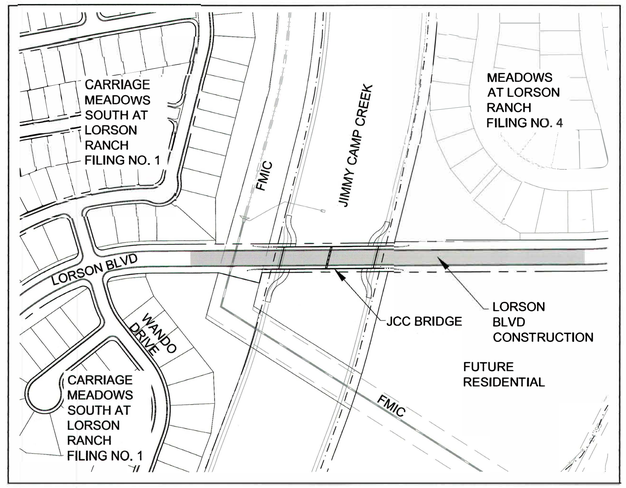
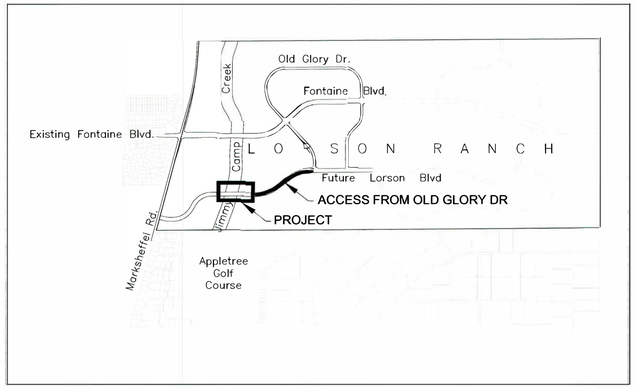
CONSTRUCTION PLANS
FOR

LORSON BLVD BRIDGE OVER JIMMY CAMP CREEK MAIN CHANNEL

INCLUDING
WATERMAIN AND STREET CONSTRUCTION PLANS



KEY MAP
SCALE: 1"=200'



VICINITY MAP
NO SCALE

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 – STREET, WATERMAIN
C1.3	WATERMAIN DETAILS & STREET TYPICAL SECTION
C6.1–C6.2	STREET PLAN AND PROFILE
C8.1–C8.2	WATERMAIN PLAN AND PROFILE
B01–B27	JCC BRIDGE PLANS – LORIS & ASSOCIATES

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 ENGERGY
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

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.

LORIS & ASSOCIATES
100 SUPERIOR PLAZA WAY, SUITE 220
SUPERIOR, CO, 80027
303–444–2073
CONTACT: DAN BELTZER P.E.

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 4/4/18
TITLE Authorized Signing Agent
ADDRESS 212 N. WAHSATCH AVE. SUITE 301
COLORADO SPRINGS, CO 80903

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.

STREET CONSTRUCTION AS-BUILT PLANS
JANUARY 24, 2023

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 4/4/18 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

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:

Approved
by Elizabeth Nijkamp
El Paso County Planning and Community Development
on behalf of Jennifer Irvine, County Engineer, ECM Administrator
04/12/2018 5:54:11 PM

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

COLORADO REGISTERED PE 33997 4-2-2018 PROFESSIONAL ENGINEER

CDR 17-007

CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
(719) 570-1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

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

PROJECT:
JCC BRIDGE
JCC MAIN CHANNEL – LORSON BLVD
EL PASO COUNTY, COLORADO

NO.	DESCRIPTION	DATE

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

COVER SHEET
BRIDGE AT JCC MAIN CHANNEL
CONSTRUCTION PLANS

DATE:
APRIL 2, 2018

PROJECT NO.
100.030

SHEET NUMBER
C1.1
TOTAL SHEETS: 34

CONSTRUCTION NOTES

1. ALL WORK SHALL COMPLY WITH THE CODES AND POLICIES FOR EL PASO COUNTY.

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.

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

4. THE CONTRACTOR IS RESPONSIBLE FOR THE RE–ESTABLISHMENT OF ALL SURVEY MONUMENTS DISTURBED WITHIN THE PROJECT LIMITS.

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.

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. SUBGRADE FILL SHALL BE PLACED IN SIX–INCH LIFTS AND UNIFORMLY COMPACTED, MEETING THE REQUIREMENTS AS PREVIOUSLY DESCRIBED.

7. SUBGRADE MATERIALS DEEMED UNSUITABLE BY THE ENGINEER SHALL BE EXCAVATED, DISPOSED OF AND REPLACED WITH APPROVED MATERIALS.

8. FILL SHALL BE PLACED IN 8–INCH MAXIMUM LOOSE LIFTS AND SHALL BE COMPACTED PRIOR TO SUCCESSIVE LIFTS.

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:
   - HAY BALE BARRIERS WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
   - SILT FENCE WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
   - TEMPORARY SEDIMENTATION BASINS WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
   - MULCHING AND SEEDING OF EXCESSIVE SLOPED AREAS AS NEEDED OR AS DIRECTED BY THE ENGINEER.
   - TEMPORARY VEHICLE TRACKING CONTROL AS NEEDED AND/OR DIRECTED BY THE ENGINEER.
   - CONCRETE WASH AREAS.
   - INLET PROTECTION.

   THESE AND ALL EROSION CONTROL BEST MANAGEMENT PRACTICES AS SHOWN IN THE GRADING AND EROSION CONTROL PLANS SHALL BE STRICTLY ADHERED TO.

10. FINISHED CONTOURS/SPOT ELEVATIONS SHOWN HEREON REPRESENT FINISHED GRADES. ALL PAVEMENT SUBGRADES ARE BASED ON THE COMPOSITE ASPHALT PAVEMENT RECOMMENDATIONS MADE IN THE "PAVEMENT DESIGN REPORT" FOR CARRIAGE MEADOWS SOUTH AT LORSON RANCH FILING NO. 1 DATED OCTOBER 25, 2017 JOB NO. 152427 BY RMG

EL PASO COUNTY STANDARD CONSTRUCTION NOTES:

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.*

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).*

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:*
   a. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
   b. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
   c. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
   d. CDOT M & S STANDARDS

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.*

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.*

6. *CONTRACTOR SHALL SCHEDULE A PRE–CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD) – INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.*

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.*

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.*

9. *ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.*

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.*

11. *ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.*

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.*

13. *SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY PUBLIC WORK DEPARTMENT AND MUTCD CRITERIA.*

14. *CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY PWD, INCLUDING WORK WITHIN THE RIGHT–OF–WAY AND SPECIAL TRANSPORT PERMITS.*

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.*

WIDEFIELD WATER AND SANITATION DISTRICT GENERAL NOTES

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.

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.

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.

4. ALL DUCTILE IRON PIPE, TO INCLUDE FITTINGS, VALVES AND FIRE HYDRANTS WILL BE WRAPPED WITH POLYETHEYLENE TUBING, BONDED AT EACH JOINT AND ELECTRICALLY ISOLATED.

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.

6. PVC MAIN LINES SHALL BE INSTALLED WITH COATED NO. 12 TRACER WIRE.

7. ALL FITTINGS SHALL BE DUCTILE IRON –MECHANICAL JOINT AND HAVE 1 LB. MAGNESIUM ANODES AT EVERY FITTING.

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.

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.

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.

11. ALL BENDS SHALL BE FIELD STAKED PRIOR TO CONSTRUCTION.

12. ANY WATER UTILITY MATERIAL REMOVED AND NOT REUSED SHALL BE RETURNED TO THE WIDEFIELD WATER AND SANITATION DISTRICT IF THE DISTRICT SO REQUESTS.

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.

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.

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.

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.

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.

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. 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_____.

WIDEFIELD WATER AND SANITATION DISTRICT UTILITY CONSTRUCTION NOTES

1. ALL DUCTILE IRON PIPE AND FITTINGS SHALL HAVE CATHODIC PROTECTION AND 1 LB MAGNESIUM ANODES AT EVERY FITTING.

2. ALL FIRE HYDRANTS SHALL BE MEULLER SUPER CENTURION 200 OR AMERICAN AVK SERIES 2700, (MODERN)

STREET CONSTRUCTION
AS-BUILT PLANS
JANUARY 24, 2023

CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: rlsch@ecg1.com

NO. | DESCRIPTION | DATE

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

PROJECT:
JCC BRIDGE
JCC MAIN CHANNEL – LORSON BLVD
EL PASO COUNTY, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

NOTES - WATERMAIN, STREET

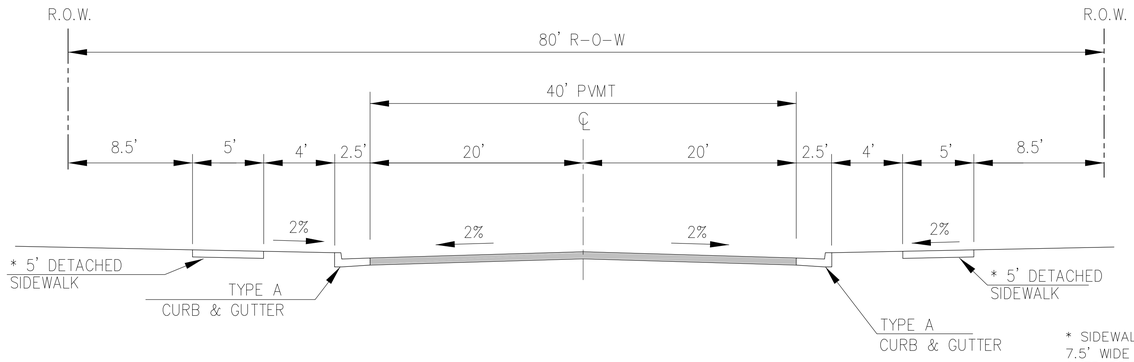
JCC BRIDGE AT MAIN CHANNEL

COLORADO REGISTERED RICHARD L. SCHINDLER 33997 4-2-2018 PROFESSIONAL ENGINEER

DATE: APRIL 2, 2018

PROJECT NO. 100.030

SHEET NUMBER C1.2
TOTAL SHEETS: 34



* SIDEWALK CHANGES TO 7.5' WIDE ATTACHED SIDEWALK OVER BRIDGE

DESIGN SPEED: 40 MPH
POSTED SPEED: 35 MPH

TYPICAL SECTION 80' R.O.W.
RESIDENTIAL URBAN COLLECTOR
NOT TO SCALE

LORSON BOULEVARD

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

* SIDEWALK CHANGES TO 7.5' WIDE ATTACHED SIDEWALK OVER BRIDGE

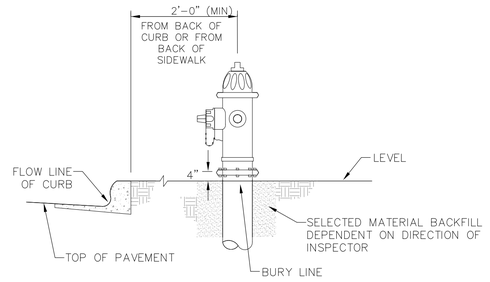
NOTE
ALL HYDRANTS SHALL BE GUARDIAN K-81D OR AVK SERIES 2700.

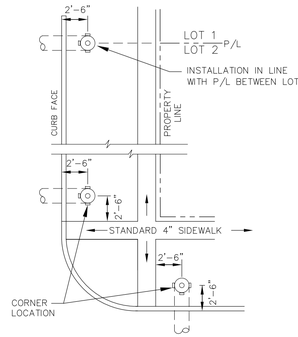
NOTES

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.

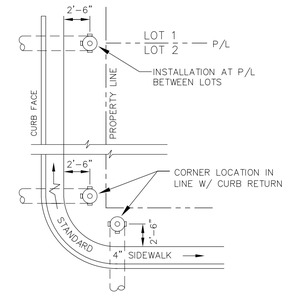
2. HYDRANTS WILL BE PLACED A MINIMUM OF 5.0 FEET FROM ANY UTILITY OR DRAINAGE STRUCTURE (TO BE CO-ORDINATED WITH JOINT TRENCH INSTALLATION)

3. ANY HYDRANT BEING INSTALLED WITH CONDITIONS OTHER THAN THOSE MENTIONED AND/OR DETAILED BELOW WILL REQUIRE SIGNED APPROVAL FROM SECURITY FIRE PROTECTION DISTRICT.



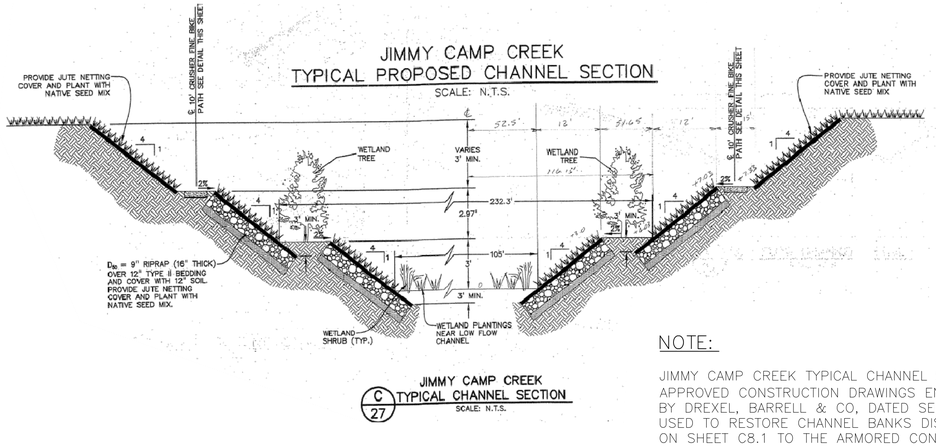


DETACHED SIDEWALK LOCATION
NO SCALE



ATTACHED SIDEWALK LOCATION
NO SCALE

FIRE HYDRANT LOCATIONS
NO SCALE

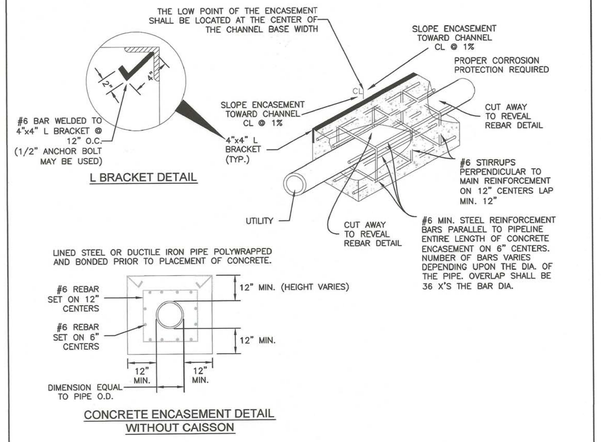


C/27 JIMMY CAMP CREEK TYPICAL CHANNEL SECTION
SCALE: N.T.S.

