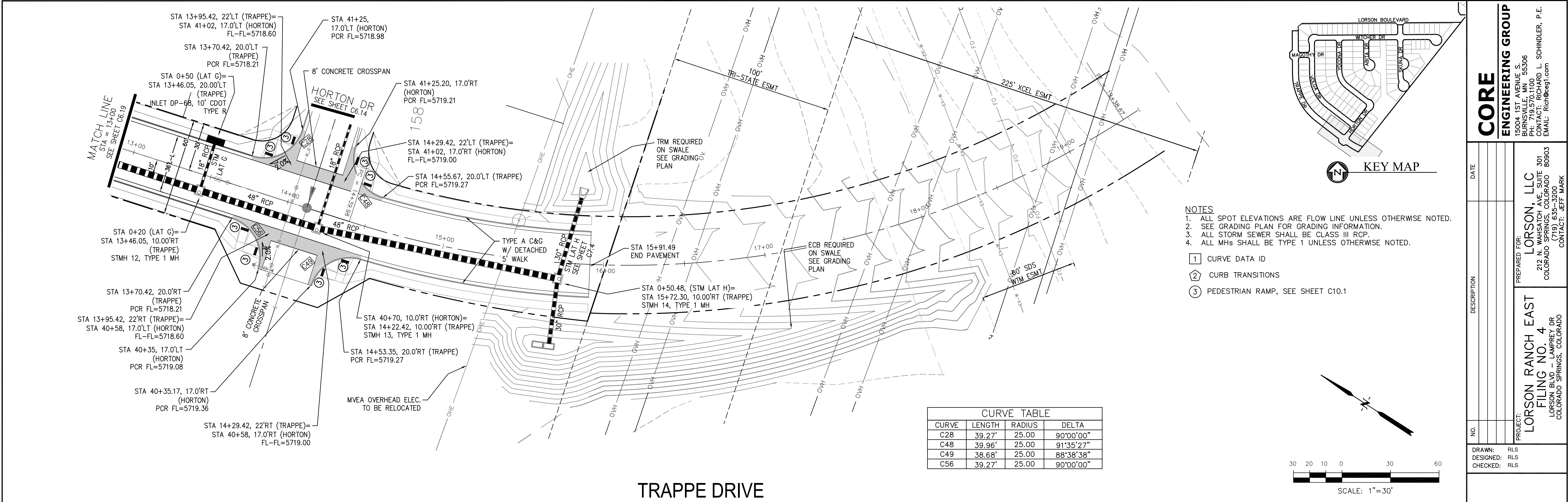


## TRAPPE DRIVE



<div>STREET/STORM TRAPPE DRIVE STA 7+00 TO 13+00</div>		DATE: FEBRUARY 28, 2019	
		PROJECT NO. 100.048	
		SHEET NUMBER C6.19	
		TOTAL SHEETS: 40	
<div>NO.</div> <div>DESCRIPTION</div> <div>DATE</div>		DRAWN: RLS DESIGNED: RLS CHECKED: RLS	
		PROJECT: LORSON RANCH EAST FILING NO. 4 LORSON BLVD. – LAMPREY DR COLORADO SPRINGS, COLORADO	
		PREPARED FOR: LORSON, LLC 212 N. WAHSATCH AVE. SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: JEFF MARK	
		15004 1ST AVENUE S. DENVER, COLORADO 80202 PHONE: 303.750.3506 FAX: 303.750.1100 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@eg1.com	
		<div>CORE</div> <div>ENGINEERING GROUP</div>	





CORE

ENGINEERING GROUP

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

DATE

DESCRIPTION

NO.

PROJECT FOR:

LORSON, LLC

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

DRAWN:

RLS

DESIGNED:

RLS

CHECKED:

RLS

DATE:

FEBRUARY 28, 2019

PROJECT NO.

100.048

SHEET NUMBER

C6.20

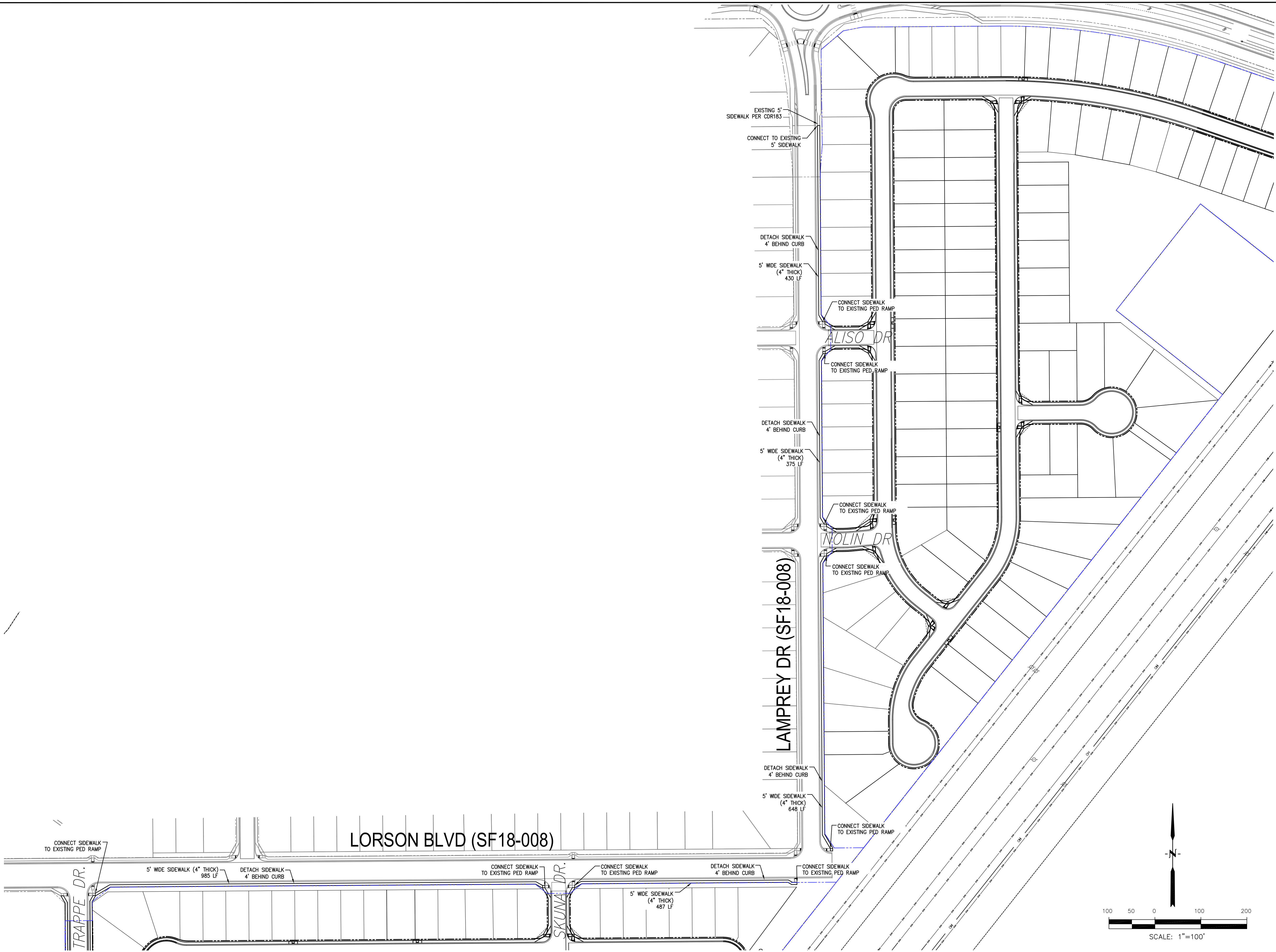
TOTAL SHEETS:

40

STREET/STORM

TRAPPE DRIVE

STA 13+00 TO 16+00



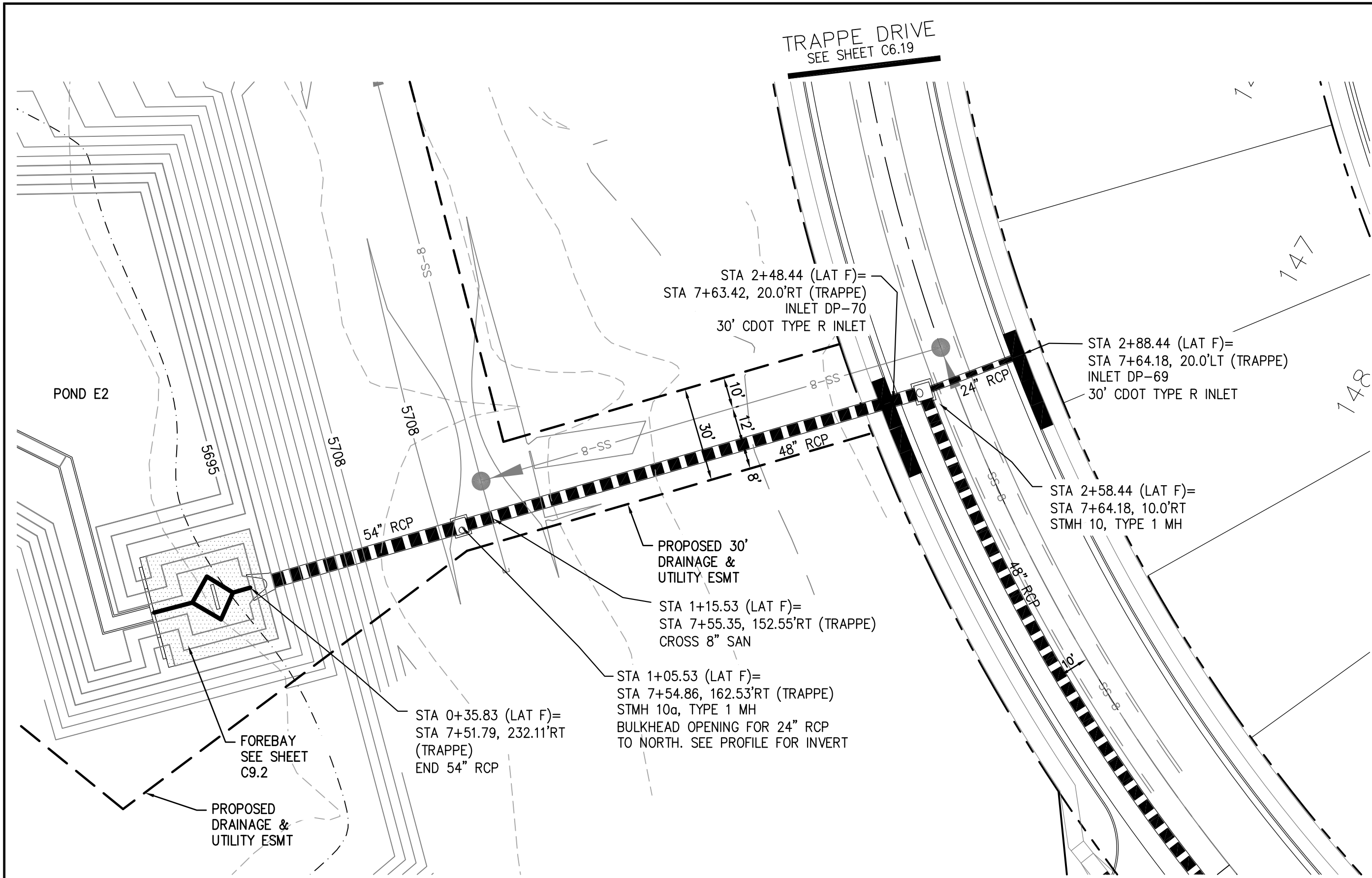
<b>CORE</b> <b>ENGINEERING GROUP</b> 15004 1ST AVENUE S. BURNING WOOD, MO 63306 PHONE: 636-251-5536 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@ceg1.com	
NO.	DATE
DESCRIPTION	
PROJECT: LORSON RANCH EAST FILING NO. 4 LORSON BLVD - LAMPREY DR COLORADO SPRINGS, COLORADO	
PREPARED FOR: LORSON, LLC 212 N. WAHSATCH AVE. SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: JEFF MARK	
DRAWN: RLS DESIGNED: RLS CHECKED: RLS	
LORSON RANCH EAST FILING NO. 4 LORSON BLVD/LAMPREY DR SIDEWALK PLAN	
DATE: FEBRUARY 28, 2019	
PROJECT NO. 100.048	
SHEET NUMBER C6.21	
TOTAL SHEETS: 40	



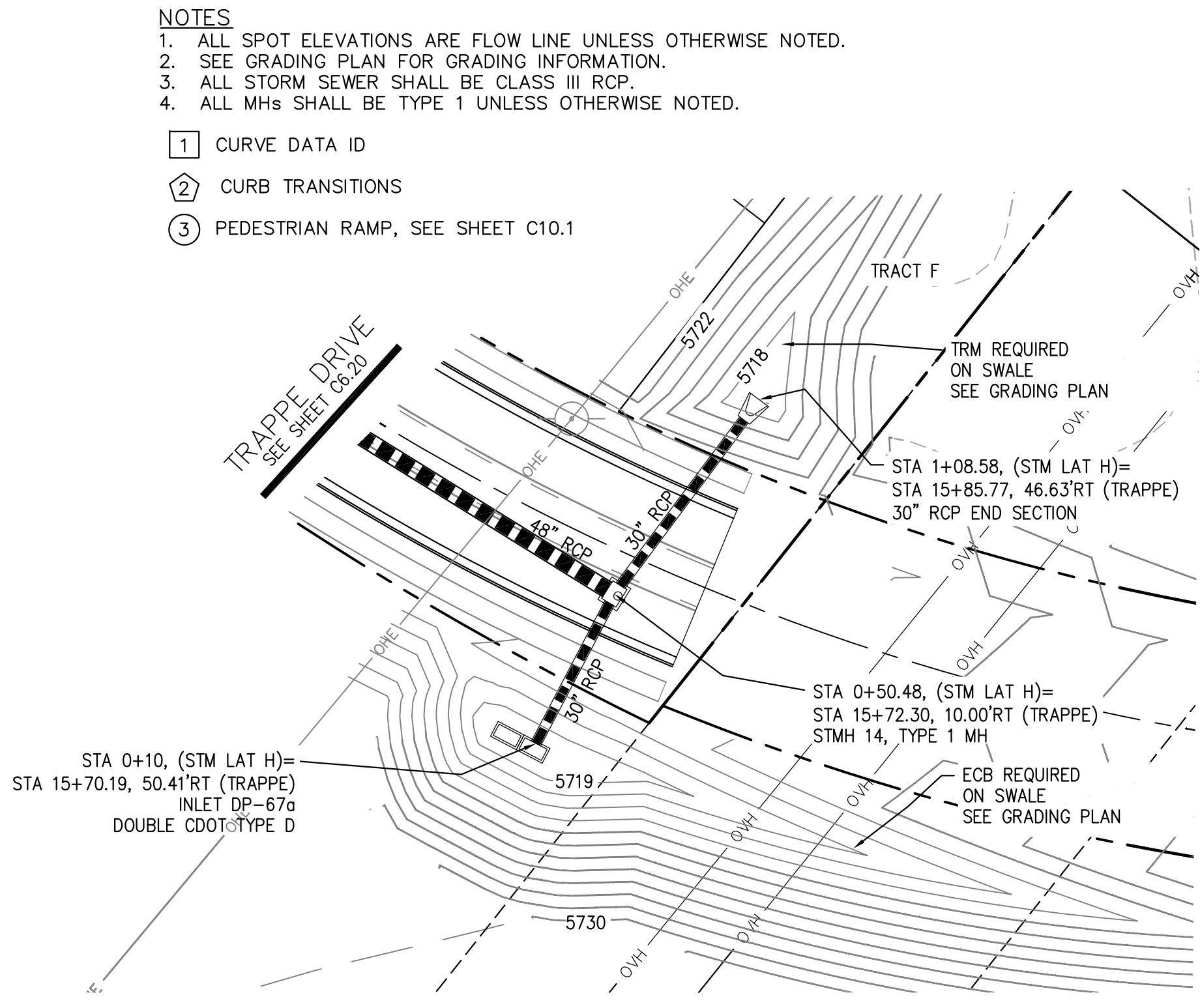




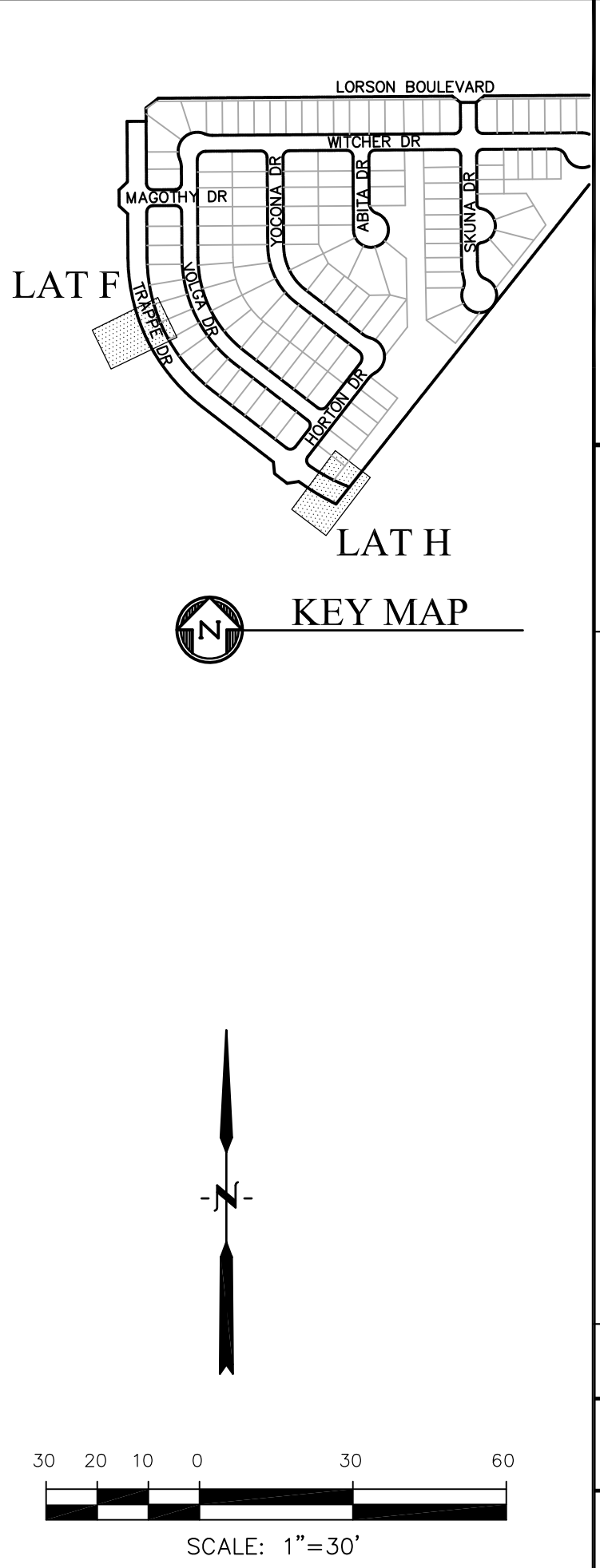




STORM LATERAL F

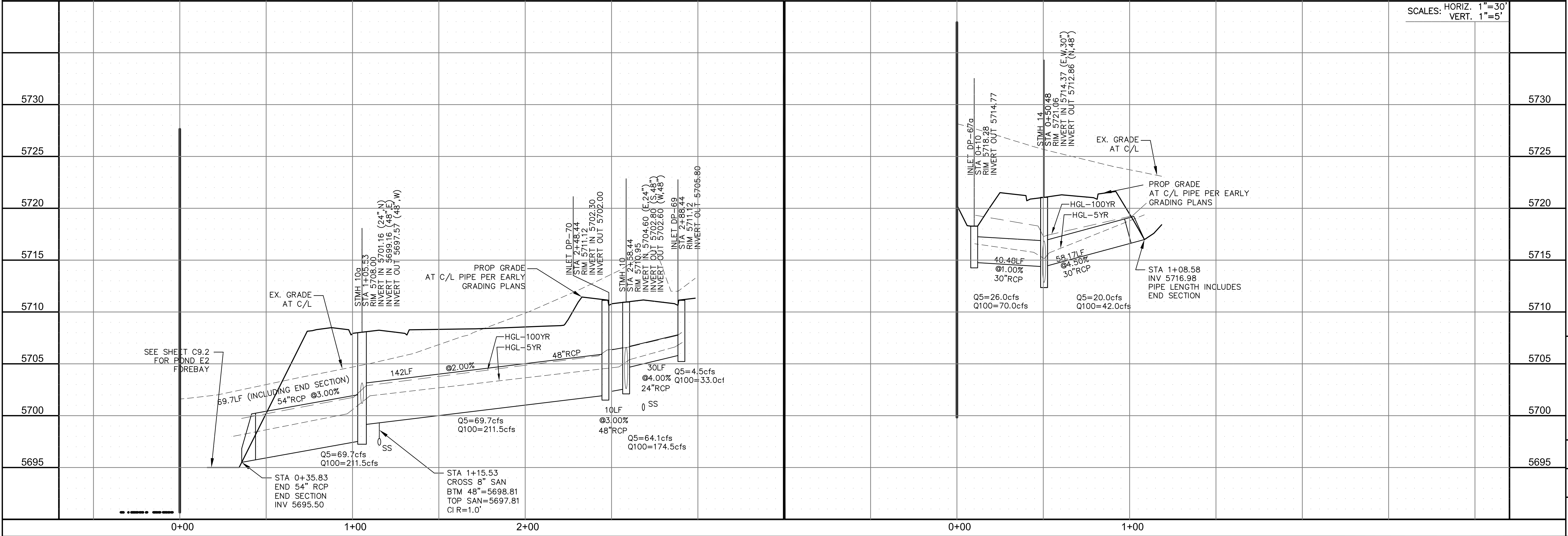


STORM LATERAL H



- NOTES
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
  2. SEE 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 CURB TRANSITIONS  
3 PEDESTRIAN RAMP, SEE SHEET C10.1



CORE

ENGINEERING GROUP

15004 1ST AVENUE S.  
BURNING WOOD, MO 65506  
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  
CONTACT: JEFF MARK

PROJECT:  
**LORSON RANCH EAST**  
**FILING NO. 4**  
LORSON BLVD - LAMPREY DR  
COLORADO SPRINGS, COLORADO

DATE:  
FEBRUARY 28, 2019

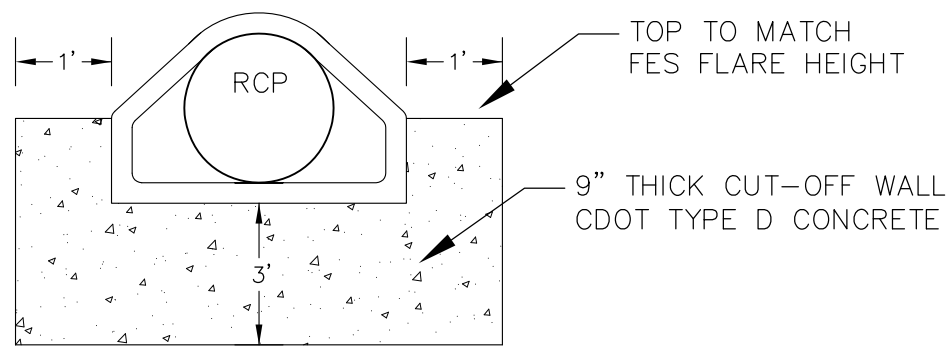
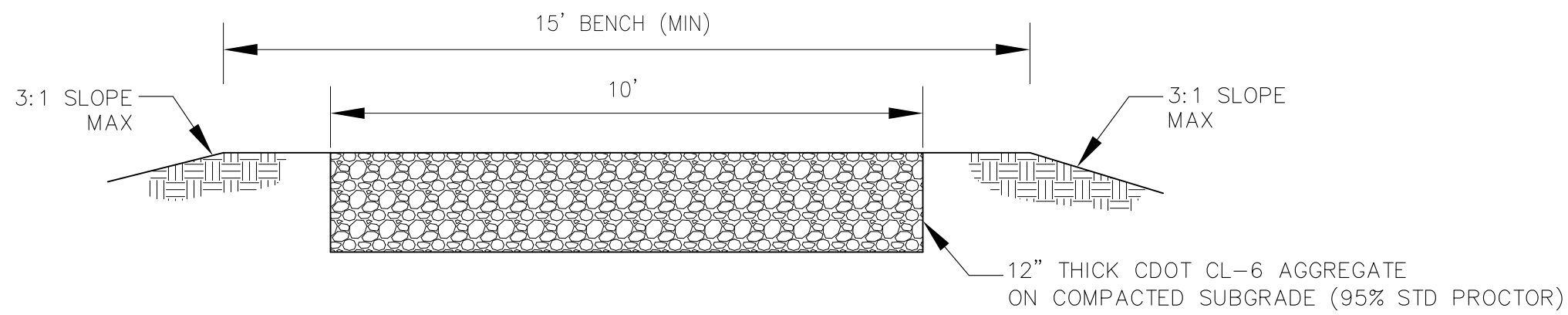
PROJECT NO.  
**100.048**