NOTE:

JIMMY CAMP CREEK TYPICAL CHANNEL SECTION IS TAKEN FROM APPROVED CONSTRUCTION DRAWINGS ENTITLED "JIMMY CAMP CREEK REALIGNMENT" BY DREXEL, BARRELL & CO, DATED SEPTEMBER 6, 2005. THIS SECTION IS TO BE USED TO RESTORE CHANNEL BANKS DISTURBED BY WATERMAIN CONSTRUCTION SHOWN ON SHEET C8.1 TO THE ARMORED CONDITION.

STREET CONSTRUCTION
AS-BUILT PLANS
JANUARY 24, 2023



Colorado Springs Utilities it's how we're all connected	PIPE ENCASEMENT DETAIL	C2-9 DATED 5/2015

CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: rlsch@ecg1.com

NO.	DESCRIPTION	DATE

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

PROJECT:
JCC BRIDGE
JCC MAIN CHANNEL - LORSON BLVD
EL PASO COUNTY, COLORADO

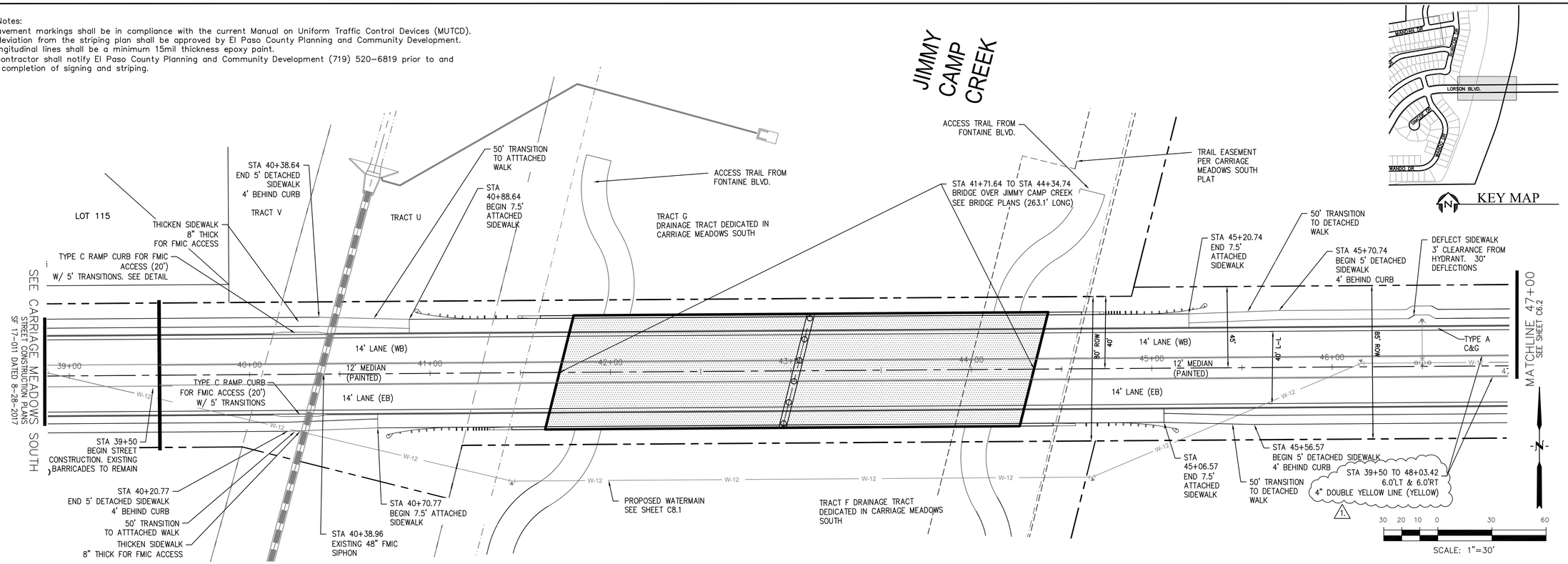
DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

WATERMAIN DETAILS
STREET TYPICAL SECTION
JCC BRIDGE AT MAIN CHANNEL

COLORADO REGISTERED 33997 4-2-2018 PROFESSIONAL ENGINEER

DATE: APRIL 2, 2018
PROJECT NO. 100.030
SHEET NUMBER C1.3
TOTAL SHEETS: 34

Striping Notes:
1. All pavement markings shall be in compliance with the current Manual on Uniform Traffic Control Devices (MUTCD).
2. Any deviation from the striping plan shall be approved by El Paso County Planning and Community Development.
3. All longitudinal lines shall be a minimum 15mil thickness epoxy paint.
4. The contractor shall notify El Paso County Planning and Community Development (719) 520-6819 prior to and upon completion of signing and striping.



LORSON BOULEVARD

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

HIGH POINT ELEV = 5709.46
HIGH POINT STA = 41+03.56
PVI STA = 40+00
PVI ELEV = 5710.42
A.D. = -4.86
K = 61.69
300.00' VC

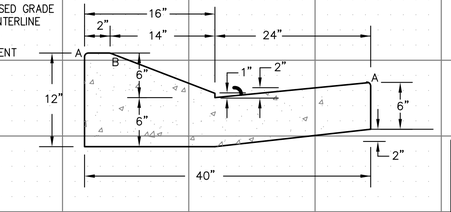
EVCS: 41+50
EVCE: 5709.29

PROPOSED GRADE AT CENTERLINE
4.11%
EXISTING 48" FMIC SIPHON
STATION 39+50 BEGIN STREET CONSTRUCTION
STA 41+71.64 TO STA 44+34.74 BRIDGE OVER JIMMY CAMP CREEK SEE BRIDGE PLANS
-0.75%
PVI STA = 47+00
PVI ELEV = 5705.15
MATCHLINE 47+00 SEE SHEET C6.2
EXISTING GRADE AT CENTERLINE
PROPOSED GRADE AT CENTERLINE
BRIDGE ABUTMENT
ACCESS TRAIL
JIMMY CAMP CREEK

5710
5705
5700
5695
5690
5685
5680
5675

39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00

STREET CONSTRUCTION AS-BUILT PLANS JANUARY 24, 2023



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

FMIC TYPE C RAMP CURB AND GUTTER
SCALE 1" = 1'

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PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
719.520.5200
CONTACT: JEFF MARK

NO.	DESCRIPTION	DATE
1.	ADD FUTURE STREET AT STA 48+35.42, REVISE MEDIAN STRIPING	8/9/2018

PROJECT:
JCC BRIDGE
JCC MAIN CHANNEL - LORSON BLVD
EL PASO COUNTY, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

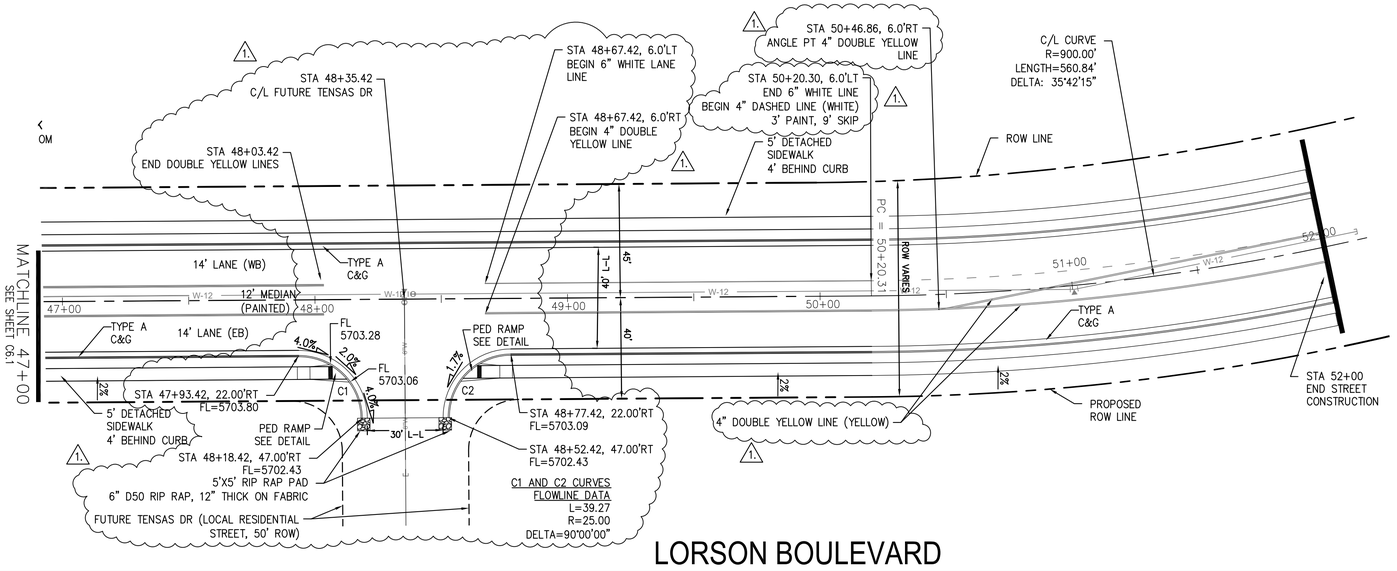
STREET
STA 39+50 TO 47+00
LORSON BOULEVARD

DATE:
APRIL 2, 2018

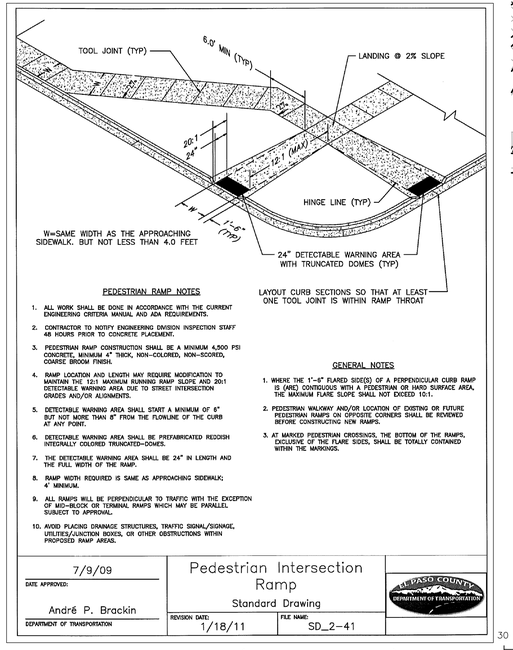
PROJECT NO.
100.030

SHEET NUMBER
C6.1

TOTAL SHEETS: 34



LORSON BOULEVARD



PEDESTRIAN RAMP NOTES

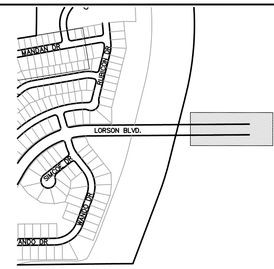
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT ENGINEERING CRITERIA MANUAL AND ADA REQUIREMENTS.
2. CONTRACTOR TO NOTIFY ENGINEERING DIVISION INSPECTION STAFF 48 HOURS PRIOR TO CONCRETE PLACEMENT.
3. PEDESTRIAN RAMP CONSTRUCTION SHALL BE A MINIMUM 4,500 PSI CONCRETE, MINIMUM 4" THICK, NON-COLORED, 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 GRADES 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 EXCEPTION OF MID-BLOCK OR TERMINAL RAMPS WHICH MAY BE PARALLEL SUBJECT TO APPROVAL.
10. AVOID PLACING DRAINAGE STRUCTURES, TRAFFIC SIGNAL/SIGNAGE, UTILITIES/JUNCTION BOXES, OR OTHER OBSTRUCTIONS WITHIN PROPOSED RAMP AREAS.

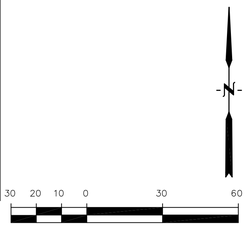
GENERAL NOTES

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.