SHEET NUMBER  
**C7.3**

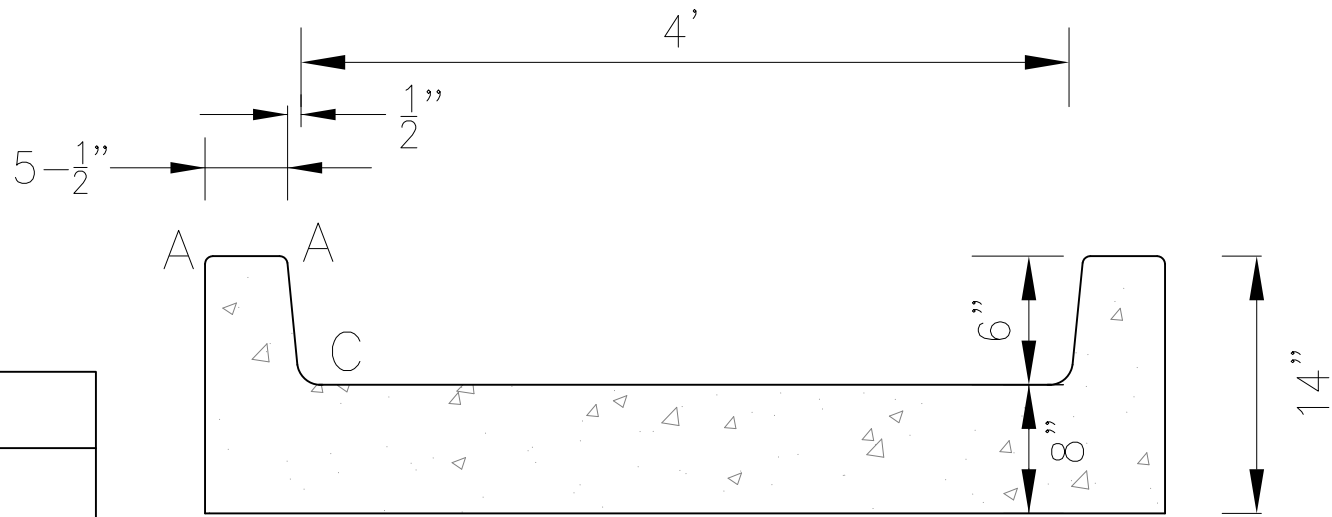
TOTAL SHEETS: 40



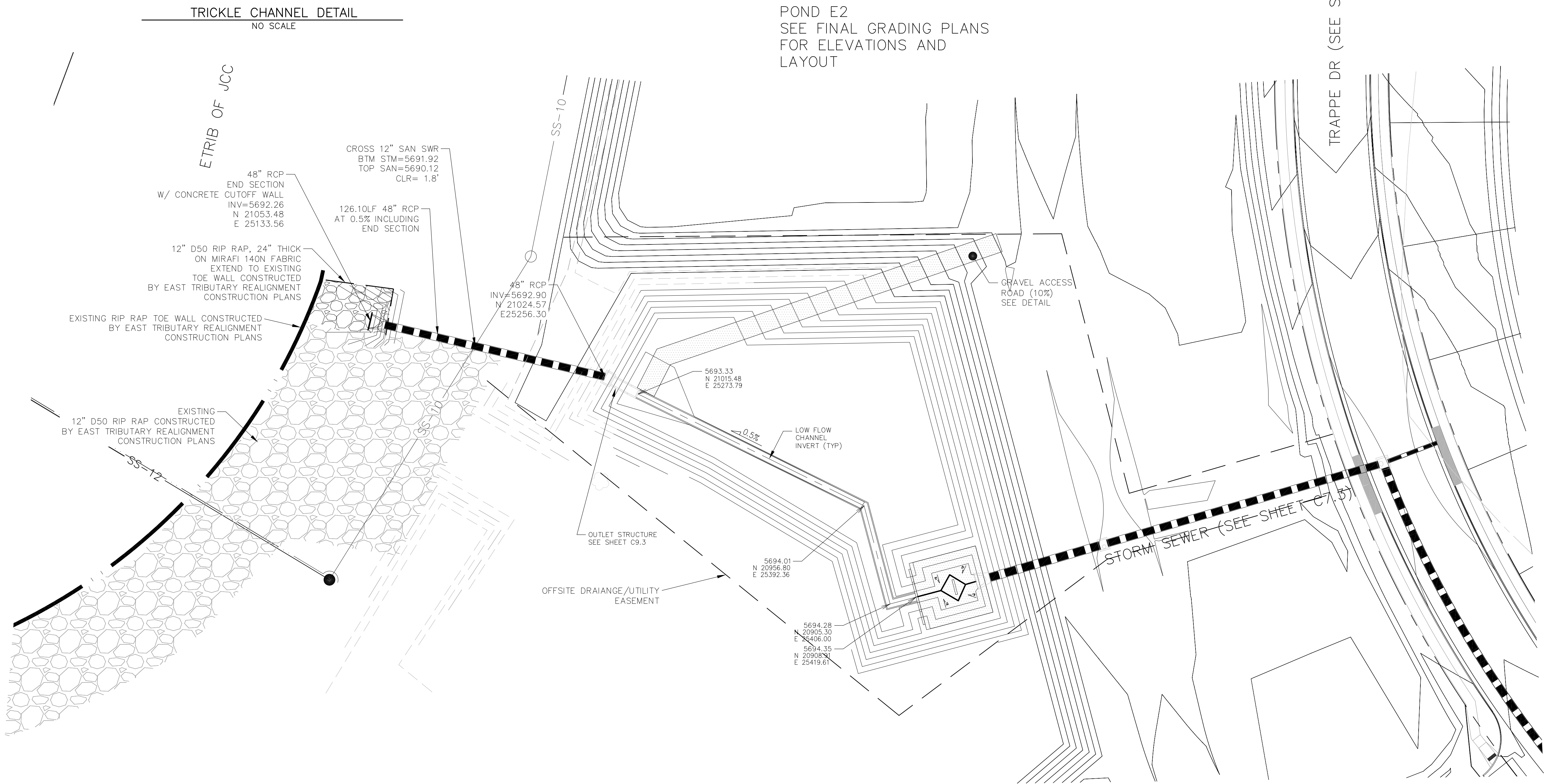
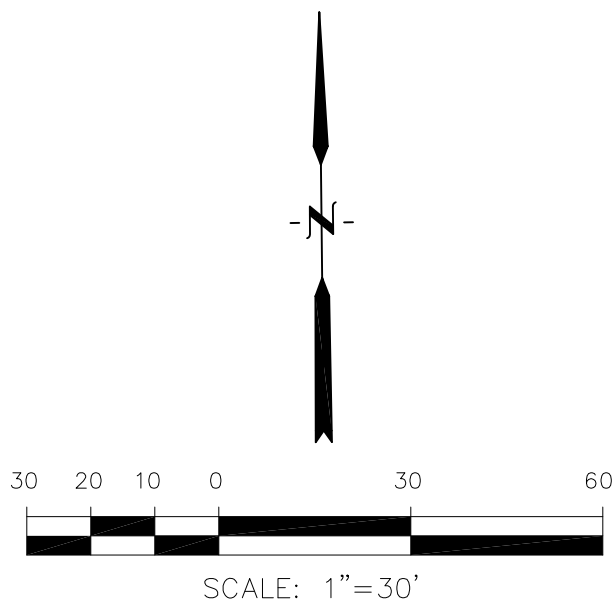




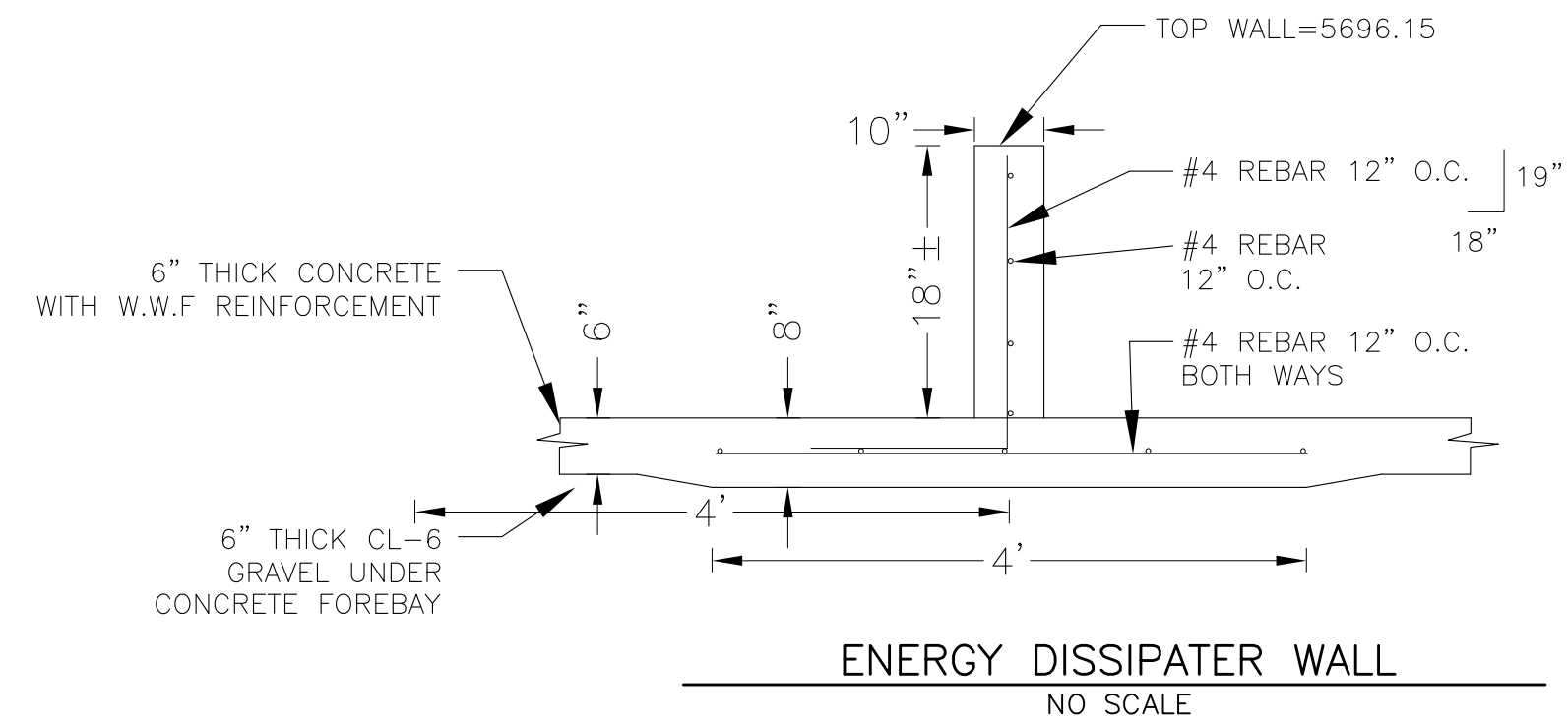
LENGTH FOR RADII
A = 1/2"
C = 1-1/2"



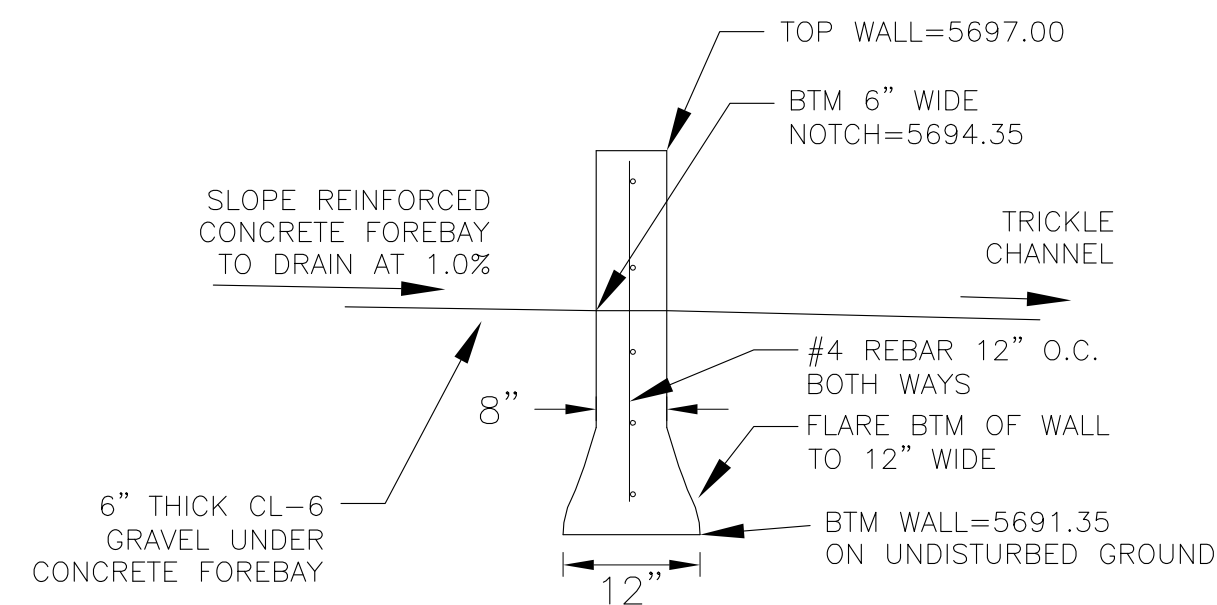
CONCRETE CUT-OFF WALL  
N.T.S.



<b>CORE</b> <b>ENGINEERING GROUP</b> 15004 1ST AVENUE S. BURNING WOODS, CO 80906 PHONE: 719.570.1100 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@ceg1.com	DATE	
	DESCRIPTION	
	NO.	
	DRAWN: RLS DESIGNED: RLS CHECKED: RLS	
PROJECT: <b>LORSON RANCH EAST</b> FILING NO. 4 LORSON BLVD. - LAMPREY DR COLORADO SPRINGS, COLORADO 80903 CONTACT: JEFF MARK	PREPARED FOR: <b>LORSON, LLC</b> 212 N. WAHSATCH AVE. SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: JEFF MARK	
	<b>POND E2</b> <b>POND E2 OUTFALL AND</b> <b>TRICKLE CHANNEL</b>	
	DATE: FEBRUARY 28, 2019	
	PROJECT NO. 100.048	
SHEET NUMBER <b>C9.1</b>		
TOTAL SHEETS: 40		