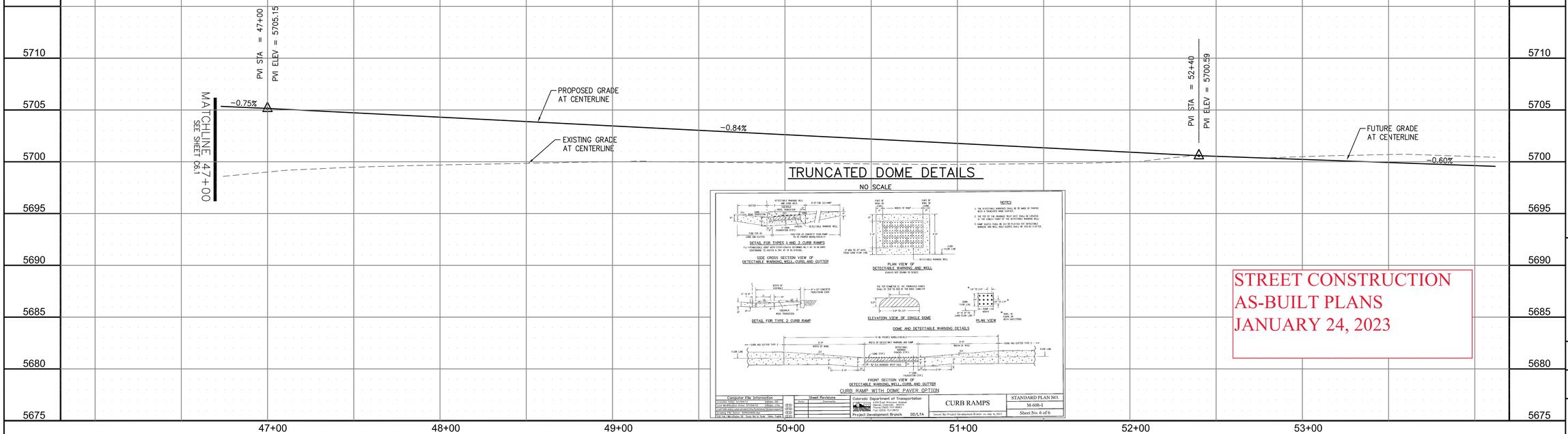
7/9/09	Pedestrian Intersection Ramp	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION
DATE APPROVED:	Standard Drawing	
André P. Brackin	REVISION DATE: 1/18/11	FILE NAME: SD_2-41
DEPARTMENT OF TRANSPORTATION		

CURB DETAILS (ECM SD_2-41)





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



TRUNCATED DOME DETAILS

NO SCALE

Computer File Information	Sheet Revisions	Colorado Department of Transportation	CURB RAMPS	STANDARD PLAN NO.
Location: Roads M:\CAD\R	DATE / Comments	4201 East Arkansas Avenue		M-608-1
Default Font: Arial Narrow		Denver, CO 80222		Sheet No. 6 of 6
Last Modified: 10/31/2017		Project Development Branch	DD/LTA	Issued for Project Development Branch on July 4, 2017

STREET CONSTRUCTION
AS-BUILT PLANS
JANUARY 24, 2023

NO.	DESCRIPTION	DATE
1.	ADD FUTURE STREET AT STA 48+35.42, REVISE MEDIAN STRIPING	8/9/2018

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

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
719.635.3200
CONTACT: JEFF MARK

PROJECT:
JCC BRIDGE
JCC MAIN CHANNEL – LORSON BLVD
EL PASO COUNTY, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

STREET
STA 47+00 TO 52+00
LORSON BOULEVARD

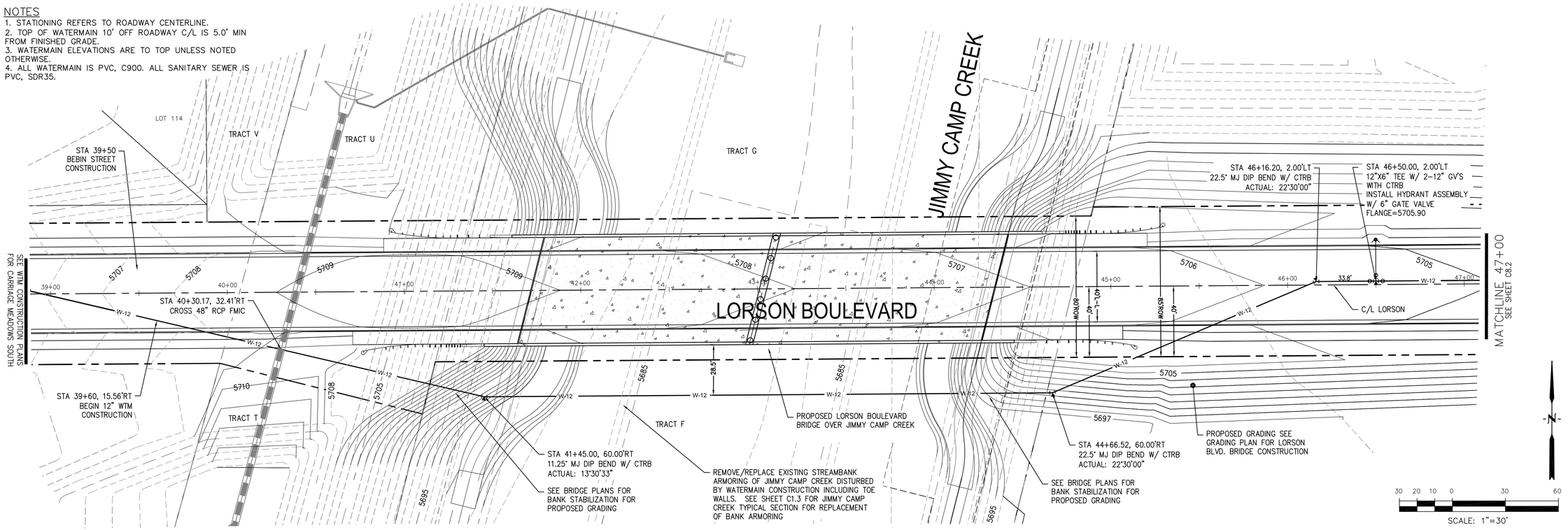
DATE:
APRIL 2, 2018

PROJECT NO.
100.030

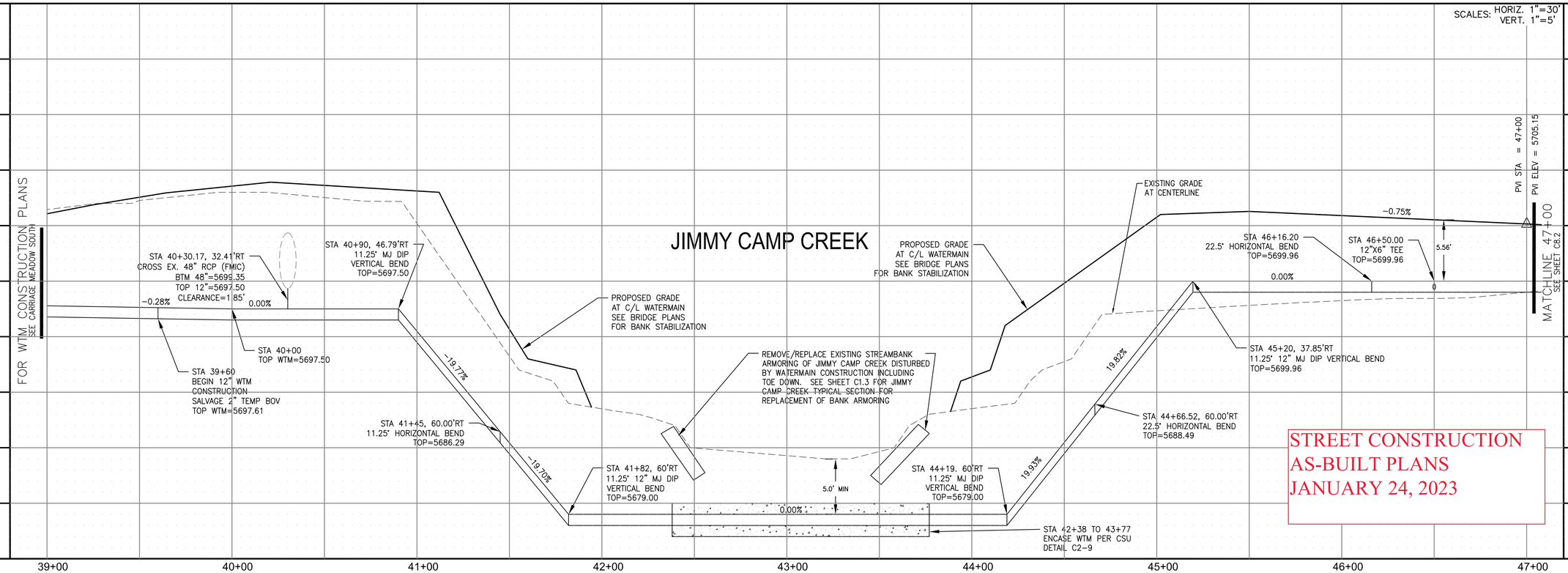
SHEET NUMBER
C6.2

TOTAL SHEETS: 34

NOTES
1. STATIONING REFERS TO ROADWAY CENTERLINE.
2. TOP OF WATERMAIN 10' OFF ROADWAY C/L IS 5.0' MIN FROM FINISHED GRADE.
3. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE.
4. ALL WATERMAIN IS PVC, C900. ALL SANITARY SEWER IS PVC, SDR35.



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



STREET CONSTRUCTION
AS-BUILT PLANS
JANUARY 24, 2023

CORE
ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
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CONTACT: JEFF MARK

PROJECT:
JCC BRIDGE
JCC MAIN CHANNEL - LORSON BLVD
EL PASO COUNTY, COLORADO

NO.	DESCRIPTION	DATE

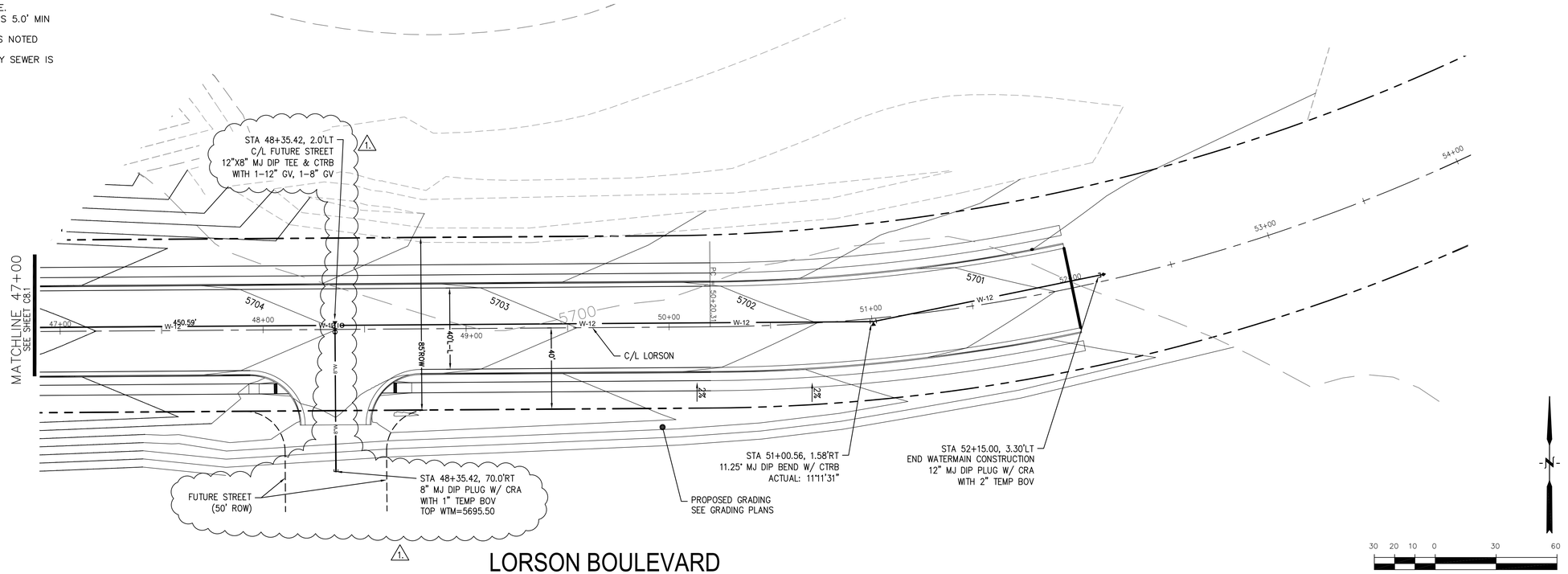
DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

COLORADO REGISTERED PROFESSIONAL ENGINEER
RICHARD L. SCHINDLER
33997
4-2-2018

DATE: APRIL 2, 2018
PROJECT NO. 100.030
SHEET NUMBER C8.1
TOTAL SHEETS: 34

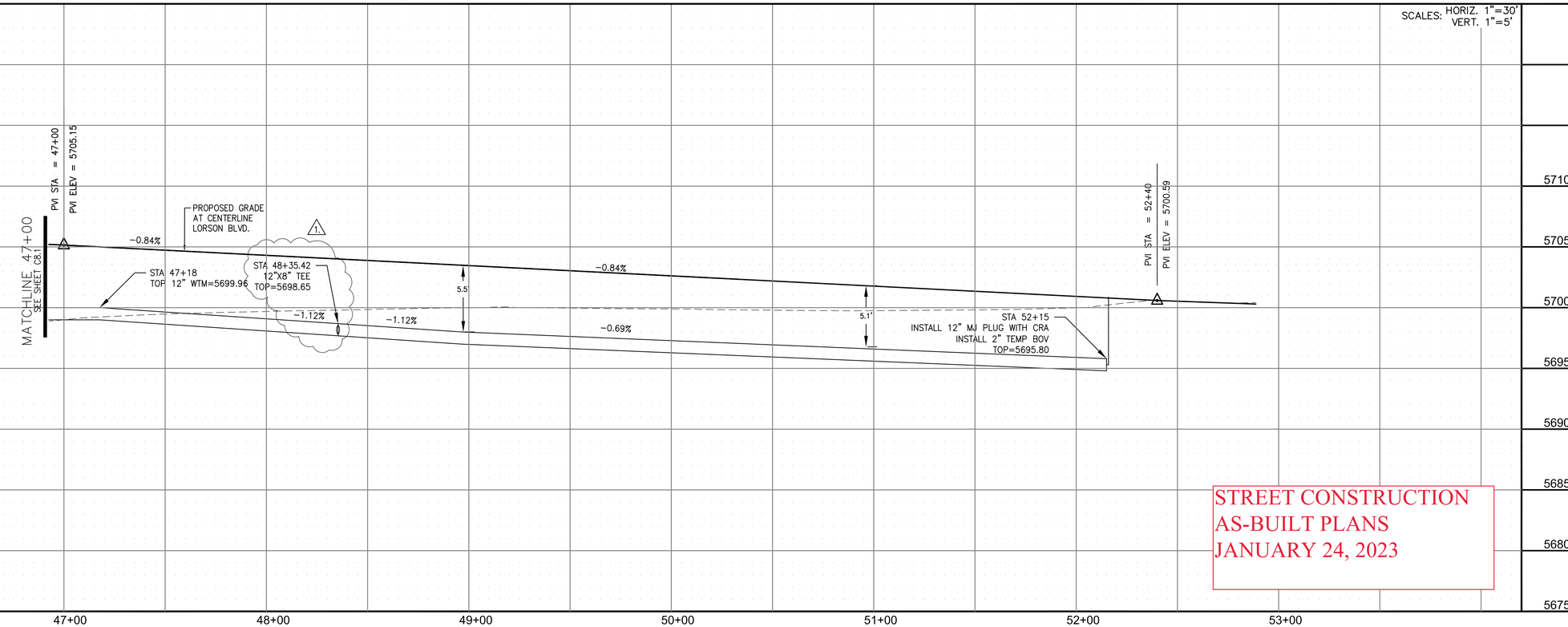
WATERMAIN
STA 39+50 TO 47+00
LORSON BOULEVARD

NOTES
1. STATIONING REFERS TO ROADWAY CENTERLINE.
2. TOP OF WATERMAIN 10' OFF ROADWAY C/L IS 5.0' MIN FROM FINISHED GRADE.
3. WATERMAIN ELEVATIONS ARE TO TOP UNLESS NOTED OTHERWISE.
4. ALL WATERMAIN IS PVC, C900. ALL SANITARY SEWER IS PVC, SDR35.



LORSON BOULEVARD

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



STREET CONSTRUCTION
AS-BUILT PLANS
JANUARY 24, 2023

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

NO.	DESCRIPTION	DATE
1.	ADD FUTURE STREET AT STA 48+35.42, MOVE TEE	8/9/2018

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

PROJECT:
JCC BRIDGE
JCC MAIN CHANNEL – LORSON BLVD
EL PASO COUNTY, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

WATERMAIN
STA 47+00 TO 52+15
LORSON BOULEVARD

DATE:
APRIL 2, 2018

PROJECT NO.
100.030

SHEET NUMBER
C8.2
TOTAL SHEETS: 34

BRIDGE DESCRIPTION:

2–SPAN, 263'–1 3/16" LONG (BACK FACE ABUTMENT – BACK FACE ABUTMENT) BY 63'–0" WIDE PRESTRESSED CONCRETE BULB–TEE GIRDER SUPERSTRUCTURE OVER JIMMY CAMP CREEK. SPAN LENGTHS ARE 130'–0" ℄ ABUTMENT #1 BEARINGS TO ℄ PIER; 130'–0" ℄ PIER TO ℄ ABUTMENT #3 BEARINGS. ROADWAY ON TANGENT ALIGNMENT. 75°33'38" SKEW.

GENERAL NOTES:

A. ALL WORK SHALL BE IN ACCORDANCE WITH THE COLORADO DEPARTMENT OF TRANSPORTATION 2011 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
B. EXCEPT AS SHOWN ON THE PLANS, STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH M–206–2 FOR BRIDGES.
C. EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M213.
D. THE FINAL FINISH FOR THE SURFACES OF THE TYPE 7 BRIDGE RAIL AND CURBS SHALL BE CLASS 2. ALL OTHER EXPOSED CONCRETE SURFACES SHALL RECEIVE A CLASS 1 FINISH TO ONE FOOT BELOW FINISHED GRADE.
E. LEVELING PADS ARE UNLAMINATED BEARINGS. THEY SHALL BE CUT OR MOLDED FROM AASHTO ELASTOMER GRADE 3, 4, OR 5 AS DESCRIBED IN TABLES 705–1 AND 705–2 WITH A DUROMETER (SHORE "A") HARDNESS OF 60.
F. GRADE 60 REINFORCING STEEL IS REQUIRED.
G. ALL REINFORCING STEEL SHALL BE EPOXY COATED UNLESS OTHERWISE NOTED. (N) DENOTES NON–EPOXY COATED REINFORCING STEEL.
H. ALL STRUCTURAL STEEL NOT OTHERWISE NOTED SHALL BE A588 WEATHERING STEEL IN ACCORDANCE WITH SECTION 509 OF THE STANDARD SPECIFICATIONS.
I. THE FOLLOWING STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 50 (ASTM A–572): BEARING PLATES AND PILING. THE FOLLOWING STRUCTURAL STEEL SHALL BE ASTM A–53, GRADE B: PEDESTRIAN HANDRAIL ON BRIDGE RAIL TYPE 7 (SPECIAL).
J. ALL RAILING STEEL SHALL BE PAINTED AFTER FABRICATION IN ACCORDANCE WITH SECTION 509 OF THE STANDARD SPECIFICATIONS. COLOR SHALL BE SELECTED BY THE OWNER.
K. ALL BOLTS SHALL BE 7/8" DIAMETER, HIGH STRENGTH, UNLESS NOTED OTHERWISE.
L. AN EMERGENCY DECK CONSTRUCTION JOINT MAY BE LOCATED AT THE ONE QUARTER SPAN POINT BACK FROM AN ABUTMENT WITH RESPECT TO THE DIRECTION OF THE DECK PLACEMENT.
M. ALL LONGITUDINAL AND TRANSVERSE DIMENSIONS ARE MEASURED HORIZONTALLY AND INCLUDE NO CORRECTION FOR GRADE.
N. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
O. PERMANENT DECK FORMS ARE OPTIONAL.
P. FOR STRUCTURE NUMBER INSTALLATION, SEE STANDARD S–614–12.
Q. STATIONS, ELEVATIONS, AND DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM A RECENT FIELD SURVEY. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.
R. THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 1–800–922–1987 AT LEAST 2 DAYS (NOT INCLUDING THE DAY OF NOTIFICATION) PRIOR TO ANY EXCAVATION OR OTHER EARTHWORK.
S. CONCENTRATIONS OF WATER–SOLUBLE SULFATES WERE MEASURED TO BE 0.08 PERCENT. THE CONCRETE SULFATE EXPOSURE FOR THIS PROJECT IS CLASS 0.
T. THE FOLLOWING TABLE GIVES THE MINIMUM LAP SPLICE LENGTH FOR EPOXY COATED REINFORCING BARS PLACED IN ACCORDANCE WITH SUBSECTION 602.06. THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER OR LESS THAN 3" OF LATERAL COVER.

BAR SIZE	#4	#5	#6	#7	#8	#9	#10	#11
SPLICE LENGTH FOR CLASS B OR D CONCRETE	1'–3"	1'–7"	2'–5"	2'–10"	3'–8"	4'–8"	5'–11"	7'–3"

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

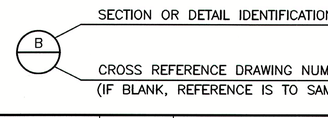
U. THE FOLLOWING TABLE GIVES THE MINIMUM LAP SPLICE LENGTH FOR BLACK REINFORCING BARS PLACED IN ACCORDANCE WITH SUBSECTION 602.06. THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER OR LESS THAN 3" OF LATERAL COVER.

BAR SIZE	#4	#5	#6	#7	#8	#9	#10	#11
SPLICE LENGTH FOR CLASS B OR D CONCRETE	1'–1"	1'–4"	1'–7"	1'–11"	2'–6"	3'–1"	3'–11"	4'–10"

V. THE ABOVE SPLICE LENGTHS SHALL BE INCREASED BY 20% FOR 3 BAR BUNDLES AND 33% FOR 4 BAR BUNDLES.

DESIGN DATA:

G. AASHTO, SIXTH EDITION LRFD WITH CURRENT INTERIMS.
H. DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN.
LIVE LOAD: HL–93 (DESIGN TRUCK OR TANDEM, AND DESIGN LANE LOAD)
DEAD LOAD: ASSUMES 36 POUNDS PER SQUARE FOOT FOR BRIDGE DECK OVERLAY
ASSUMES 5 POUNDS PER SQUARE FOOT FOR PERMANENT STEEL DECK FORMS
ASSUMES 5 POUNDS PER SQUARE FOOT FOR UTILITIES
I. REINFORCED CONCRETE:
CLASS B CONCRETE: f'c = 4,500 PSI
CLASS D CONCRETE: f'c = 4,500 PSI
CLASS BZ CONCRETE: f'c = 4,000 PSI
REINFORCING STEEL: fy = 60,000 PSI
PRECAST PRESTRESSED CONCRETE:
CLASS PS CONCRETE: f'c = (SEE DETAILS)
f's = 270,000 PSI



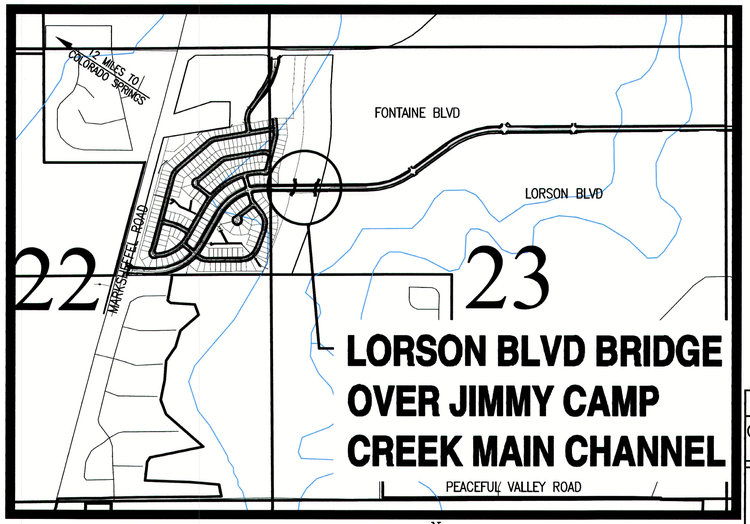
STRUCTURAL STEEL:
AASHTO M270 (ASTM A709) GRADE 36; fy = 36,000 PSI
AASHTO M270 (ASTM A709) GRADE 50; fy = 50,000 PSI

811 Know what's below. Call before you dig.

AWARD SET

FOUNDATION NOTES:

A. **GEOTECHNICAL REPORT:** STRUCTURAL FOUNDATION DESIGN FOR THIS PROJECT IS BASED ON THE RECOMMENDATIONS OF A GEOTECHNICAL INVESTIGATION BY RMG – ROCKY MOUNTAIN GROUP, DATED APRIL 3, 2017 (RMG REPORT 155271).
B. **DRIVEN PILES:** A REPRESENTATIVE FROM RMG, (719) 548–0060, SHALL BE PRESENT TO OBSERVE FOUNDATION INSTALLATION OPERATIONS. COST TO BE INCLUDED IN ITEM 502. PILES SHALL BE INSTALLED TO PRACTICAL REFUSAL AS DEFINED IN THE STANDARD SPECIFICATIONS.
C. **PILE DRIVING ANALYZER (PDA):** ONE PILE PER SUBSTRUCTURE SHALL BE MONITORED USING A PDA PER THE STANDARD SPECIFICATIONS. THE CONTRACTOR'S ENGINEER SHALL BE RESPONSIBLE FOR MONITORING AND REPORTING RESULTS TO THE CONTRACTOR AND ENGINEER.
D. **MINIMUM TIP PENETRATION:** THE MINIMUM PILE PENETRATION SHALL BE 15 FEET BELOW THE BOTTOM OF THE BOTTOM OF ABUTMENT AT EACH SUBSTRUCTURE.
E. **DRILLING HOLES TO FACILITATE PILE DRIVING (PRE–DRILLING):** SEE PROJECT SPECIAL PROVISIONS



VICINITY MAP
N.T.S.
SECTION 23
TOWNSHIP 15 SOUTH
RANGE 65 WEST

N

BRIDGE & ROADWAY ABBREVIATIONS

@ = AT\AT EACH
ABC = AGGREGATE BASE COURSE
ABUT = ABUTMENT
ALT = ALTERNATE
ARCH = ARCHITECTURAL
BF = BACK FACE
BM = BEAM
BOF = BOTTOM OF FOOTING
BOW = BOTTOM OF WALL
BRG = BEARING
BTM = BOTTOM
℄ = CENTERLINE
(CIP) = (COMPLETE IN PLACE)
CJ = CONTROL JOINT
CLR = CLEAR\CLEARANCE
CONST JNT = CONSTRUCTION JOINT
COL = COLUMN
CONC = CONCRETE
CONT = CONTINUOUS
CP = CONTROL POINT
∅ = DIAMETER
DET = DETAIL
DIAG = DIAGONAL
DWG = DRAWING
DWLS = DOWELS
E = EPOXY COATED
EF = EACH FACE
EL\ELEV = ELEVATION
EOP = EDGE OF PAVEMENT
EOTW = EDGE OF TRAVELED WAY
EST = ESTIMATED
EW = EACH WAY
EQUIP = EQUIPMENT
EXIST = EXISTING
EXP = EXPANSION
FF = FAR FACE
FTG = FOOTING
GAVL = GALVANIZED
GEOTECH = GEOGRAPHICAL
GRD BM = GRADE BEAM
HORIZ = HORIZONTAL
HCL = HORIZONTAL CONTROL LINE
IF = INSIDE FACE
INV EL = INVERT ELEVATION
LP = LIGHT POLE
MAS = MASONRY
MATL = MATERIAL
MAX = MAXIMUM
MB = MAIL BOX
MFR = MANUFACTURER
MIN = MINIMUM
MK = MARK
NF = NEAR FACE
NTS = NOT TO SCALE
OC = ON CENTER
OF = OUTSIDE FACE
OH = OVERHEAD
OPNG = OPENING
OPP = OPPOSITE
℄ = PLATE
PC = POINT OF CURVATURE
PE\F = PREFORMED EXPANSION JOINT FILLER
PGL = PROFILE GRADE LINE
PI = POINT OF INTERSECTION
PK = KNOWN POINT
PP = POWER POLE
PROJ = PROJECTION
PROP = PROPOSED
PT = POINT OF TANGENCY
QTY = QUANTITY
R\RAD = RADIUS
REINF = REINFORCING
REF = REFERENCE
REQD = REQUIRED
ROW = RIGHT OF WAY
± = EXISTING FEATURE DIMENSION
℄ = SURVEY LINE
SCJ = SAW CUT JOINT
SHT = SHEET
SIM = SIMILAR
SPA = SPACING\SPACES
SPEC = SPECIFICATIONS
SQ = SQUARE
STA = STATION
STD = STANDARD
SYM = SYMMETRICAL
T & B = TOP & BOTTOM
TAN = TANGENT
TH = TEST HOLE
TOC = TOP OF CONCRETE
TOF = TOP OF FOOTING
TOW = TOP OF WALL
TYP = TYPICAL
UNO = UNLESS NOTED OTHERWISE
VERT = VERTICAL
VC = VERTICAL CURVE
VPC = VERTICAL POINT OF CURVATURE
VPI = VERTICAL POINT OF INTERSECTION
VPT = VERTICAL POINT OF TANGENCY
WL = WORKING LINE
WP = WORKING POINT
WWF = WELDED WIRE FABRIC

DESIGN ENGINEER'S STATEMENT:

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.