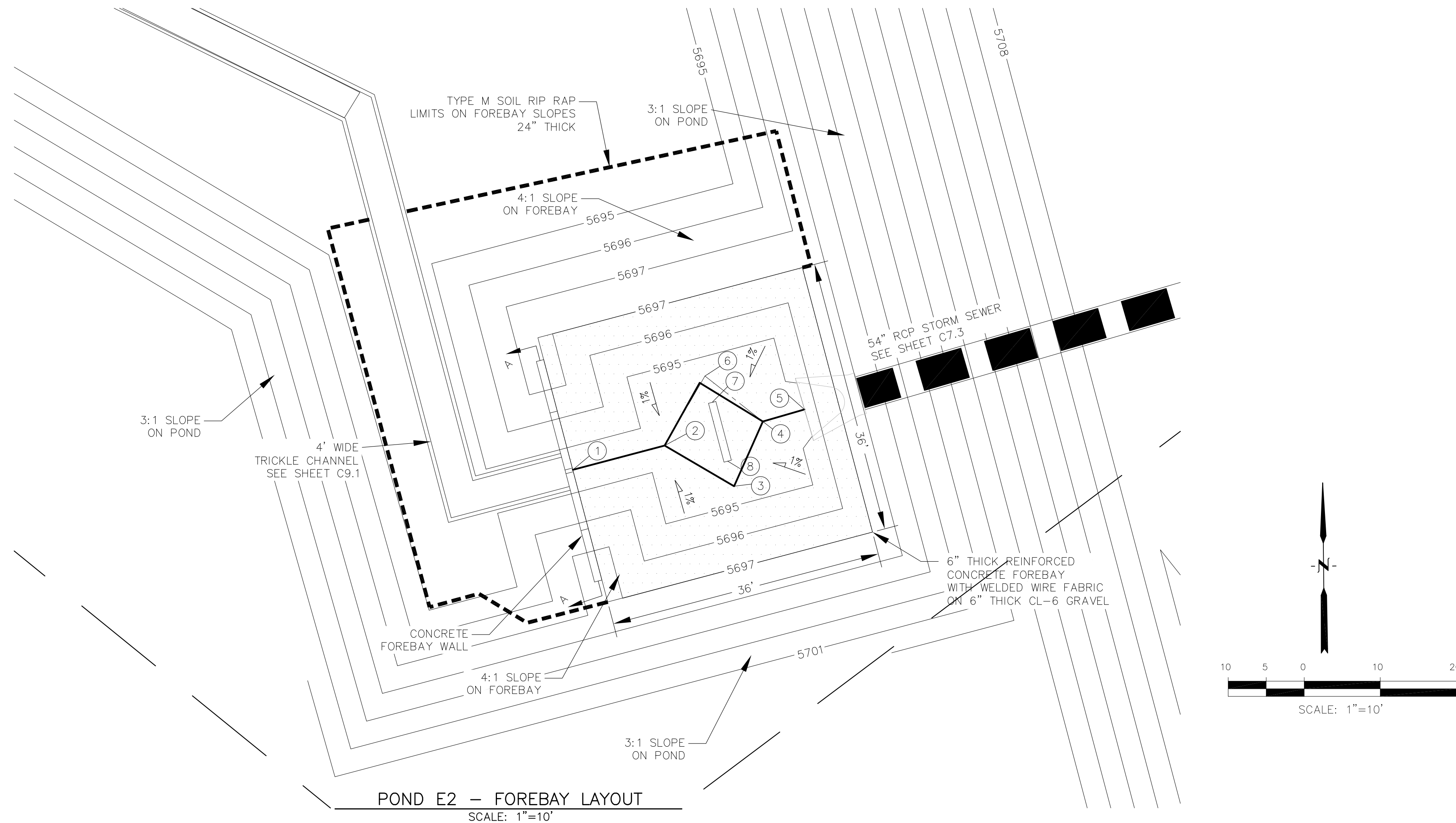


WALL SECTION A-A  
1"=10'



WALL SECTION B-B  
NO SCALE

POINT TABLE (FOREBAY)				
NUMBER	NORTHING	EASTING	ELEVATION	NOTES
1	20909.17	25420.57	5694.35	FOREBAY BOTTOM
2	20912.36	25432.66	5694.47	FOREBAY BOTTOM
3	20907.02	25441.78	5694.58	FOREBAY BOTTOM
4	20915.53	25445.57	5694.67	FOREBAY BOTTOM
5	20917.11	25451.04	5694.90	FOREBAY BOTTOM, INV 54"=5695.50
6	20921.52	25437.96	5694.58	FOREBAY BOTTOM
7	20918.05	25438.91	5694.65	ENERGY DISSIPATER WALL
8	20910.31	25440.95	5694.65	ENERGY DISSIPATER WALL



NOTE: ALL CONCRETE  
FOR WALL SHALL BE  
CDOT TYPE D

**CORE**  
**ENGINEERING GROUP**  
15004 1ST AVENUE S.  
BURNSVILLE, MN 55306  
PH: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

NO.	DESCRIPTION	DATE
PROJECT: LORSON RANCH EAST FILING NO. 4 LORSON BLVD. - LAMPREY DR COLORADO SPRINGS, COLORADO		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

POND E2

DATE:  
FEBRUARY 28, 2019

PROJECT NO.	100.048
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SHEET NUMBER  
**C9.2**

TOTAL SHEETS: 40



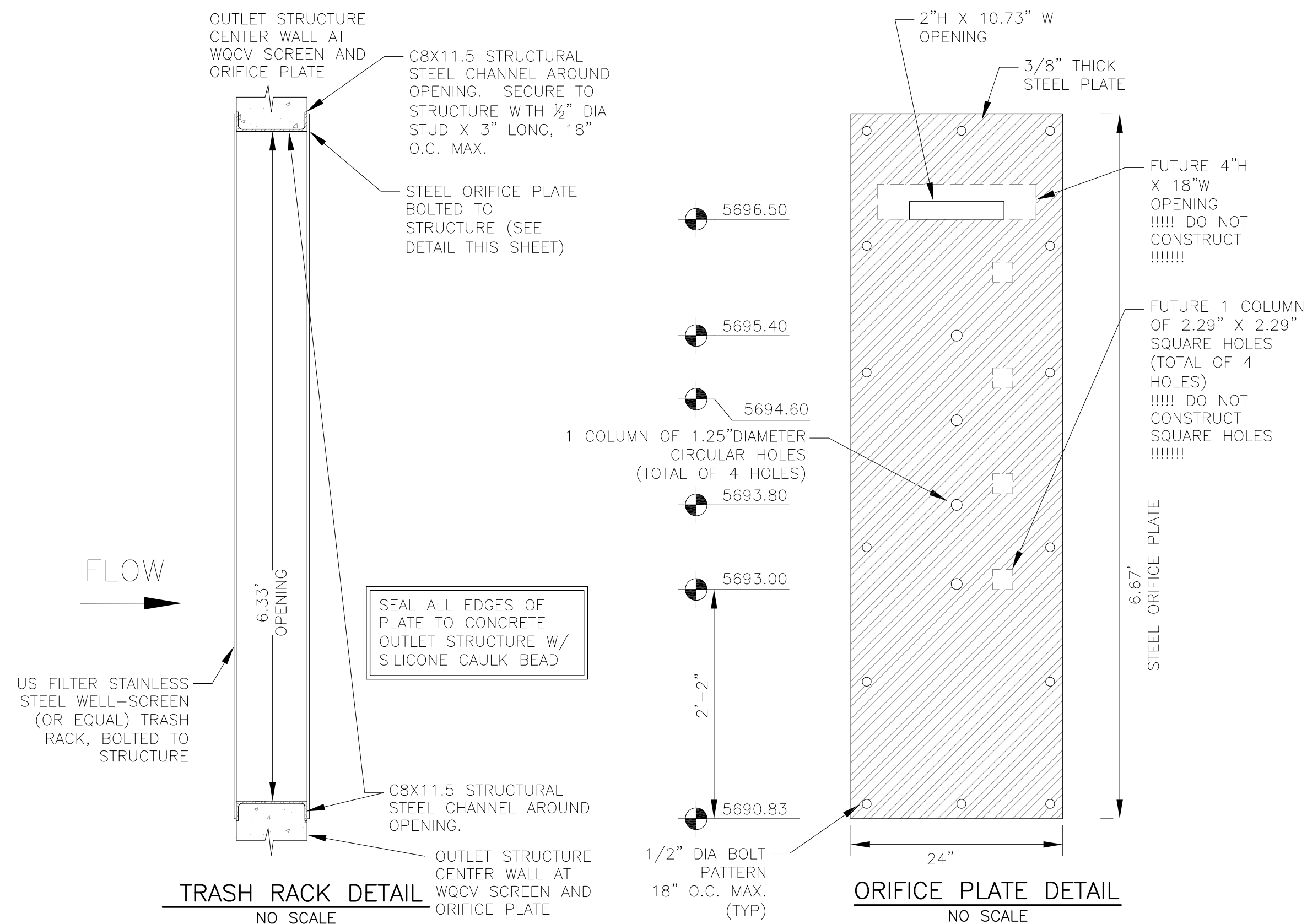
Three diagrams of rectangular reinforced concrete slabs are shown, each with a height of 4'-4".

- Slab 1 (Left):** Width is 3'-7.5". Reinforcement consists of horizontal bars. Label:  $\frac{1}{2}" \times 2\frac{1}{2}"$  BAR, 2" O.C., ALL WELDS  $\frac{1}{4}"$  FILLETS.
- Slab 2 (Middle):** Width is 3'-7.8". Reinforcement consists of vertical bars. Label:  $\frac{1}{2}" \times 2\frac{1}{2}"$  BAR, 2" O.C., ALL WELDS  $\frac{1}{4}"$  FILLETS.
- Slab 3 (Right):** Width is 3'-2". Reinforcement consists of vertical bars. Label:  $\frac{1}{2}" \times 2\frac{1}{2}"$  BAR, 2" O.C., ALL WELDS  $\frac{1}{4}"$  FILLETS.

GRATE 1  
NO SCALE

GRATES 2-  
NO SCALE

GRATES 5-6  
NO SCALE



TRASH RACK DETAIL  
NO SCALE

ORIFICE PLATE DETAIL  
NO SCALE



1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL COMPONENTS OF THE OUTLET STRUCTURE.

2. GRADE 60 REINFORCING STEEL REQUIRED. SEE TABLE FOR THE MINIMUM LAP SPLICE LENGTH FOR REINFORCING BARS. ALL REINFORCING STEEL SHALL HAVE A TWO-INCH MINIMUM CLEARANCE FROM EDGE OF CONCRETE, UNLESS OTHERWISE NOTED.

BAR SIZE	#4	#5	#6
MIN. SPLICE LENGTH	1'-3"	1'-7"	2'-0"

3. CONCRETE FOR THE OUTLET STRUCTURE AND FOREBAY SHALL BE CDOT CLASS D CONCRETE.

4. CONCRETE FOR DRAIN CHANNELS SHALL BE CDOT CLASS B CONCRETE

5. EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213. EXPANSION JOINT MATERIAL SHALL BE  $\frac{1}{2}$ " THICK, SHALL EXTEND THE FULL DEPTH OF CONTACT SURFACE, AND THE JOINT SHALL BE SEALED, REFER TO DETAILS.

6. ALL EXPOSED CONCRETE CORNERS SHALL HAVE A  $\frac{3}{8}$ " CHAMFER UNLESS OTHERWISE NOTED.

7. SUBGRADE TO BE 12" THICK CLEAN FILL COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM M698 UNDER STRUCTURE.

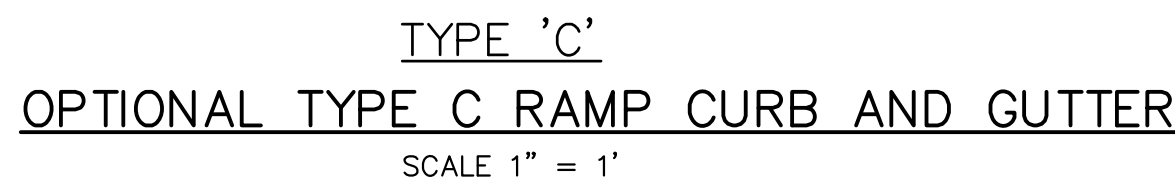
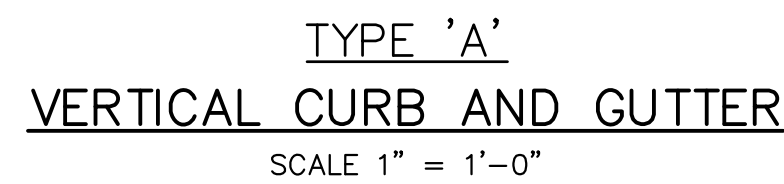
8. REFER TO SHEET C9.1 FOR PRESEDIMENTATION/FOREBAY DESIGN.

9. ENGINEER SHALL BE NOTIFIED PRIOR TO BEGINNING CONSTRUCTION OF OUTLET STRUCTURE TO SCHEDULE OBSERVATION VISITS TO THE STRUCTURES.