Todd D. Beltzer, 33594 4/3/2018

TODD D. BELTZER, P.E. LICENSE # DATE

OWNER/DEVELOPER'S STATEMENT:

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

JEFF MARK, PRESIDENT DATE
LORSON, LLC
212 N. WASATCH AVE, SUITE 301
COLORADO SPRINGS, CO 80903

COLORADO LICENSED Todd Daniel Beltzer 33594 4/3/2018 PROFESSIONAL ENGINEER

INDEX OF SHEETS

SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
B01	BRIDGE GENERAL INFORMATION	B13	PIER #2 PLAN & ELEVATION
B02	BRIDGE GENERAL LAYOUT	B14	PIER #2 DETAILS
B03	ENGINEERING GEOLOGY	B15	PIER DIAPHRAGM DETAILS
B04–B05	HYDRAULIC INFORMATION	B16	SUPERSTRUCTURE DETAILS
B06	CONSTRUCTION LAYOUT	B17	DECK REINFORCING PLAN
B07	FOUNDATION LAYOUT	B18–B19	PRESTRESSED CONCRETE I
B08–B09	ABUTMENTS 1 & 3 PLAN & ELEVATION	B20–B21	PRECAST CONCRETE DECK FORMS
B10–B11	ABUTMENT & WINGWALL DETAILS	B22–B23	BRIDGE RAIL TYPE 7 (SPECIAL)
B12	EXCAVATION AND BACKFILL DETAILS	B24–B27	DECK ELEVATIONS

SUMMARY OF QUANTITIES

CONTRACT ITEM NO.	CONTRACT ITEM DESCRIPTION	UNIT	ABUT #1	PIER #2	ABUT #3	SUPERSTRUCTURE	TOTAL
206	FILTER MATERIAL (CLASS A)	CY	114	30	120	–	264
206	STRUCTURE EXCAVATION	CY	203	726	451	–	1,381
206	STRUCTURE BACKFILL (CLASS 1)	CY	483	331	483	–	1,297
206	MECHANICAL REINFORCEMENT OF SOIL	CY	439	–	439	–	877
420	GEOTEXTILE (DRAINAGE) (CLASS 1)	SY	511	134	540	–	1,186
502	PILING (HP 14x89)	LF	625	–	504	–	1,129
503	DRILLED CAISSON (36 INCH)	LF	–	324	–	–	324
506	RIPRAP (24 INCH)	CY	682	–	720	–	1,402
506	RIPRAP (30 INCH)	CY	–	339	–	–	348
601	CONCRETE CLASS D (BRIDGE)	CY	49	65	49	854	1016
602	REINFORCING STEEL	LB	2,423	10,353	2,423	–	15,199
602	REINFORCING STEEL (EPOXY COATED)	LB	6,536	245	6,536	126,506	139,823
606	BRIDGE RAIL TYPE 10M (SPECIAL)	LF	–	–	–	600	600
606	TRANSITION TYPE 3G	EA	–	–	–	–	2
606	TRANSITION TYPE 3H	EA	–	–	–	–	2
606	END ANCHORAGE (FLARED)	EA	–	–	–	–	4
613	4" DIAMETER SCH 80 PVC	LF	–	–	–	263	263
613	2" DIAMETER SCH 80 PVC	LF	–	–	–	526	526
613	12.5" CARRIER PIPE ASSEMBLY	LF	–	–	–	714	714
618	PRESTRESSED CONCRETE I (BT 72)	LF	–	–	–	1,820	1,820

Print Date:
File Name:
Horiz. Scale: Vert. Scale: As Noted
Unit Information Unit Leader Initials

Sheet Revisions

Date:	Comments	Init.

Loris — A DIVISION OF OTAK

LORSON RANCH — THE LANDHUIS COMPANY, 212 N. WASATCH, SUITE 301, COLORADO SPRINGS, CO 80903, PHONE: 719-633-3200

CORE ENGINEERING GROUP — 212 N. WAHSATCH AVE., SUITE 206, COLORADO SPRINGS, CO 80903, PH: 719.570.1100, FAX: 719.570.1106, CONTACT: RICHARD L. SCHINDLER, P.E., EMAIL: RichS@cegt.com

As Constructed
No Revisions:
Revised:
Void:

LORSON BRIDGE
BRIDGE GENERAL INFORMATION

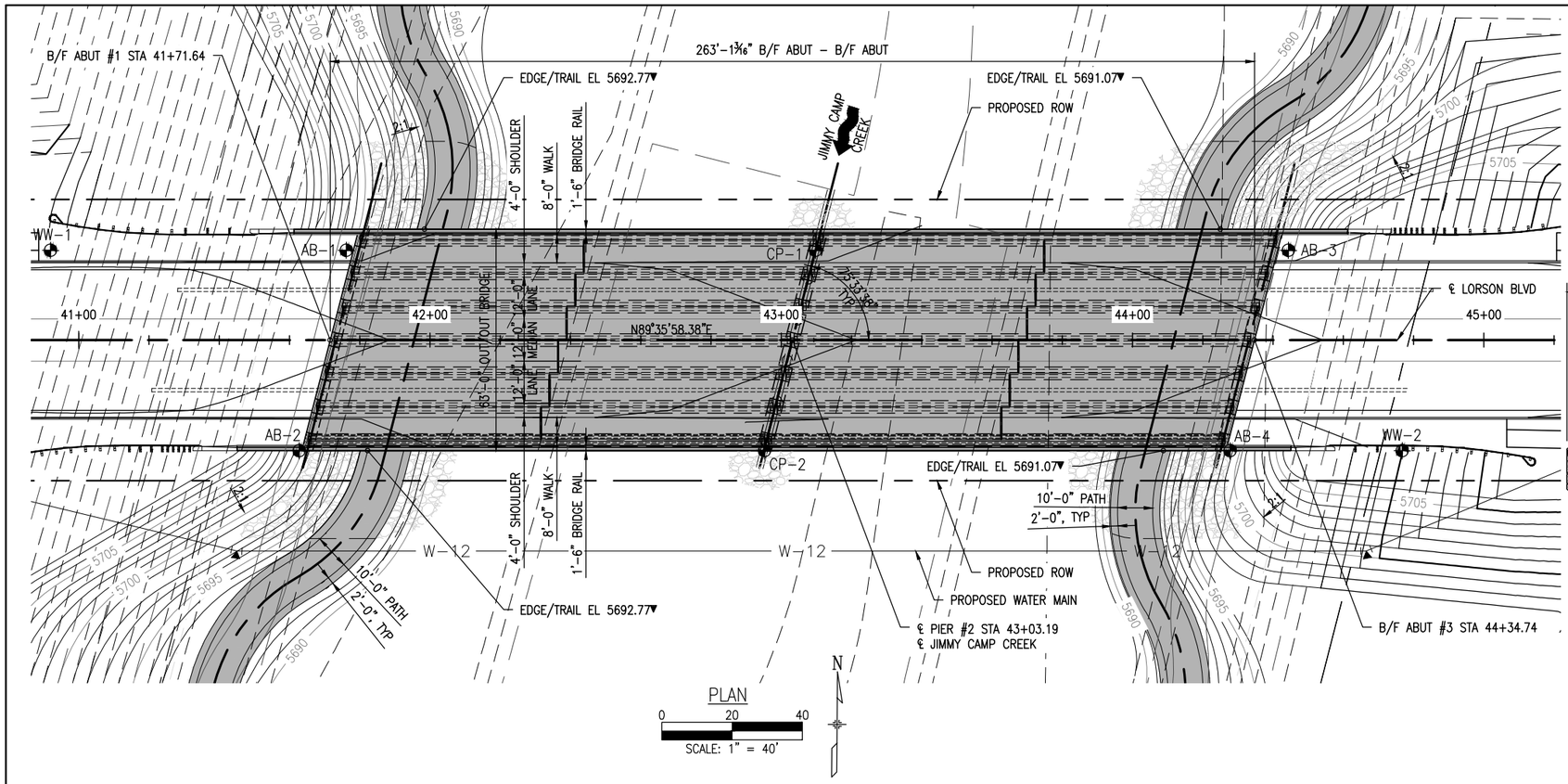
Designer: TDB
Detailer: TDB
Structure Numbers
Sheet Subset:
Subset Sheets:

Project No./Code: –
–
Sheet Number B01

G:\7.2 Clients\369 - Lorson\16136 - Lorson Bridge\50 DWG\16136 (B01) Bridge General Information.dwg Apr 03, 2018 - 11:14am

AWARD SET

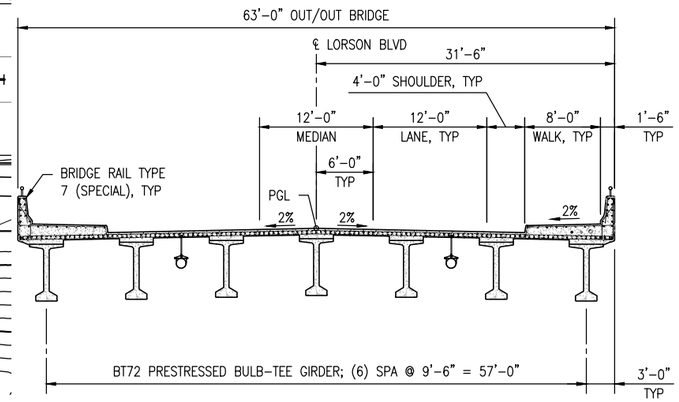
Know what's **below.** **Call** before you dig.



PLAN

0 20 40

SCALE: 1" = 40'

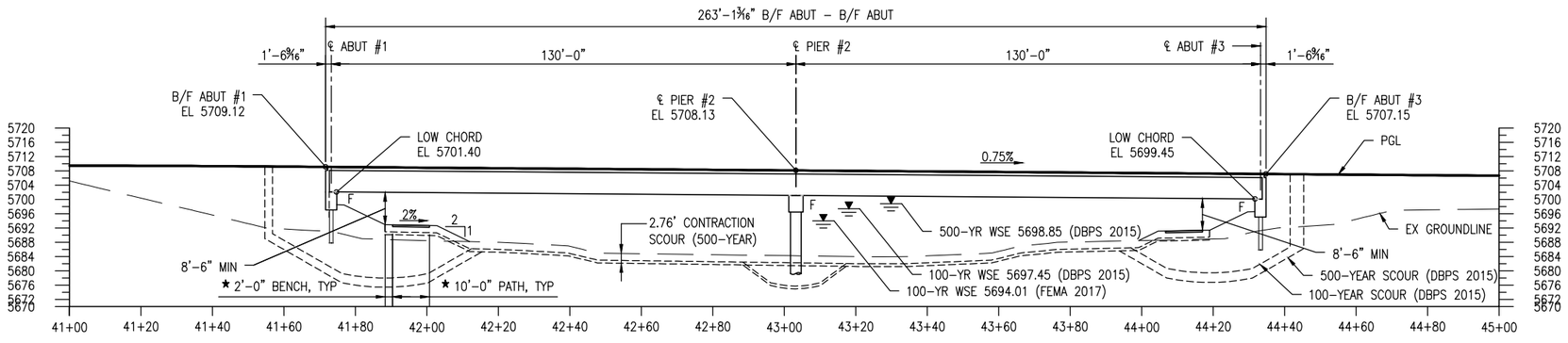


TYPICAL SECTION

LOOKING UPSTATION

0 8 16

SCALE: 1/16" = 1'-0"



SECTION NOTES:
1. SECTION TAKEN AT ℄ LORSON BLVD.
2. ELEVATIONS ARE AT FINISHED GRADE

★ = MEASURED PERPENDICULAR TO PATH
▼ = SLOPE 2' TRAIL SHOULDER AS REQUIRED TO MEET STATED EDGE OF TRAIL ELEVATION

TOP OF BEDROCK @ AB-2 ELEV 5632

TOP OF BEDROCK @ AB-1 ELEV 5630

SECTION

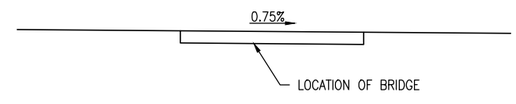
0 20 40

SCALE: 1" = 40'

TOP OF BEDROCK @ CP-1 & CP-2 ELEV 5638

TOP OF BEDROCK @ AB-4 ELEV 5643

TOP OF BEDROCK @ AB-3 ELEV 5642



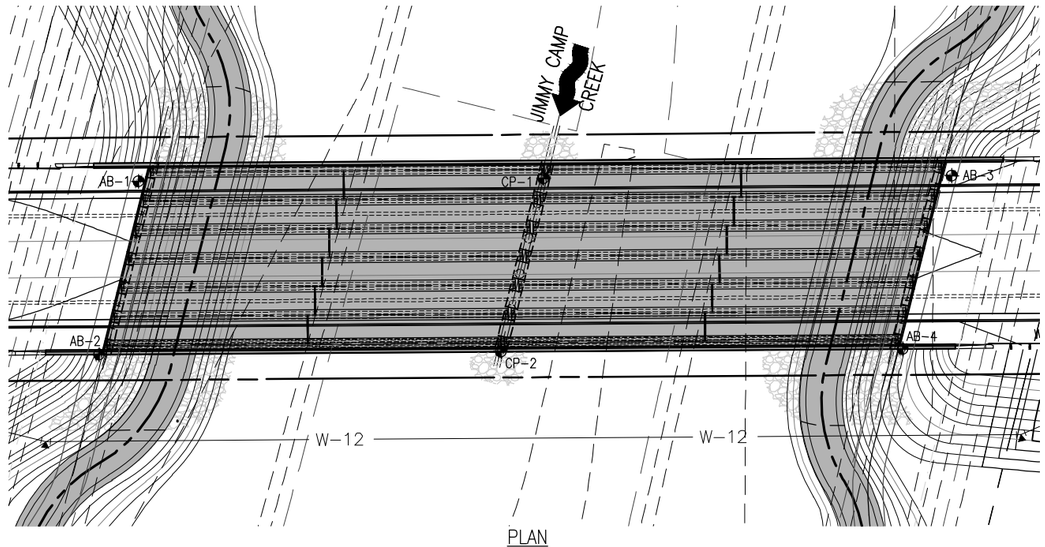
PROFILE GRADE

N.T.S.