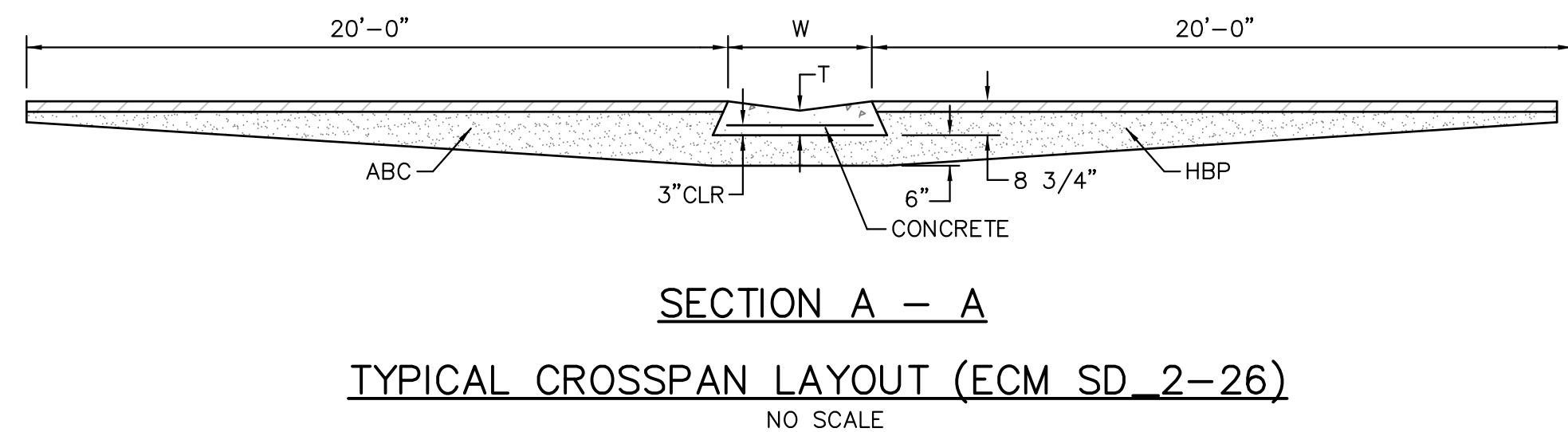
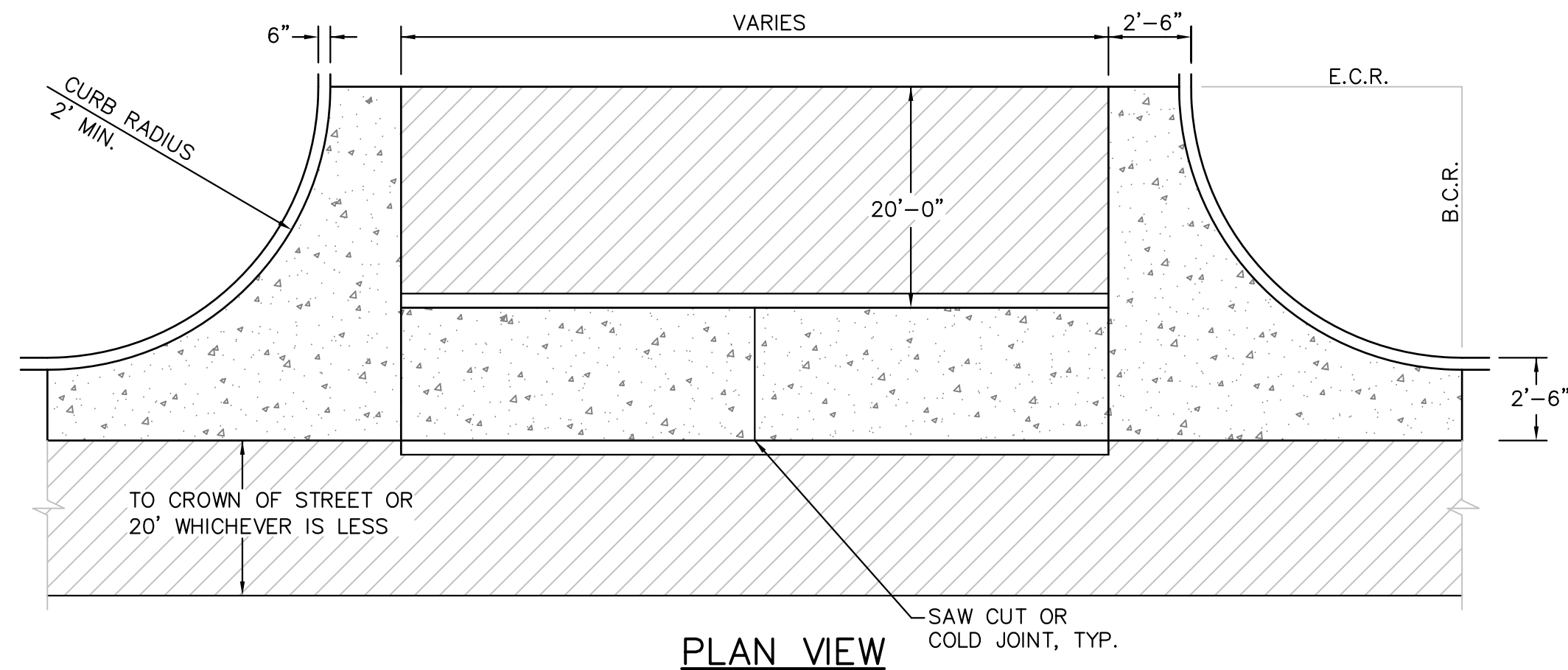
10. SEE RIGHT FOR WELL-SCREEN DESIGN NOTES

1. Well-Screen shall be stainless steel and attached by stainless steel bolts along edge of the mounting frame.
2. WQCV Well Screen
  - Type of Screen: Stainless steel #93 Vee Wire (Johnson Vee Wire (tm) Stainless Steel Screen or equivalent with 60% open area)
  - Screen slot opening dimension: 0.139" (Screen #93 Vee Wire Slot Opening)
  - Type and Size of Support Rod: TE 0.074"x0.50"
  - Spacing of Support Rod (O.C.): 1.0 Inch
  - Total Screen Thickness: 0.655"
  - Carbon Steel Holding Frame Type: 3/4" x 1.0" angle





LENGTH FOR RADII
A = 1/8" TO 1/4"
B = 1-1/2"
C = 1-1/2" TO 2"

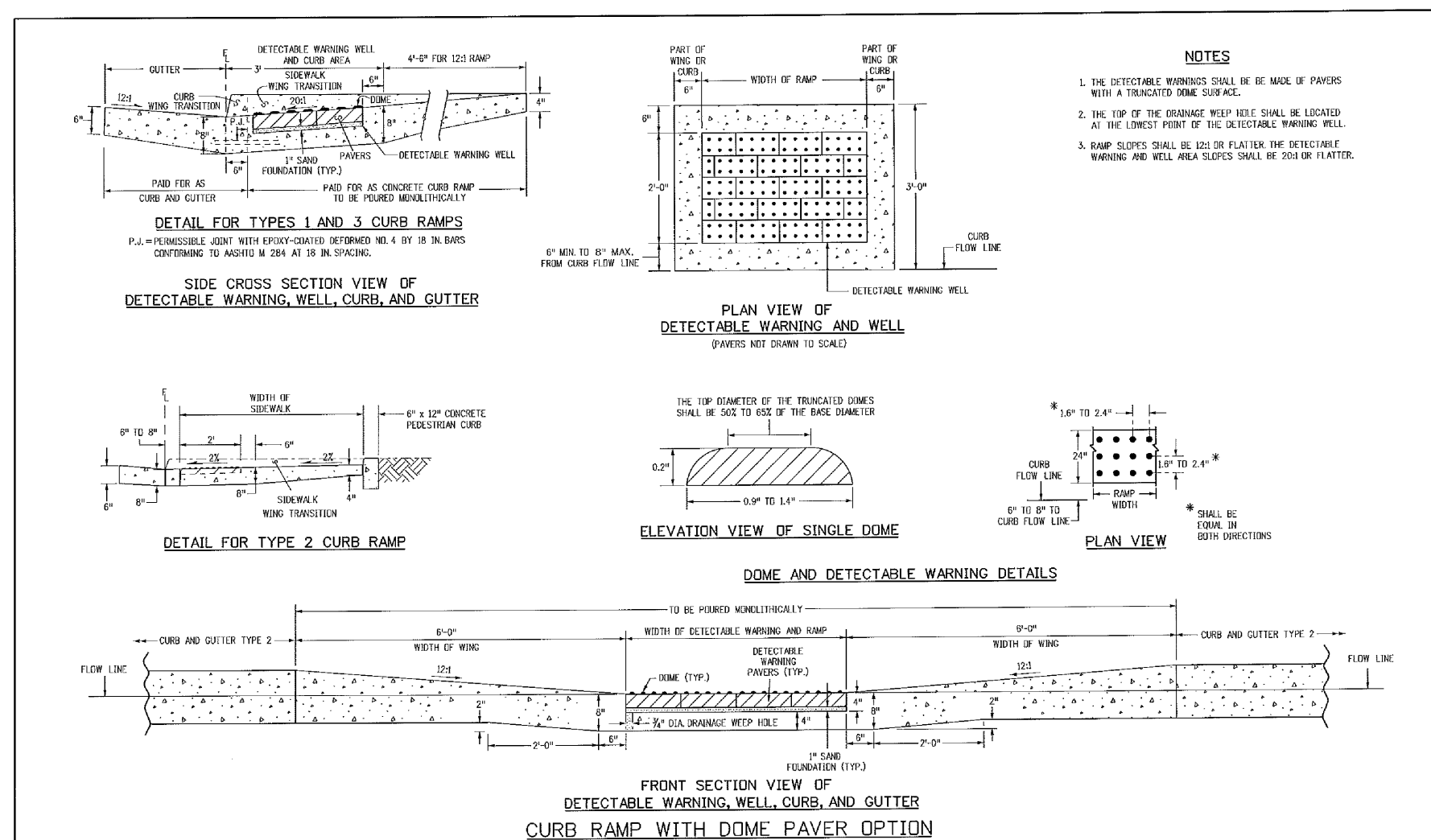



1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT ENGINEERING CRITERIA MANUAL AND ADA REQUIREMENTS.
2. CONTRACTOR TO NOTIFY ENGINEERING DIVISION INSPECTION STAFF 48 HOURS PRIOR TO CONCRETE PLACEMENT.
3. PEDESTRIAN RAMP CONSTRUCTION SHALL BE A MINIMUM 4.50 PSI CONCRETE, MINIMUM 4" THICK, NON-COLORED, NON-SCORED, COARSE BROOM FINISH.
4. 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 GRASSES AND/OR ALIGNMENTS.
5. DETECTABLE WARNING AREA SHALL START A MINIMUM OF 6" BUT NOT MORE THAN 8" FROM THE FLOWLINE OF THE CURB AT ANY POINT.
6. DETECTABLE WARNING AREA SHALL BE PREFABRICATED REDDISH INTEGRALLY COLORED TRUNCATED-DOMES.
7. THE DETECTABLE WARNING AREA SHALL BE 24" IN LENGTH AND THE FULL WIDTH OF THE RAMP.
8. RAMP WIDTH REQUIRED IS SAME AS APPROACHING SIDEWALK; 4' MINIMUM.
9. ALL RAMPS WILL BE PERPENDICULAR TO TRAFFIC WITH THE EXCEPT OF MID-BLOCK OR TERMINAL RAMPS SHOULD BE PARALLEL SUBJECT TO APPROVAL.
10. AVOID PLACING DRAINAGE STRUCTURES, TRAFFIC SIGNAL/SIGNAGE, UTILITIES/JUNCTION BOXES, OR OTHER OBSTRUCTIONS WITHIN


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

- ### GENERAL NOTES

1. 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.
2. PEDESTRIAN WALKWAY AND/OR LOCATION OF EXISTING OR FUTURE PEDESTRIAN RAMPS ON OPPOSITE CORNERS SHALL BE REVIEWED BEFORE CONSTRUCTING NEW RAMPS.
3. AT MARKED PEDESTRIAN CROSSINGS, THE BOTTOM OF THE RAMPS, EXCLUSIVE OF THE FLARE SIDES, SHALL BE TOTALLY CONTAINED WITHIN THE MARKINGS.



- NOTES
1. W = WIDTH SHALL BE 6' FOR LOCAL, 8' FOR COLLECTORS, 10' FOR ARTERIAL ROADS.
  2. T = SQUARED-OFF RETURN TO BE POURED MONOLITHIC 8" PCC, OR 9" FOR COLLECTORS MINIMUM WITH 6x6 - 4,4 WWF OR #4 @ 18"E.W.
  3.  = 3" MINIMUM ASPHALT DEPTH (2 LIFTS).
  4. DESIGN TO SPECIFY ELEVATIONS AT PI AND PCR.

7/9/09 DATE APPROVED:  André P. Brackin DEPARTMENT OF TRANSPORTATION		Pedestrian Intersection Ramp Standard Drawing		
REVISION DATE: 1/18/11		FILE NAME: SD-2-41		

**CORE**  
**ENGINEERING GROUP**  
15004 1ST AVENUE S.  
BURNSVILLE, MN 55306  
PH: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

NO.	DESCRIPTION	DATE

PROJECT: <b>LORSON RANCH EAST</b> <b>FILING NO. 4</b> LORSON BLVD — LAMPREY DR COLORADO SPRINGS, COLORADO	PREPARED FOR: <b>LORSON, LLC</b> 212 N. WAHSATCH AVE, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: JEFF MARK
---	---

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

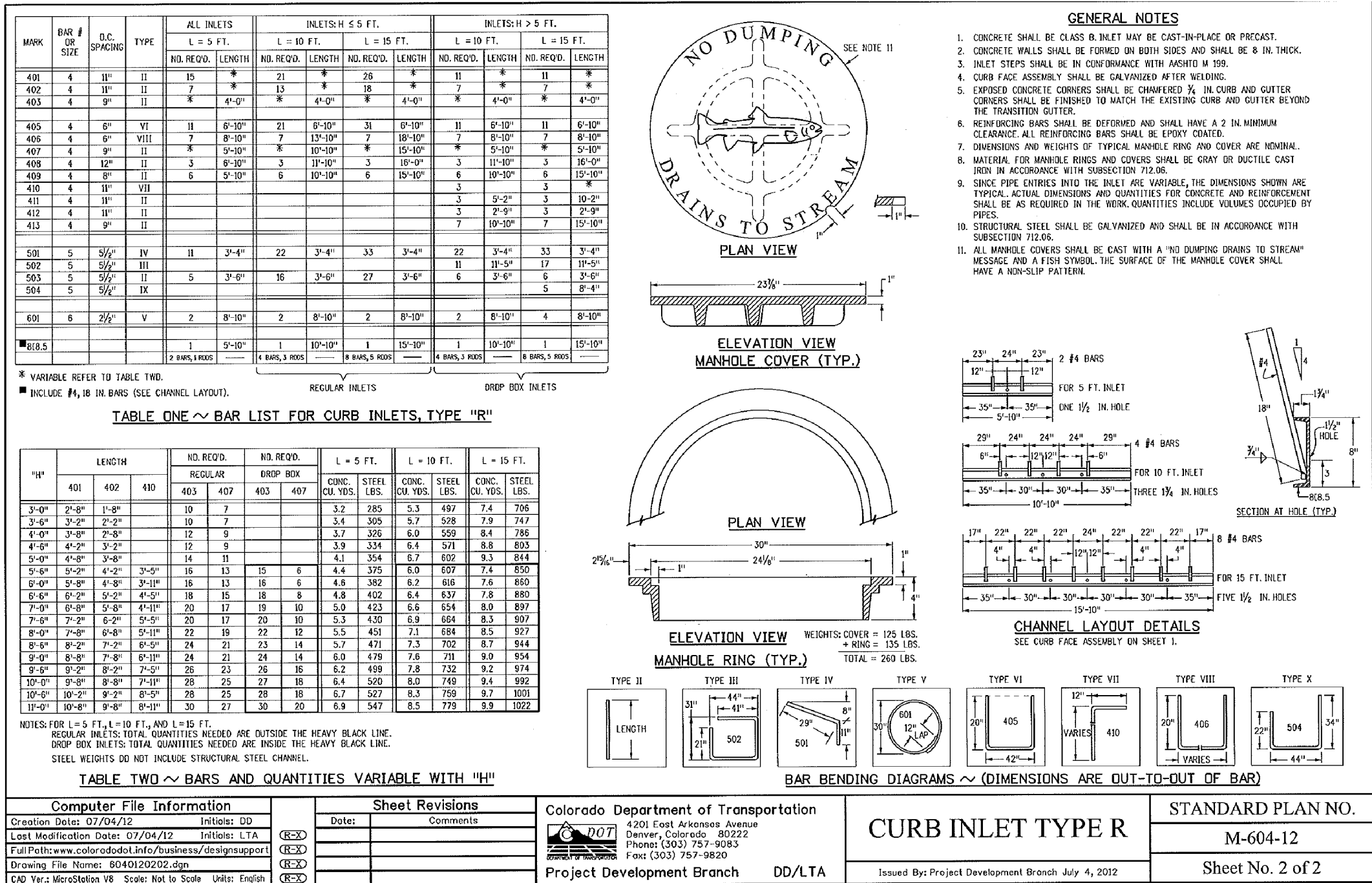
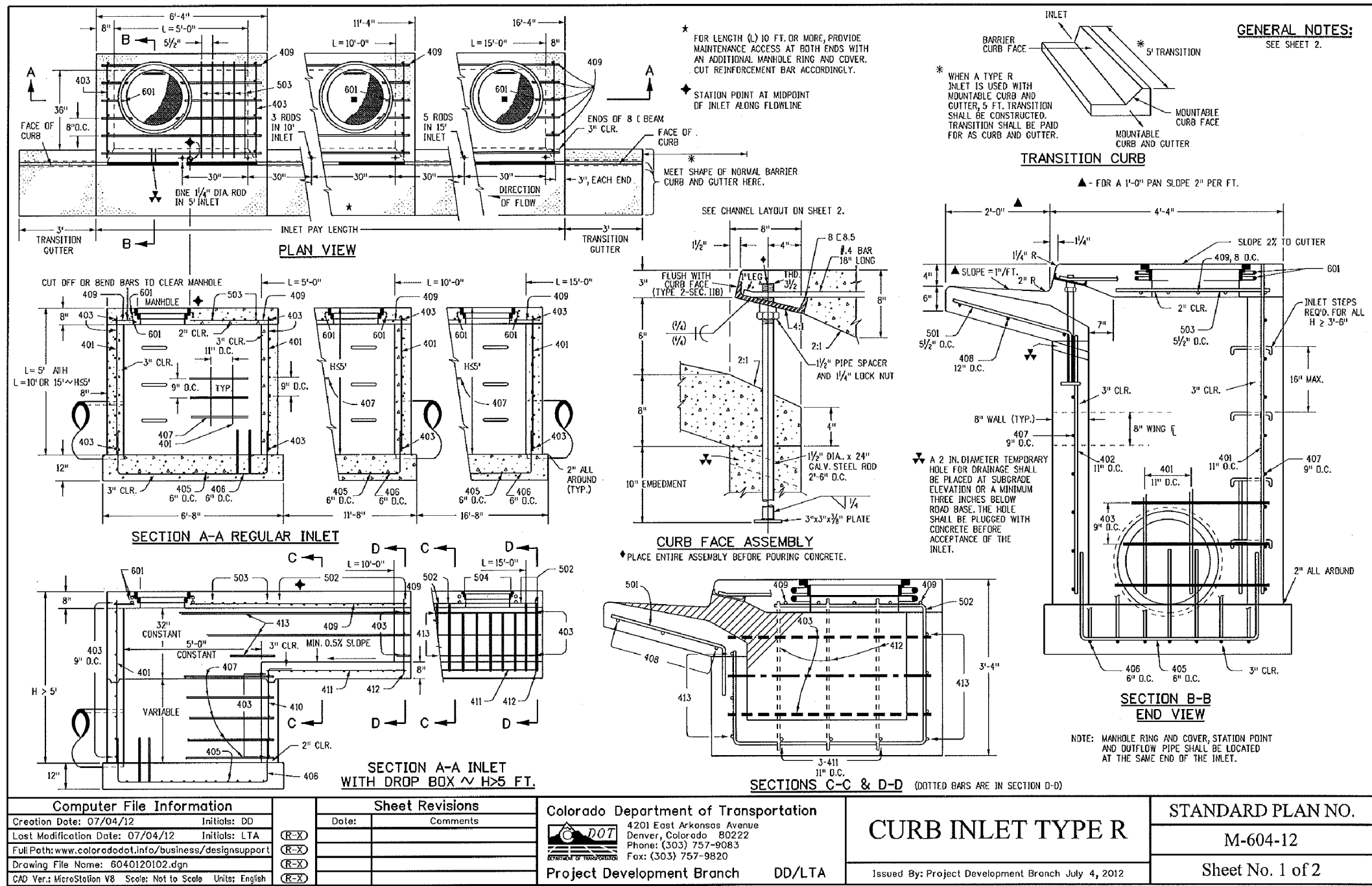
ROADWAY DETAIL SHEET

DATE:  
FEBRUARY 28, 2019

PROJECT NO.	100.048
SHEET NUMBER	C10.1
TOTAL SHEETS:	40

TRUNCATED DOME DETAILS (ECM SD\_2-42)





**CORE**  
**ENGINEERING GROUP**  
 15004 1ST AVENUE S.  
 BURNING WOODS, CO 80506  
 PHONE: 719.576.1100  
 CONTACT: RICHARD L. SCHINDLER, P.E.  
 EMAIL: Rich@ceg.com

DATE: \_\_\_\_\_  
 DESCRIPTION: \_\_\_\_\_  
 NO: \_\_\_\_\_

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

PROJECT:  
**LORSON RANCH EAST**  
**FILING NO. 4**  
 LORSON BLVD - LAMPREY DR  
 COLORADO SPRINGS, COLORADO

DRAWN: RLS  
 DESIGNED: RLS  
 CHECKED: RLS

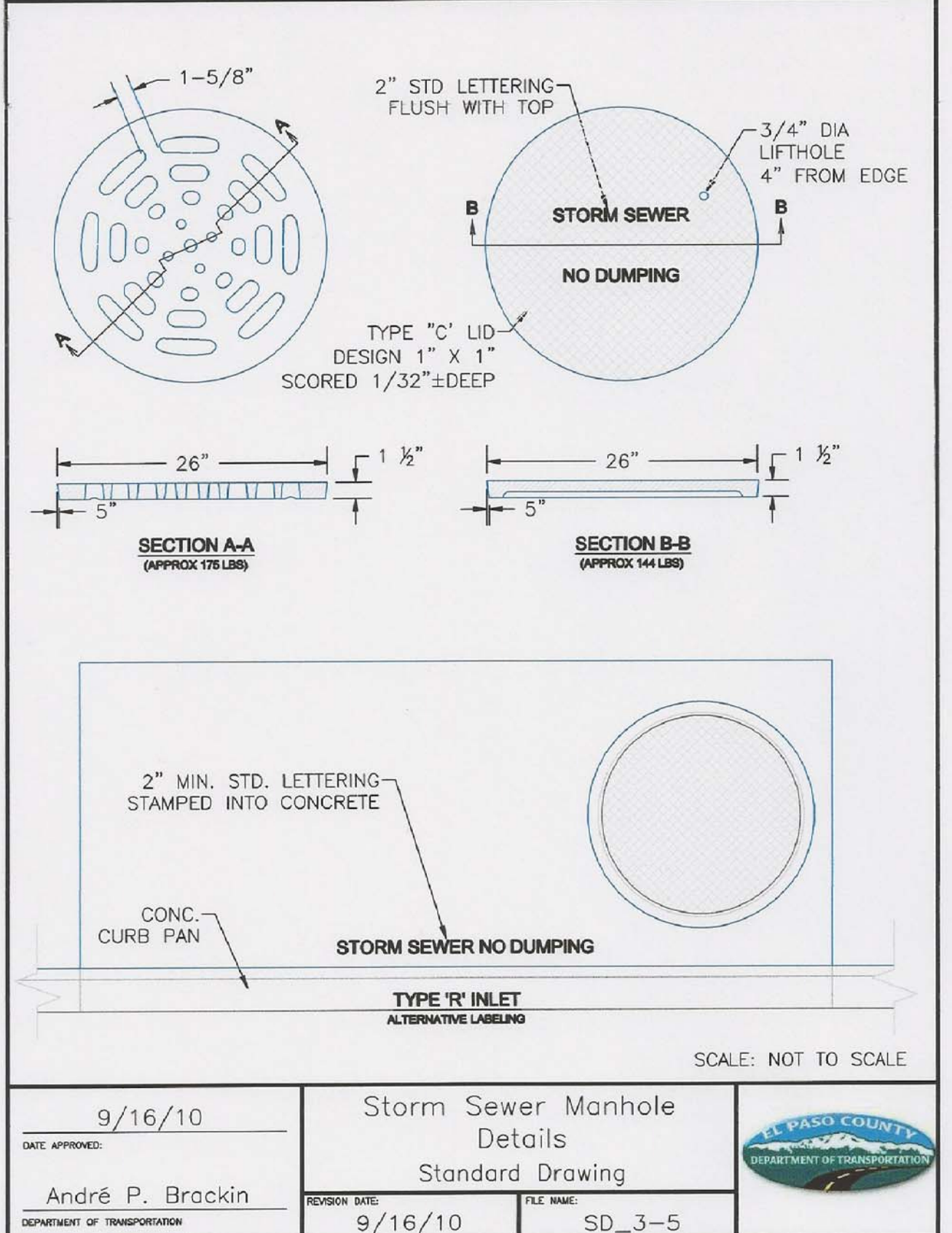
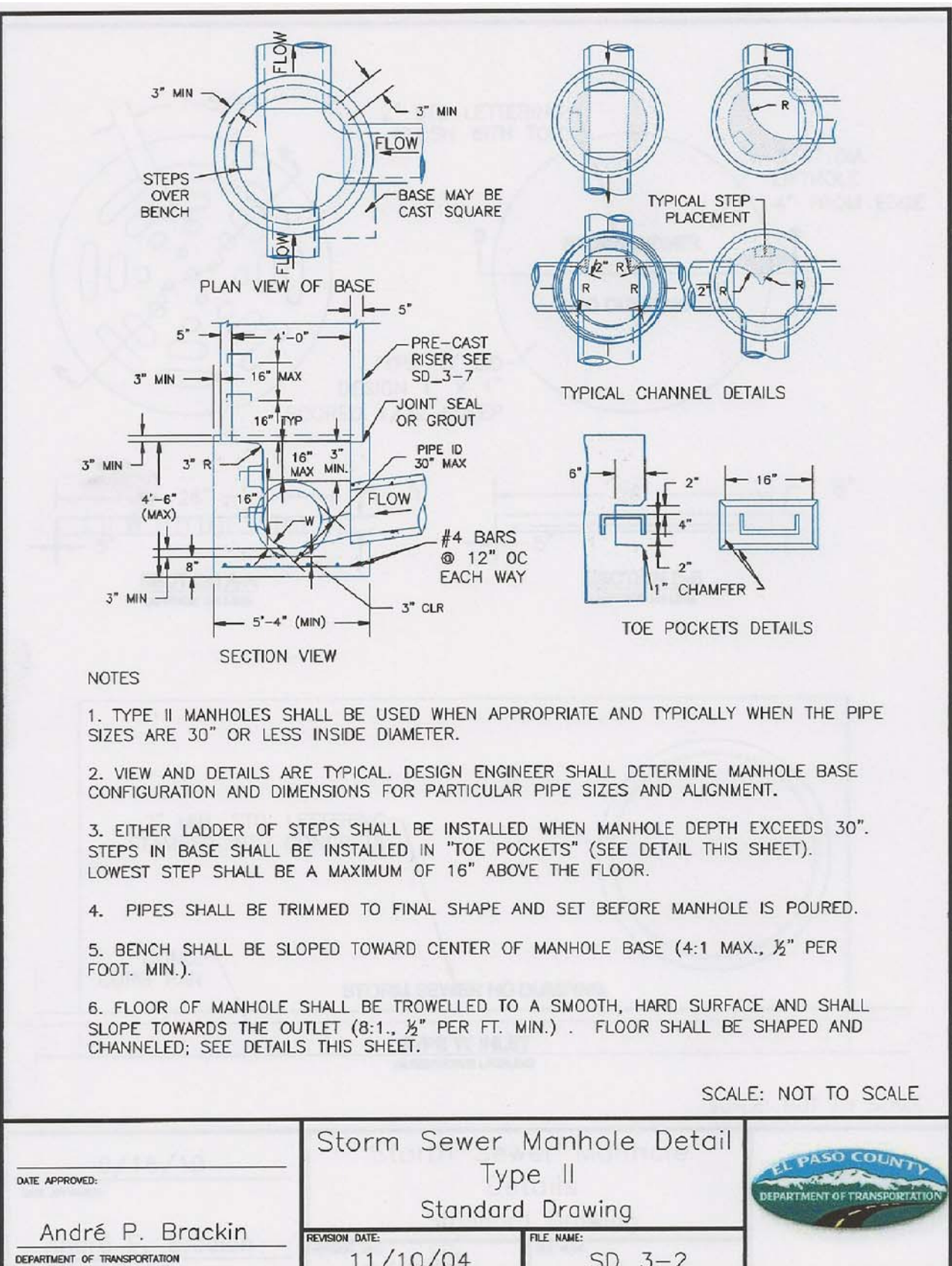
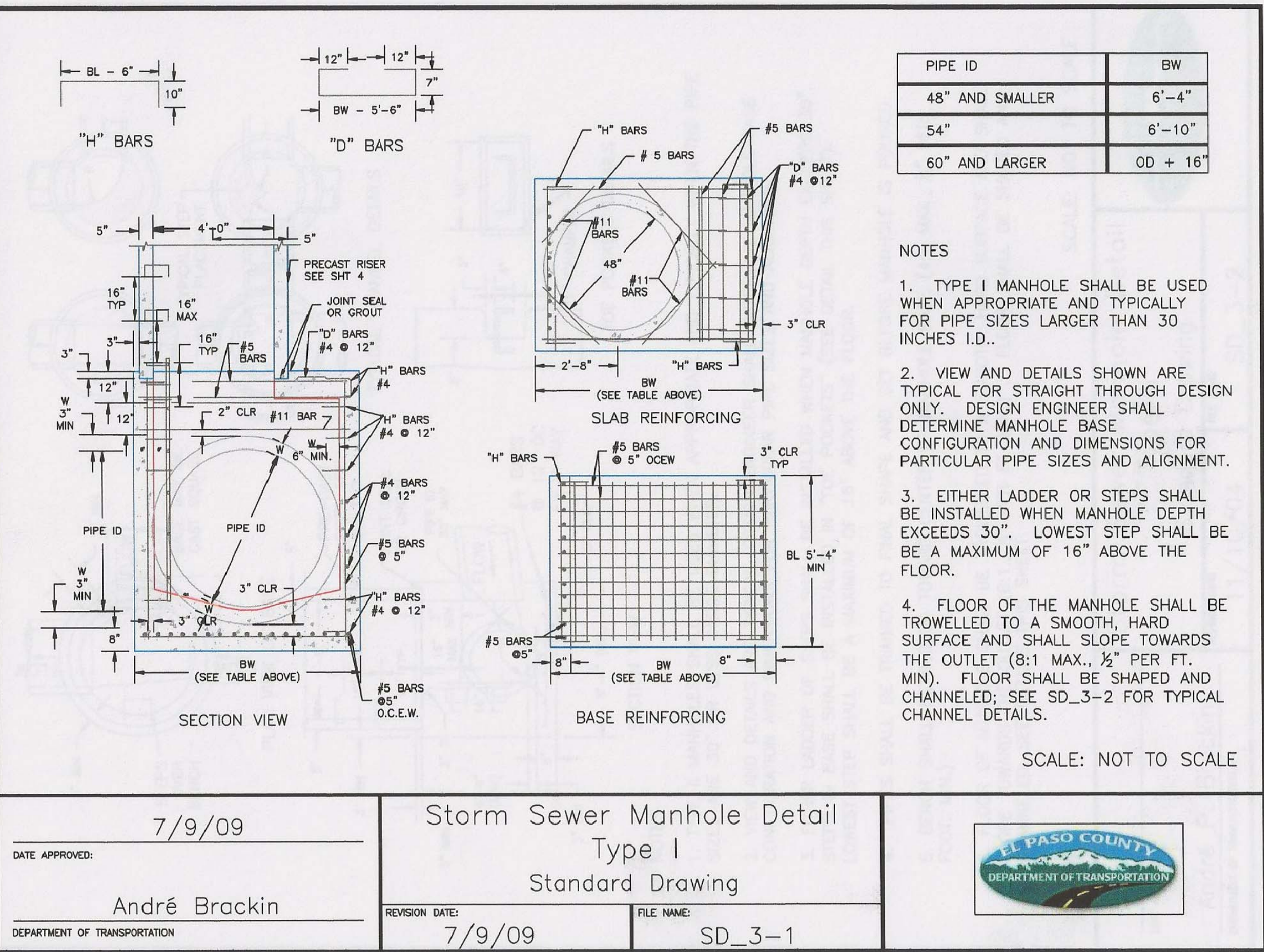
**LORSON RANCH EAST FILING NO. 4**  
**STORM SEWER DETAILS**