COLORADO LICENSED
Todd Daniel Bazzell
33594
12/3/2018
PROFESSIONAL ENGINEER

Print Date:		Sheet Revisions			Loris A DIVISION OF OTAK	LORSON RANCH THE LANDHUIS COMPANY 212 N. WABASH, SUITE 301 COLORADO SPRINGS, CO 80903 PHONE: 719-635-3200	CORE ENGINEERING GROUP 212 N. WAHSATCH AVE., SUITE 206 COLORADO SPRINGS, CO 80903 PH: 719.570.1100 FAX: 719.570.1106 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich3@engl.com	As Constructed	LORSON BRIDGE BRIDGE GENERAL LAYOUT	Project No./Code
File Name:		Date:	Comments	Init.				No Revisions:		–
Horiz. Scale:	Vert. Scale: As Noted							Revised:	Designer: TDB / Structure Numbers	–
Unit Information	Unit Leader Initials							Void:	Detailer: TDB	
									Sheet Subset: / Subset Sheets:	Sheet Number B02

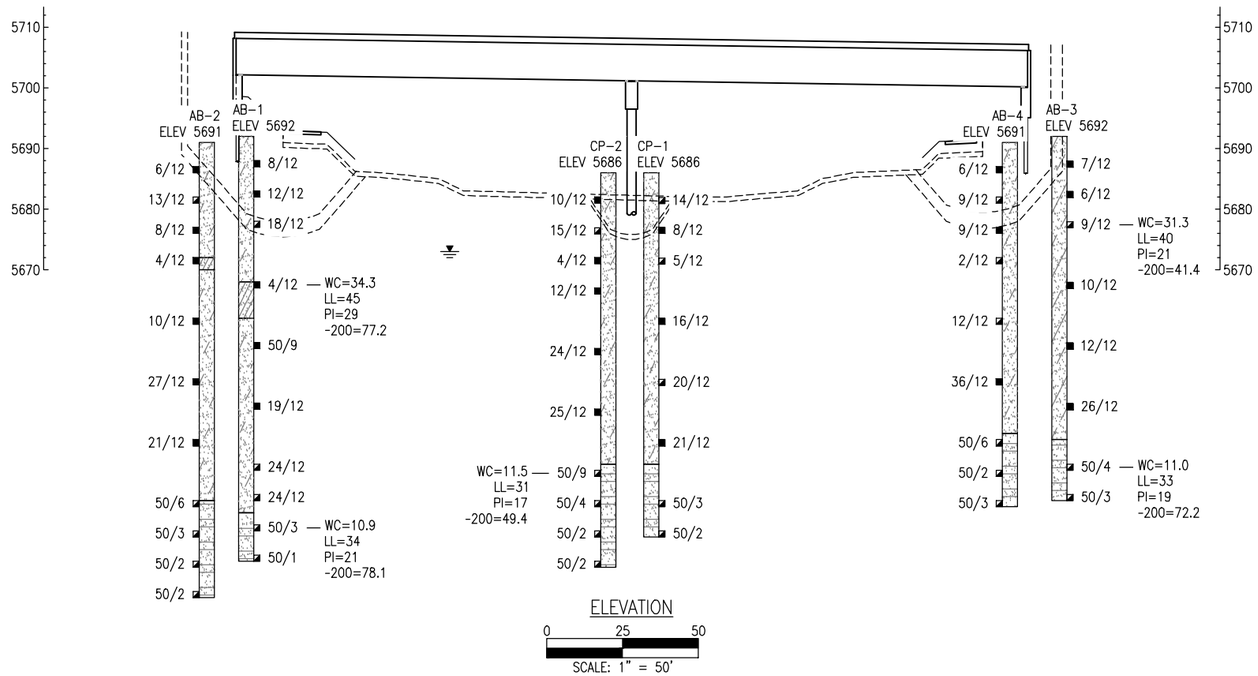
G:\7.2 Clients\369 - Lorson\16136 - Lorson Bridge\50 DWG\16136 (B02) Bridge General Layout.dwg Apr 03, 2018 - 11:20am



PLAN

0 25 50

SCALE: 1" = 50'



ELEVATION

0 25 50

SCALE: 1" = 50'

Know what's **below.** **Call** before you dig.

Legend

- Sand, Silty, light brown to brown, loose to medium dense, moist to wet
- Clay, Sandy, brown, soft, moist to wet
- Sand, Silty to Clayey, brown, moist to wet, loose to medium dense
- Shale, Sandy, blue to gray, moist to wet, very hard
- Depth to water level encountered at the time of drilling
- Drive sample, Standard Penetration Test, 2-inch OD split barrel sample. The symbol 9/12 indicates that 9 blows hammer were required to drive the sampler 12 inches
- Drive sample, 2½-inch OD modified California sample. The symbol 9/12 indicates that 9 blows hammer were required to drive the sampler 12 inches

Notes

1) Borings were advanced with a power-driven, concinuous-flight auger rig on April 3, 2017.
2) Elevations of the Borings were provided by M&S Civil Group.
3) Samples were obtained in gerneral accordance with ASTM D-1586 utilizing a 2-inch OD split barrel sampler.
4) The lines between materials shown on the logs represent the approximate boundaries between material types. In-situ transitions may actually be gradual.
5) Water level readings shown on the logs were made while drilling. Fluctuations in the water level may occur with time.

NOTE:
1. TEST HOLE DRILLING FIELD EXPLORATION WAS PERFORMED BY ROCKY MOUNTAIN GROUP (RMG). ALL WORK SHALL CONFORM TO RECOMMENDATIONS, AS APPLICABLE, DISCUSSED IN THE GEOTECHNICAL REPORT TITLED "SUBSURFACE SOIL INVESTIGATION" – LORSON BLVD. BRIDGE OVER JIMMY CAMP CREEK, DATED APRIL 3, 2017.

2. ELEVATIONS SHOWN ARE APPROXIMATE.

3. ALL INFORMATION ON THIS SHEET WAS TAKEN DIRECTLY FROM THE GEOTECHNICAL REPORT. REFER TO EXPLORATORY BORING LOGS SUBSET FOR COMPLETE BORING LOGS WITH TEST RESULTS.

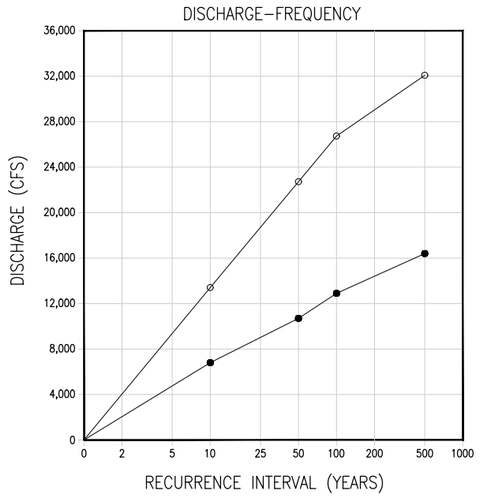
COLORADO LICENSED Todd Daniel Bohlen 33594 11/3/2018 PROFESSIONAL ENGINEER

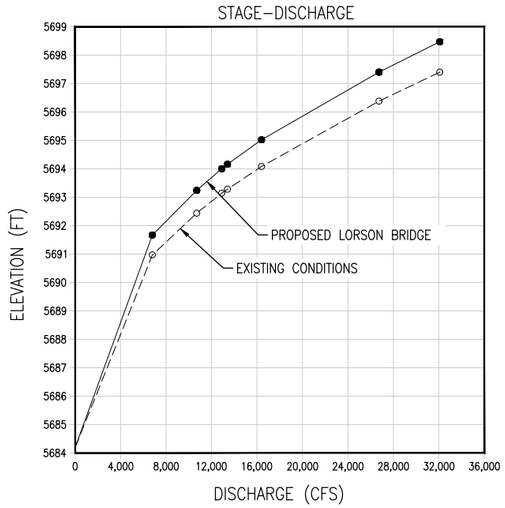
AWARD SET

Print Date:		Sheet Revisions			Loris A DIVISION OF OTAK	LORSON RANCH THE LANDHUIS COMPANY 212 N. WASATCH, SUITE 501 COLORADO SPRINGS, CO 80903 PHONE: 719-635-3200	CORE ENGINEERING GROUP 212 N. WAHSATCH AVE., SUITE 206 COLORADO SPRINGS, CO 80903 PH: 719.570.1100 FAX: 719.570.1106 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: RichS@ceg1.com	As Constructed	LORSON BRIDGE ENGINEERING GEOLOGY	Project No./Code
File Name:		Date:	Comments	Init.				No Revisions:		–
Horiz. Scale:	Vert. Scale: As Noted							Revised:	Designer: TDB / Detailer: JWJ / Structure Numbers	–
Unit Information	Unit Leader Initials							Void:	Sheet Subset: / Subset Sheets:	Sheet Number B03

G:\7.2 Clients\369 - Larson\16136 - Larson Bridge\50 DWG\16136 (B03) Engineering Geology2.dwg Apr 03, 2018 - 11:15am

AWARD SET





PROPOSED THALWAG = 5684.19'

	RECURRENCE INTERVAL (YEARS)	DISCHARGE AT BRIDGE (CFS)	DISCHARGE OVER ROAD (CFS)	VELOCITY AT BRIDGE (FT/SEC)	WSEL (FT–NGVD)	ABUTMENT SCOUR ELEV (FT–NGVD)	PIER SCOUR ELEV (FT–NGVD)
FEMA	10	6,800	0.0	7.40	5691.64	–	–
	50	10,700	0.0	9.00	5693.24	–	–
	100	12,900	0.0	9.64	5694.01	–	–
	500	16,400	0.0	10.57	5695.06	–	–
DBPS	10	13,402	0.0	9.76	5694.18	–	–
	100	26,734	0.0	13.14	5697.45	5678.40	5675.75
	500	32,081	0.0	14.32	5698.49	5675.90	5674.85

NOTES

1. STAGE–DISCHARGE CURVE AT CHANNEL STA. 52+35.61 WHICH IS LOCATED 25–FEET UPSTREAM OF FACE OF BRIDGE.
2. WSEL SHOWN IN STAGE–DISCHARGE CURVE ARE TAKE AT THE UPSTREAM FACE OF BRIDGE.
3. BRIDGE DESIGN RECURRENCE INTERVAL IS 100–YEAR STORM.
4. ABUTMENT AND PIER SCOUR ELEVATIONS INCLUDE CONTRACTION SCOUR.

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Todd Daniel Belzer
33594
11/3/2018
PROFESSIONAL ENGINEER

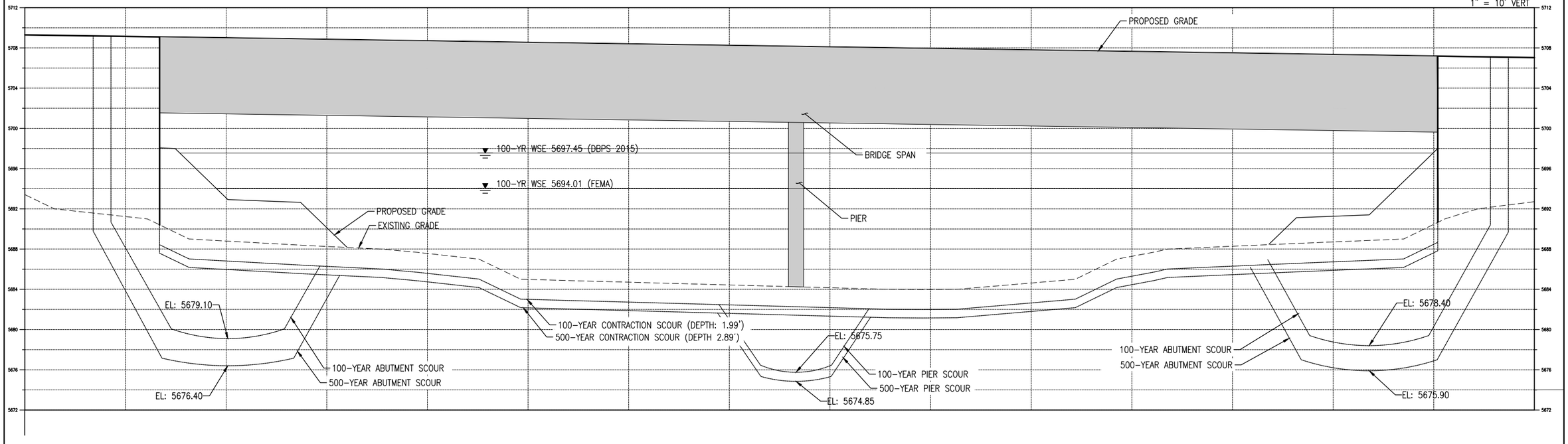
HYDRAULIC DATA:

DRAINAGE AREA: 44.16 SQUARE MILES
AVERAGE CHANNEL SLOPE: 0.0061 FT/FT
MANNING'S n FOR DESIGN:
OVERBANK: 0.040 CHANNEL: 0.040 (EXISTING)
OVERBANK: 0.040 CHANNEL: 0.040, 0.090, 0.067 (PROPOSED)
DEBRIS:
☐ BRUSH ☐ TREES/LOGS ☐ ICE ■ NONE
HYDROLOGY DATA:
TWO SETS OF FLOOD FREQUENCY DATA WERE USE FOR THE ANALYSIS OF THE PROPOSED LORSON BRIDGE. THE FIRST SET OF DISCHARGES WERE TAKEN FROM THE LOMR PREPARED FOR THE CHANNEL REALIGNMENT AND CONSTRUCTION OF FONTAINE BOULEVARD BRIDGE OVER JIMMY CAMP CREEK, SUBMITTED TO FEMA AND EFFECTIVE AUGUST 29, 2007. THE SECOND SET OF PEAK DISCHARGES ARE TAKEN FROM THE DRAINAGE BASIN PLANNING STUDY (DBPS) OF JIMMY CAMP CREEK, PREPARED BY KIOWA ENGINEERING CORPORATION, DATED MARCH OF 2015.

GEOTECHNICAL DATA:

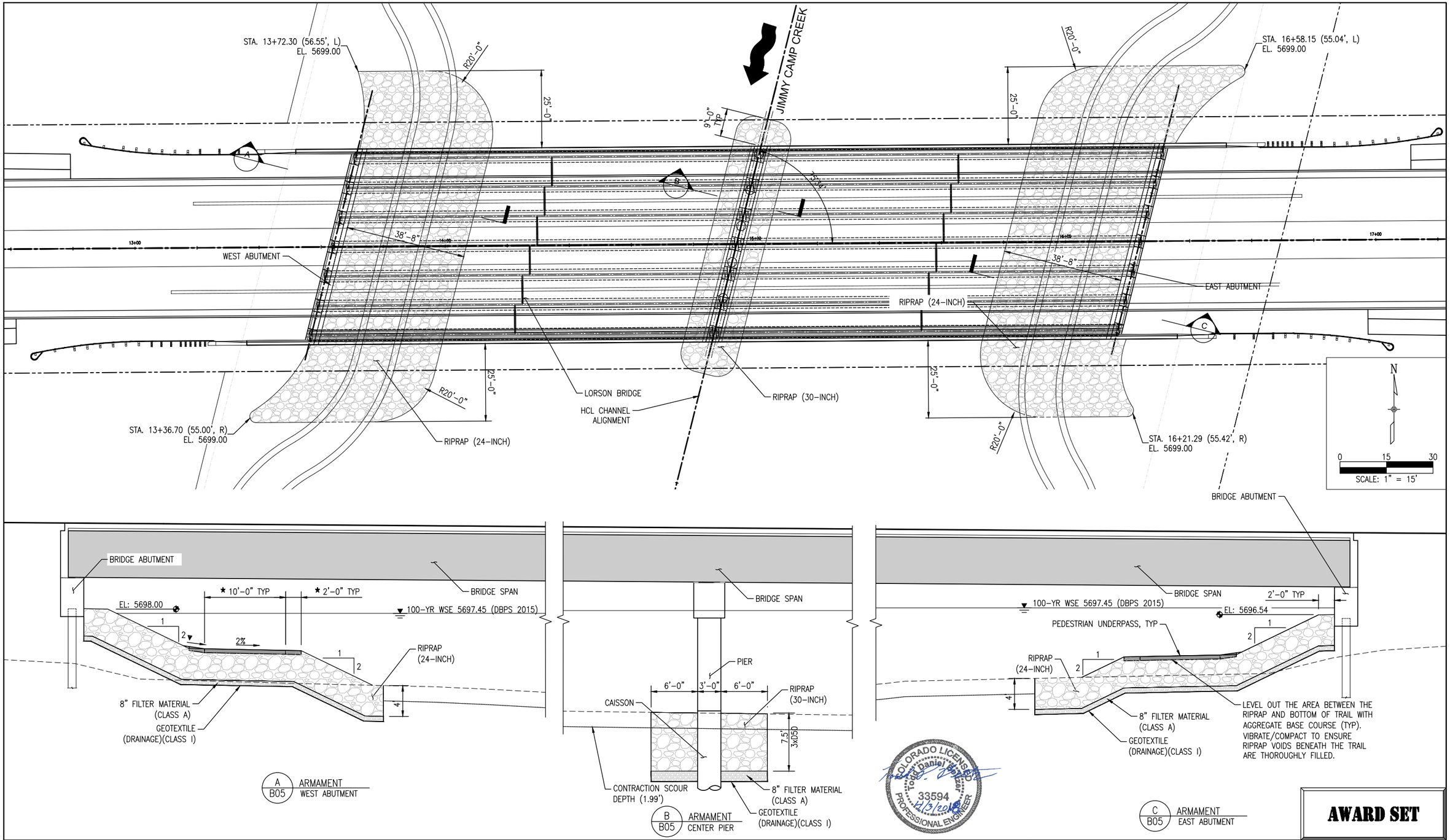
BOTTOM MATERIAL:
☐ COHESIVE ■ NON–COHESIVE
BOTTOM MATERIAL SIZE:
☐ CLAY ■ SILT ■ SAND
☐ GRAVEL ☐ COBBLES ☐ OTHER
STREAM PLANFORM:
■ STRAIGHT ☐ MEANDERING ☐ BRAIDED
CHANNEL STABILITY:
■ STABLE ☐ AGGRADING ☐ DEGRADED
ICE:
☐ YES ■ NO ☐ UNKNOWN

BRIDGE SECTION
0 10 20
SCALE: 1" = 20'
1" = 20' HORIZ
1" = 10' VERT



G:\7-2 Clients\369 - Lorson\16136 - Lorson Bridge\50 DWG\16136 (B04-B05) Hydraulic Data.dwg Apr 03, 2018 - 11:21am

Print Date:		Sheet Revisions			Loris A DIVISION OF OTAK	LORSON RANCH THE LANDHUS COMPANY 212 N. WASATCH, SUITE 301 COLORADO SPRINGS, CO 80903 PHONE: 719-635-3200	CORE ENGINEERING GROUP 212 N. WAHSATCH AVE., SUITE 206 COLORADO SPRINGS, CO 80903 PH: 719.570.1100 FAX: 719.570.1106 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich5@ceg1.com	As Constructed	LORSON BRIDGE HYDRAULIC DATA (SHEET 1)		Project No./Code
File Name:		Date:	Comments	Init.				No Revisions:				–
Horiz. Scale:	Vert. Scale: As Noted							Revised:	Designer: CJB	Structure Numbers		–
Unit Information	Unit Leader Initials							Void:	Detailer: CJB			Sheet Number B04
									Sheet Subset:	Subset Sheets:		



AWARD SET

Print Date:	Sheet Revisions		
File Name:	Date:	Comments	Init.
Horiz. Scale: Vert. Scale: As Noted			
Unit Information Unit Leader Initials			

Loris — A DIVISION OF OTAK

LORSON RANCH
THE LANDHUS COMPANY
212 N. WASATCH, SUITE 301
COLORADO SPRINGS, CO 80903
PHONE: 719-635-3200

CORE ENGINEERING GROUP
212 N. WAHSATCH AVE., SUITE 206
COLORADO SPRINGS, CO 80903
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FAX: 719.570.1106
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: RichS@ceg1.com

As Constructed
No Revisions:
Revised:
Void:

LORSON BRIDGE
HYDRAULIC DATA
(SHEET 2)

Designer:	CJB	Structure Numbers	
Detailer:	CJB		
Sheet Subset:		Subset Sheets:	

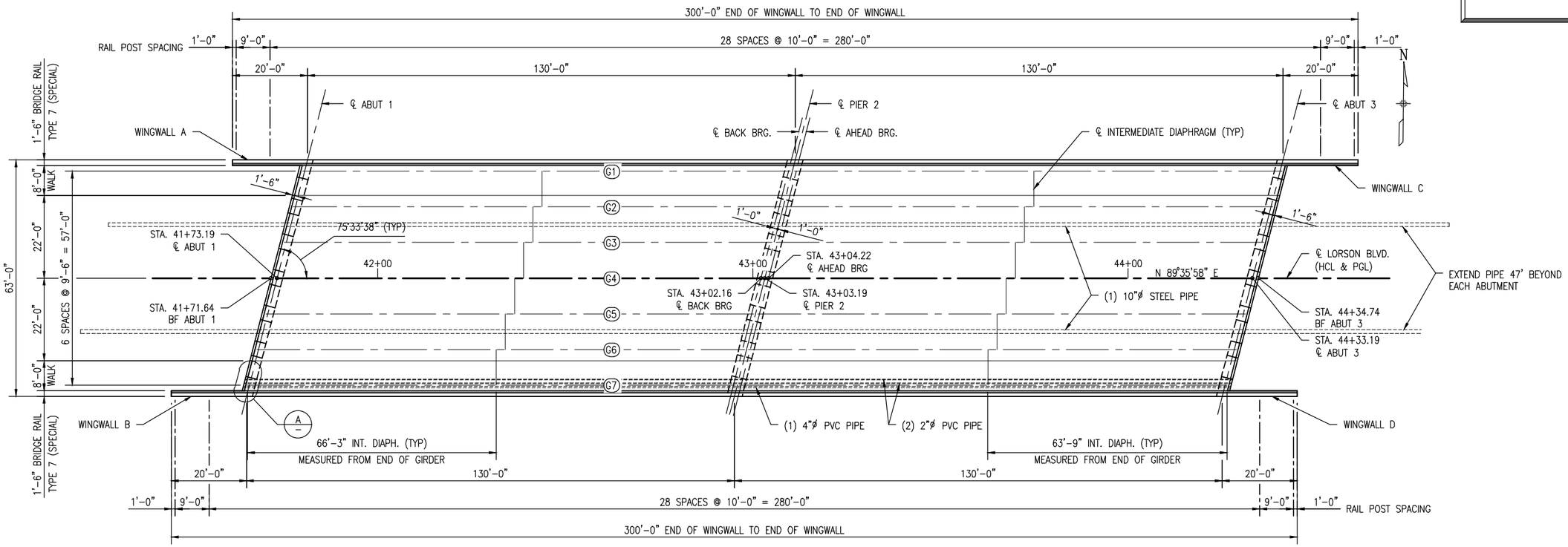
Project No./Code: –

–

Sheet Number B05

G:\7-2 Clients\369 - Lorson\16136 - Lorson Bridge\50 DWG\16136 (B04-B05) Hydraulic Data.dwg Apr 03, 2018 - 11:21am

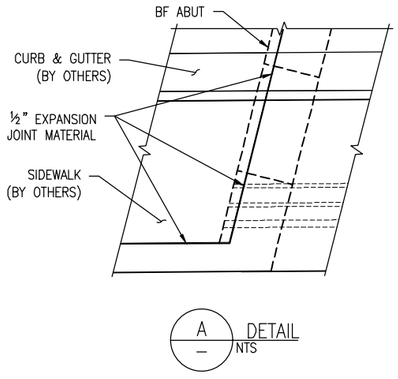
AWARD SET



CONSTRUCTION LAYOUT

0 15 30

SCALE: 1" = 30'



A — DETAIL

NTS

NOTES

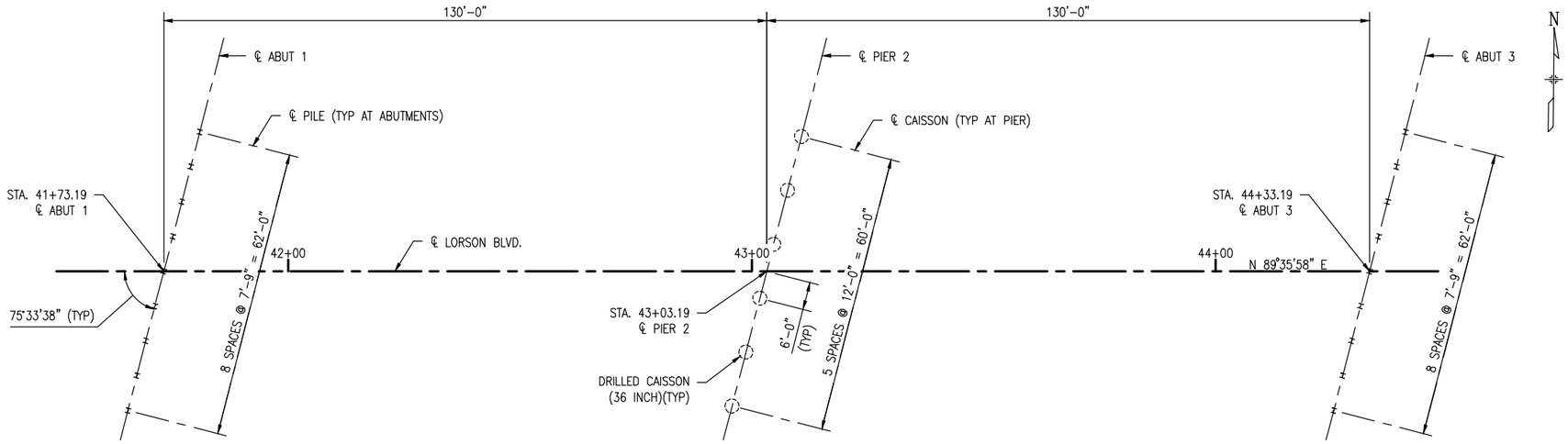
1. INTERMEDIATE DIAPHRAGMS MEASURED FROM GIRDER END.
2. SEE SHEET B16 FOR UTILITY DETAILS.