DATE:  
**FEBRUARY 28, 2019**

PROJECT NO.  
**100.048**

SHEET NUMBER  
**C10.2**

TOTAL SHEETS: 40









## 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) 2015 Edition, and the Minimum Design Loads for Buildings and Other Structures (ASCE 7-10) and The Pikes Peak Regional Building Code (2015 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 318 and ACI 308) latest editions. Section 13 "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 Slabs:**  
See specifications for any additional durability requirements.

**Mix 'A' For drilled piers:**

3,000 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:**

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% ± 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 #5 and larger... 2" Clear

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

3) Slabs... 1" Clear

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. 156655 prepared by RMG Engineers dated 11/17/11. 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 7'-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 spliced 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.

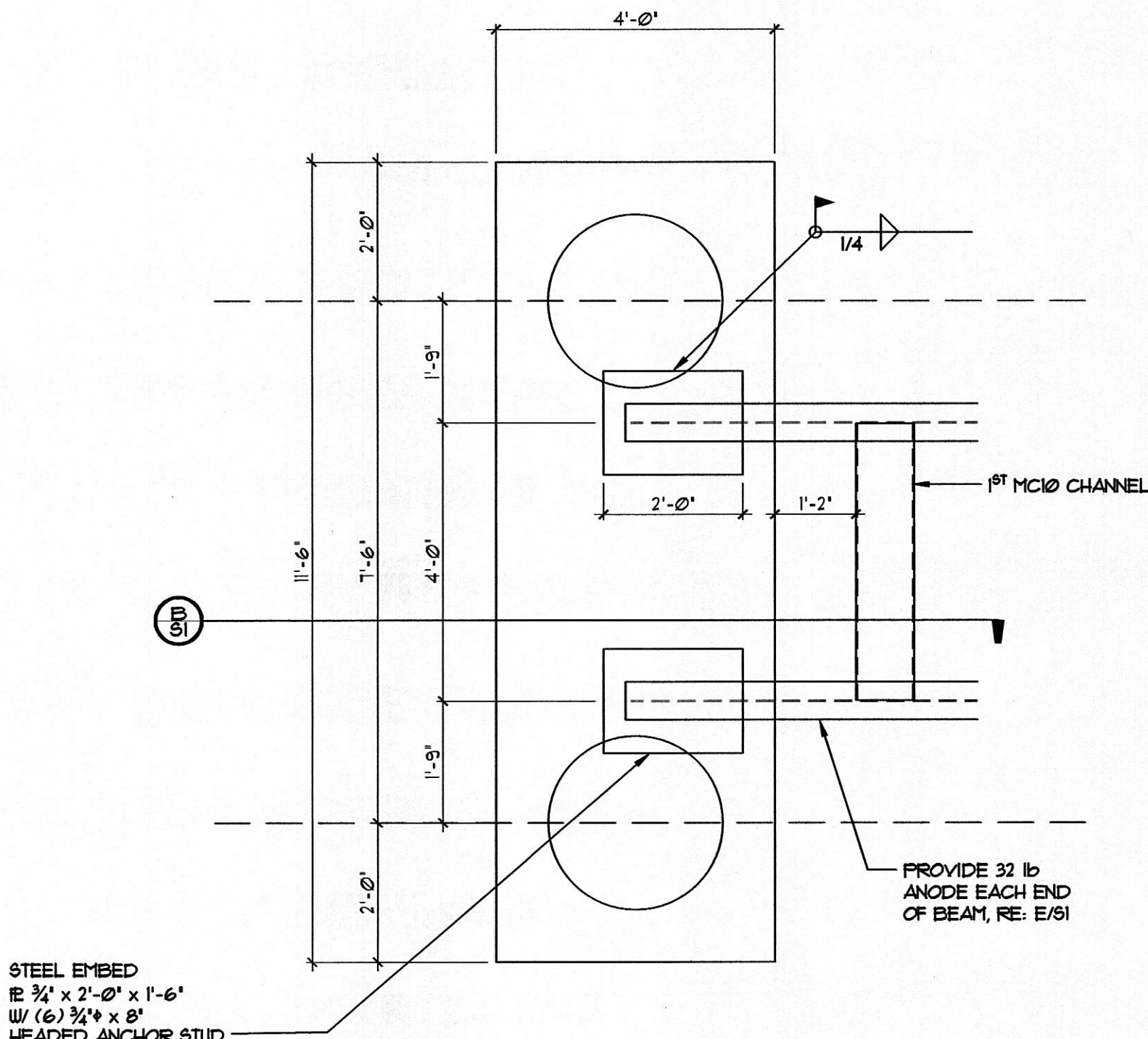
B. All wide flange and channel structural steel shall conform to ASTM A332. All other structural shapes and miscellaneous steel shall conform to ASTM A36 unless otherwise noted.

C. Shop connections shall be welded with E70xx electrodes and ground smooth where exposed. Field connections shall be made with bolts conforming to ASTM A325 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:

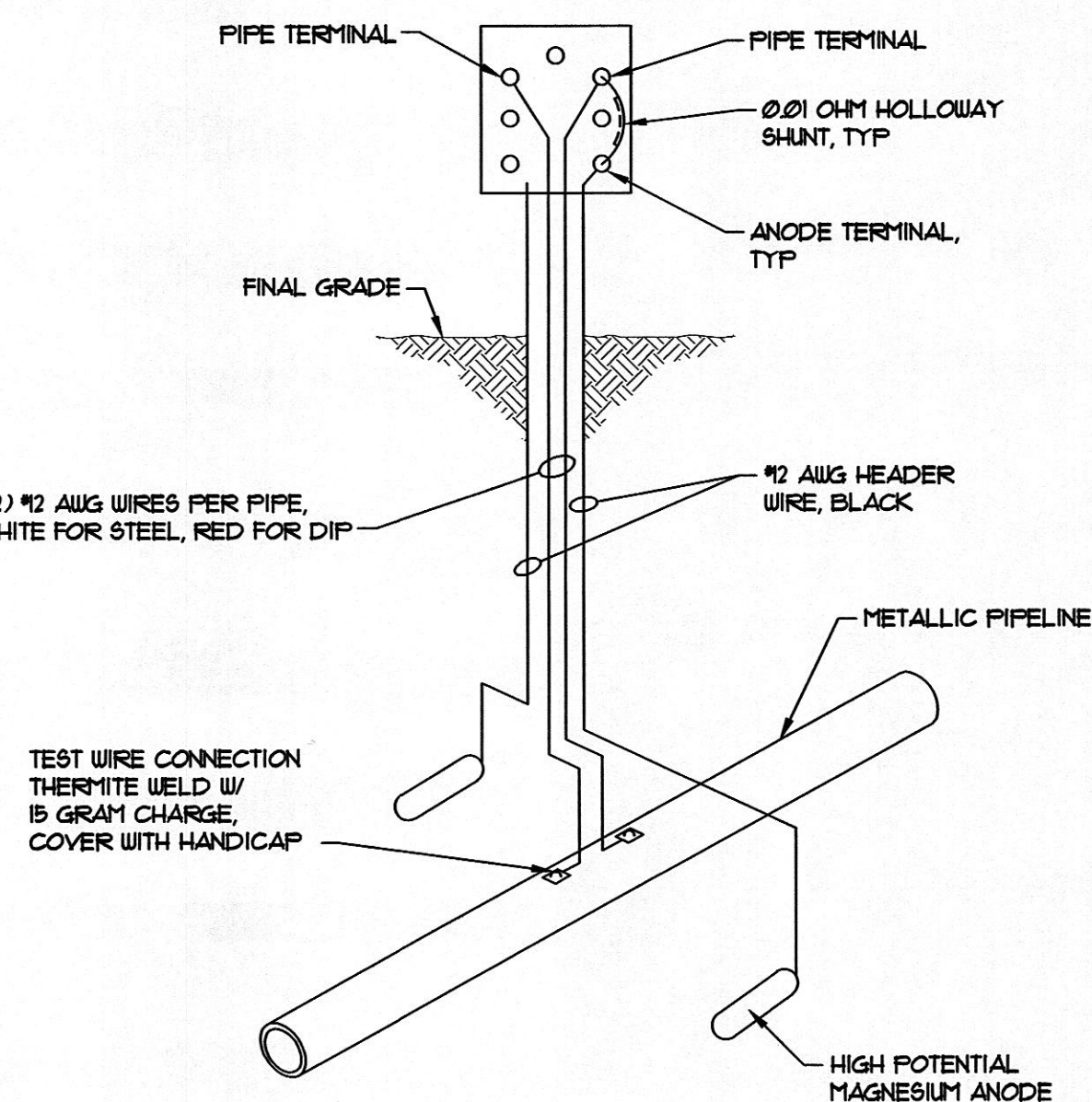
A. The Contractor shall inform the Engineer of Record at least 24 hours prior to casting any concrete so as to allow the Engineer of Record the opportunity to review the placement of reinforcing and/or embedded items. Contact Rocky Mountain Group: (719) 548-0600.



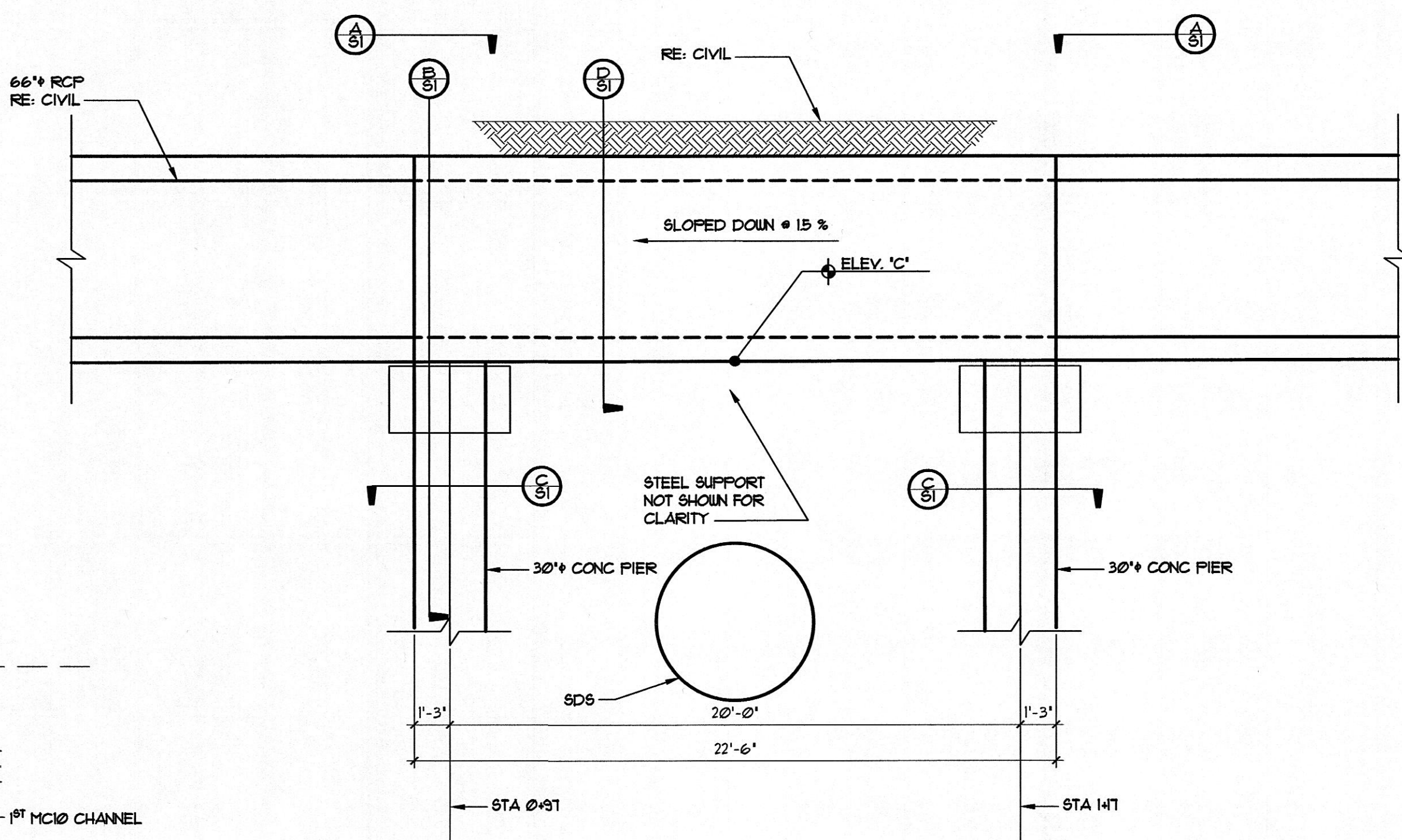
**A PIER CAP PLAN**  
SCALE: 1/2" = 1'-0"

NOTE: ALL EXPOSED STEEL BE COATED IN ASPHALT COATING

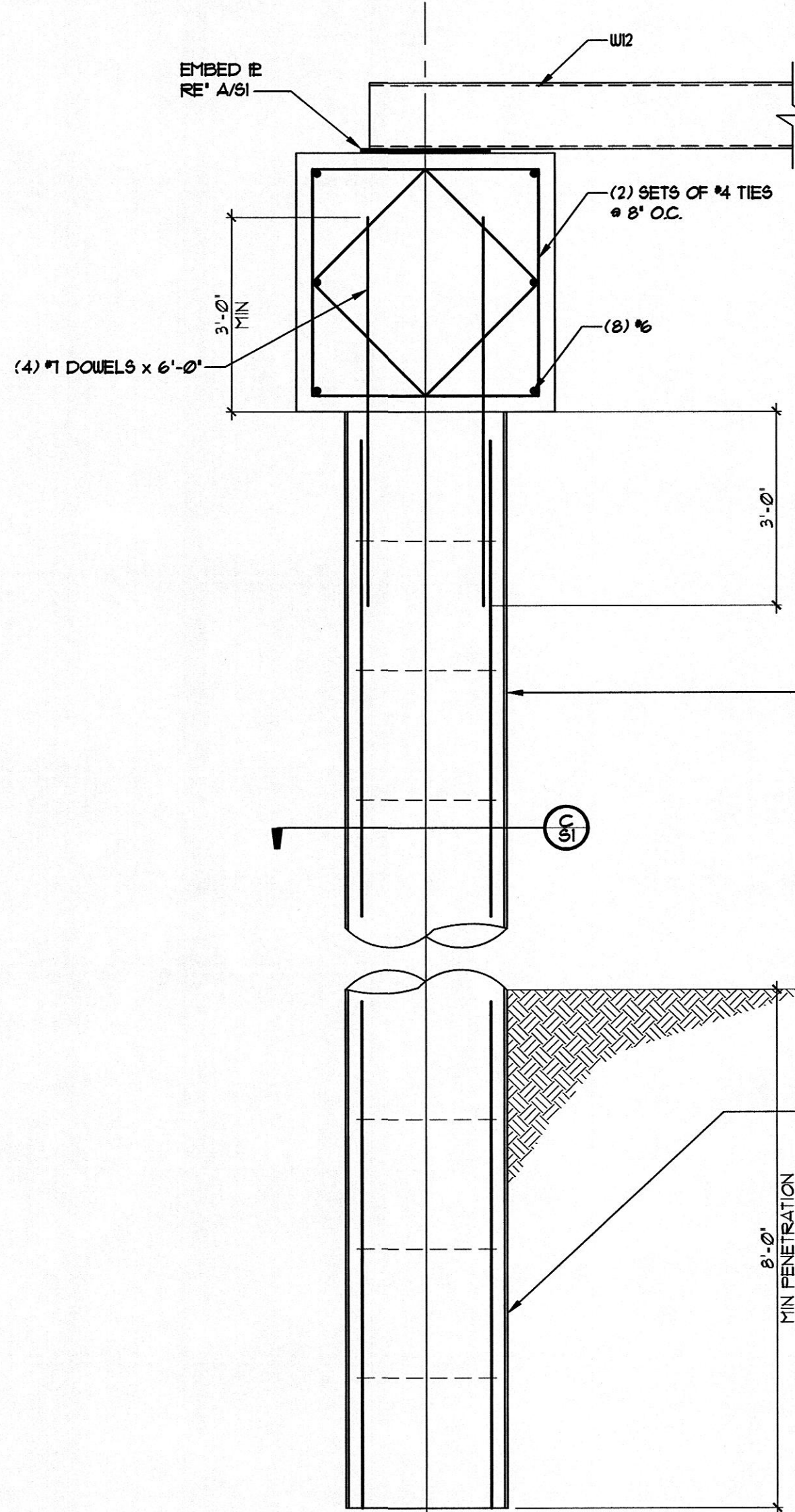
NOTES:  
1. THE CONTRACTOR SHALL COORDINATE WITH COLORADO SPRINGS UTILITIES TO WIRE TERMINAL BOARD.  
2. THERMITE WELD WIRES TO PIPE WITH A 15 GRAM CHARGE. INSTALL A COPPER SLEEVE WHEN WIRE IS 1/2" AWG OR SMALLER.  
3. THERMITE WELD CONNECTIONS AND ANY BARE METAL SHALL BE COVERED WITH PRIMERLESS HANDICAP OR CORROSION TAPE.  
4. CONTRACTOR TO VERIFY CONTINUITY OF ALL WIRES TO TERMINAL BOARD PRIOR TO FINAL ACCEPTANCE.



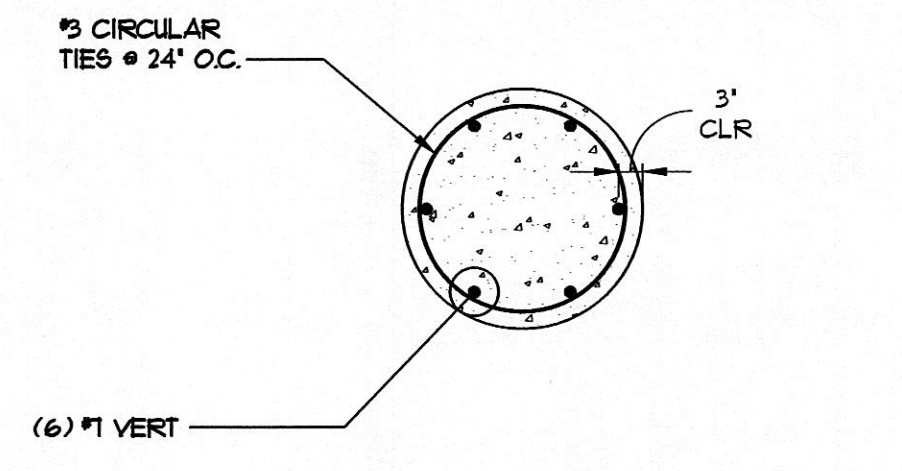
**E TERMINAL BOARD WIRING DIAGRAM AT CATHODIC PROTECTION TEST STATION**  
SCALE: N.T.S.



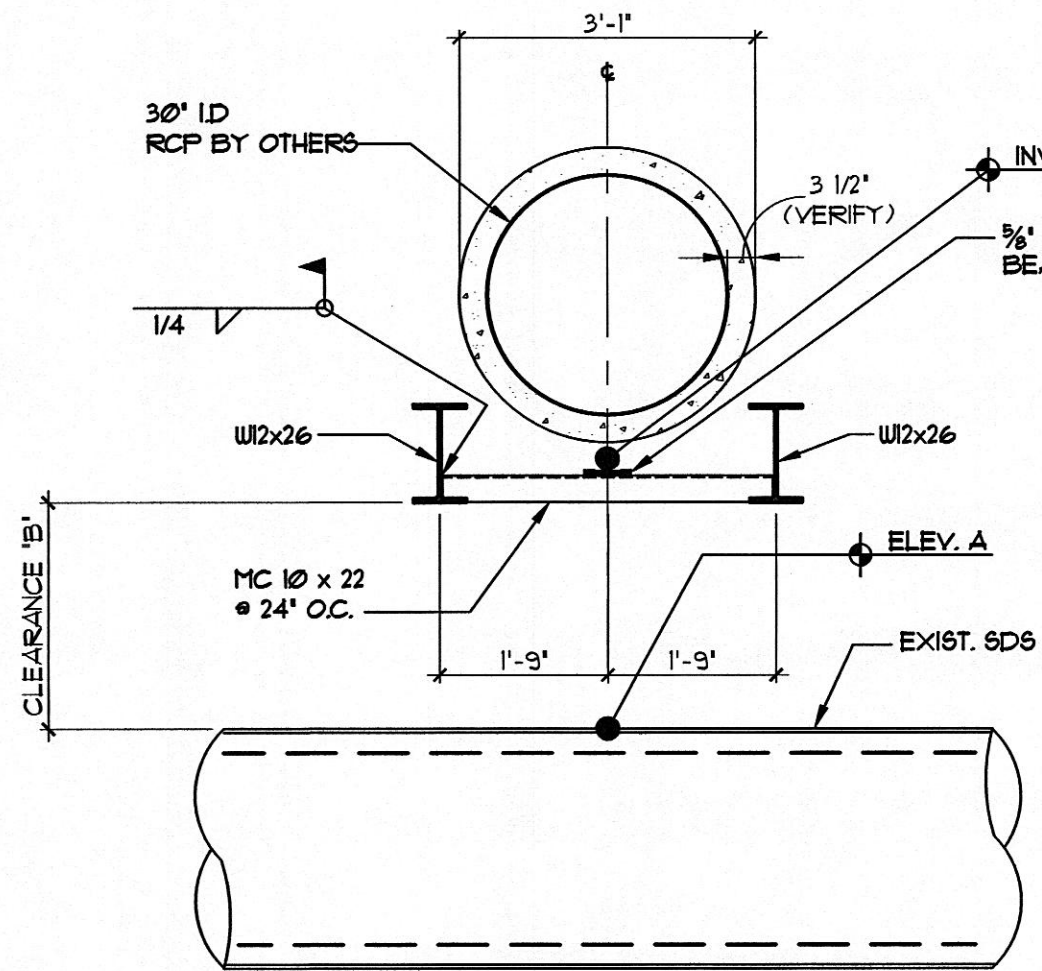
**1 SDS CROSSING ELEVATION**  
SCALE: 1/4" = 1'-0"



**B DRILLED PIER DETAIL**  
SCALE: 1/2" = 1'-0"



**C 30#~ DRILLED PIER DETAIL**  
SCALE: 1/2" = 1'-0"



**D RCP SUPPORT OVER SDS**  
SCALE: 1/2" = 1'-0"

DIMENSIONS	
CROSSING	NO. 6
A	5109.01
B	15.94
C	5124.95

**ROCKY MOUNTAIN GROUP**  
ARCHITECTS  
Rocky Mountain Group  
Civil, Planning  
Environmental  
Structural  
Forensics

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PROFESSIONAL ENGINEER  
31528  
FOR STRUCTURAL ONLY

PROFESSIONAL ENGINEER  
31528  
FOR STRUCTURAL ONLY

LORSON BLVD STREET/STORM CONSTRUCTION  
FONTAINE BLVD - LORSON BLVD  
EL PASO COUNTY, COLORADO

LORSON RANCH METROPOLITAN DISTRICT NO. 1

DRILLED PIER DETAILS  
AT SDS CROSSING NO. 4  
(POTHOLE 1A)

FOR CONSTRUCTION

ARCHITECT: RMG  
DRAWN: RMG  
CHECKED: RMG  
DATE: 11-27-18

# REVISION DATE

JOB NO. 159665

SHEET NO. S1