COLORADO LICENSED
Todd Daniel Bjorn
33594
11/3/2018
PROFESSIONAL ENGINEER

Print Date:		Sheet Revisions			Loris A DIVISION OF OTAK	LORSON RANCH THE LANDHUIS COMPANY 212 N. WASATCH, SUITE 501 COLORADO SPRINGS, CO 80903 PHONE: 719-635-3200	CORE ENGINEERING GROUP 212 N. WAHSATCH AVE., SUITE 206 COLORADO SPRINGS, CO 80903 PH: 719.570.1100 FAX: 719.570.1106 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: RichS@ceg1.com	As Constructed	LORSON BRIDGE CONSTRUCTION LAYOUT	Project No./Code
File Name:		Date:	Comments	Init.				No Revisions:		–
Horiz. Scale:	Vert. Scale: As Noted							Revised:	Designer: TDB / Structure Numbers	–
Unit Information	Unit Leader Initials							Void:	Detailer: JWJ	Sheet Number B06
									Sheet Subset: / Subset Sheets:	

G:\7.2 Clients\369 - Lorson\16136 - Lorson Bridge\50 DWG\16136 (B06) Construction Layout.dwg Apr 03, 2018 - 11:15am

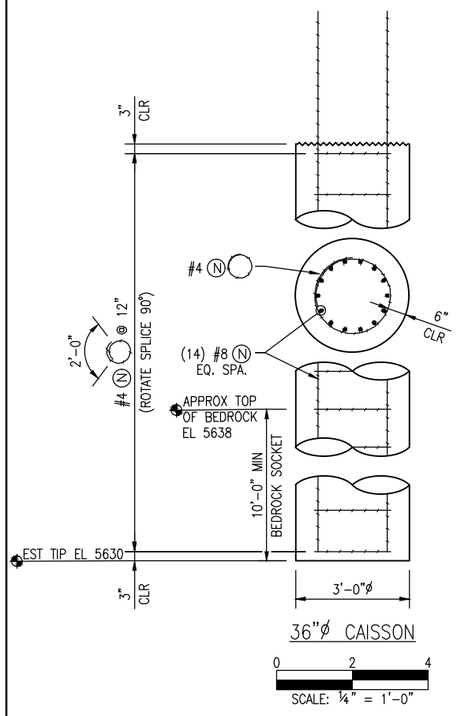
AWARD SET



FOUNDATION LAYOUT

0 15 30

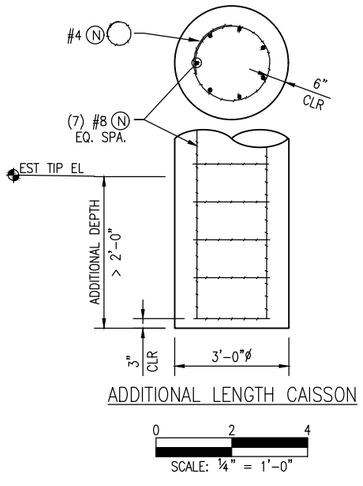
SCALE: 1" = 30'



36"ø CAISSON

0 2 4

SCALE: ¼" = 1'-0"



ADDITIONAL LENGTH CAISSON

0 2 4

SCALE: ¼" = 1'-0"

CAISSON DATA

LOCATION	CAISSON SIZE	TOP OF CAISSON ELEV.	EST. BEDROCK ELEV.	MINIMUM PENETRATION INTO BEDROCK (FT)	EST TIP ELEV.	FACTORED MAXIMUM LOADS (TONS)
PIER 2	36"ø	5682.0	5638.0	10.0	5628.0	390

PILING DATA

LOCATION	PILE SIZE	PILE CUTOFF ELEV.	EST. BEDROCK ELEV.	EST PENETRATION INTO BEDROCK (FT)	EST TIP ELEV.	FACTORED MAXIMUM LOADS (TONS)
ABUTMENT 1	HP 14x89	5697.35	5631.0	3.0	5628.0	178
ABUTMENT 3	HP 14x89	5695.40	5642.5	3.0	5639.5	178

COLORADO LICENSED
Todd Daniel Brown
33594
12/3/2018
PROFESSIONAL ENGINEER

NOTES:

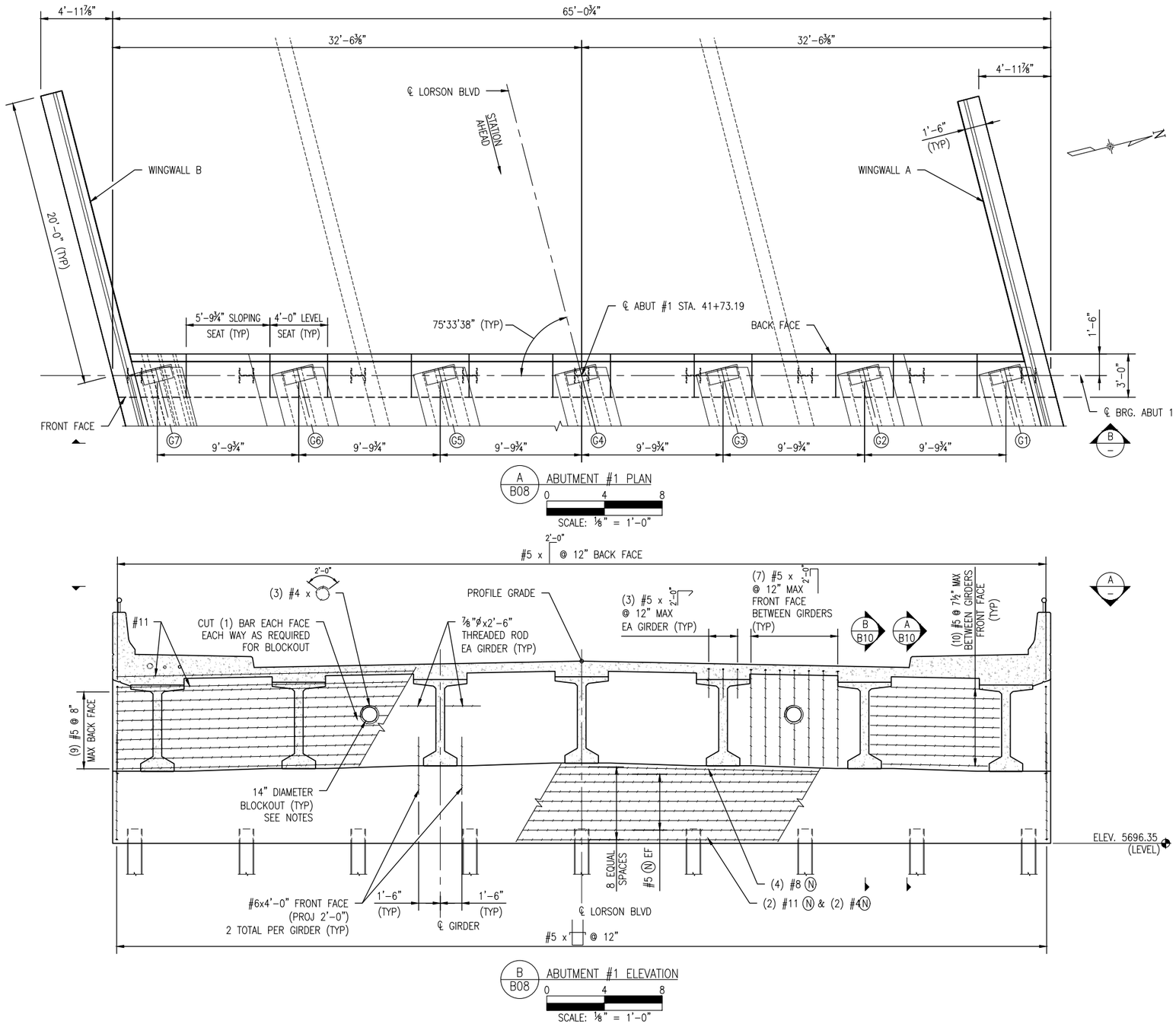
1. ALL PILING SHALL BE DRIVEN TO REFUSAL.
2. PILE TIPS ARE NOT REQUIRED. IF HOWEVER, UNEXPECTED HARD DRIVING CONDITIONS ARE ENCOUNTERED, PILE TIPS SHALL BE INSTALLED. PILE TIPS SHALL BE COMMERCIAL TIP APF HARD BITE 77600, 77750, DFP H-776, VERSA-STEEL VS-300, CONSTRUCTION SUPPLY HT-3300, OR APPROVED ALTERNATE.
3. CAISSON CONCRETE SHALL BE CONCRETE CLASS BZ AND REINFORCING STEEL SHALL BE GRADE 60.
4. BARS PROJECTING FROM TOP OF CAISSON SHALL BE PLACED TO FIT INSIDE THE REINFORCING CAGE OF THE PIER COLUMN.
5. PILING SHALL BE ASTM A709 GR 50.
6. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
7. THE BOTTOM OF THE CAISSON SHALL EXTEND THE MINIMUM PENETRATION SHOWN IN THE "CAISSON DATA", OR TO THE ESTIMATED TIP ELEVATION, WHICHEVER PRODUCES THE LOWER ELEVATION.
8. IF ADDITIONAL DEPTH IS REQUIRED FOR BEDROCK EMBEDMENT, THE CAISSON SHALL BE EXTENDED AS SHOWN IN ADDITIONAL LENGTH DETAIL.
9. THE FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL ENGINEERING STUDY PREPARED BY ROCKY MOUNTAIN GROUP, JOB NO. 155271, DATED APRIL, 2017.
10. THE CAISSONS ARE DESIGNED USING AASHTO LRFD METHODOLOGY WITH THE FOLLOWING PARAMETERS:
    - ULTIMATE BEARING CAPACITY = 150.5 KSF
    - RESISTANCE FACTOR FOR END BEARING = 0.50
    - ULTIMATE SIDE SHEAR RESISTANCE = 17.4 KSF
    - RESISTANCE FACTOR FOR SIDE SHEAR = 0.45
11. THE DRIVEN PILES ARE DESIGNED USING AASHTO LRFD METHODOLOGY WITH THE FOLLOWING PARAMETERS:
    - ULTIMATE PILE STRESS = 40 KSI
    - RESISTANCE FACTOR = 0.65
12. THIS RESISTANCE FACTOR IS BASED ON A MINIMUM OF ONE PILE PER ABUTMENT BEING TESTED BY PDA TO THE MAXIMUM FACTORED LOAD SHOWN FOR THAT LOCATION.

G:\7.2 Clients\369 - Larson\16136 - Larson Bridge\50 DWG\16136 (B07) Foundation Layout.dwg Apr 03, 2018 - 11:15am

Print Date:		Sheet Revisions			Loris A DIVISION OF OTAK	LORSON RANCH THE LANDHUIS COMPANY 212 N. WASATCH, SUITE 901 COLORADO SPRINGS, CO 80903 PHONE: 719-636-2200	CORE ENGINEERING GROUP 212 N. WAHSATCH AVE., SUITE 206 COLORADO SPRINGS, CO 80903 PH: 719.570.1100 FAX: 719.570.1106 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: RichS@cegl.com	As Constructed	LORSON BRIDGE FOUNDATION LAYOUT	Project No./Code
File Name:		Date:	Comments	Init.				No Revisions:		–
Horiz. Scale:	Vert. Scale: As Noted							Revised:	Designer: TDB / Structure Numbers	–
Unit Information	Unit Leader Initials							Void:	Detailer: JWJ	Sheet Number B07
									Sheet Subset: / Subset Sheets:	

AWARD SET

Know what's **below.** **Call** before you dig.



SEAT ELEVATIONS

GIRDER	ELEVATION
G1	5701.35
G2	5701.55
G3	5701.75
G4	5701.96
G5	5701.79
G6	5701.62
G7	5701.44

COLORADO LICENSED Todd Daniel Jones 33594 11/3/2018 PROFESSIONAL ENGINEER

NOTES

1. ABUTMENT SHALL BE CONCRETE CLASS D.
2. DECK AND DIAPHRAGM SHALL BE PLACED MONOLITHICALLY.
3. SEAT ELEVATIONS SHOWN ARE AT ℄ ABUTMENT AND ℄ GIRDER.
4. FOR WINGWALL REINFORCING PROJECTING INTO ABUTMENT SEE SHEET B11.
5. FOR SIDEWALK REINFORCING PROJECTING INTO ABUTMENT SEE SHEET B16.
6. FOR BRIDGE RAIL REINFORCING PROJECTING INTO ABUTMENT SEE SHEET B22.
7. THREADED ROD SHALL BE PLACED IN ⅞"ø INSERTS PROVIDED IN GIRDERS.
8. PLACE STIRRUP REINFORCING PARALLEL TO ℄ GIRDER.
9. AFTER INSTALLATION OF CONDUIT, SEAL GAP BETWEEN THE CONDUIT AND THE BLOCKOUT WITH MASTIC.

Print Date:		Sheet Revisions	
File Name:		Date: / Comments / Init.	
Horiz. Scale:	Vert. Scale: As Noted		
Unit Information	Unit Leader Initials		

Loris — A DIVISION OF OTAK

LORSON RANCH — THE LANDHUS COMPANY, 212 N. WAHSATCH, SUITE 301, COLORADO SPRINGS, CO 80903, PHONE: 719-635-3200

CORE ENGINEERING GROUP — 212 N. WAHSATCH AVE., SUITE 206, COLORADO SPRINGS, CO 80903, PH: 719.570.1100, FAX: 719.570.1106, CONTACT: RICHARD L. SCHINDLER, P.E., EMAIL: RichS@ceg1.com

As Constructed	
No Revisions:	
Revised:	
Void:	

LORSON BRIDGE
ABUTMENT#1 PLAN & ELEVATION

Designer:	TDB	Structure Numbers	
Detailer:	JWJ		
Sheet Subset:		Subset Sheets:	

Project No./Code: –

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Sheet Number: B08

G:\7-2 Clients\369 - Larson\16136 - Lorson Bridge\50 DWG\16136 (B08-B11) Abutment & Wingwall Details.dwg Apr 03, 2018 - 11:23am

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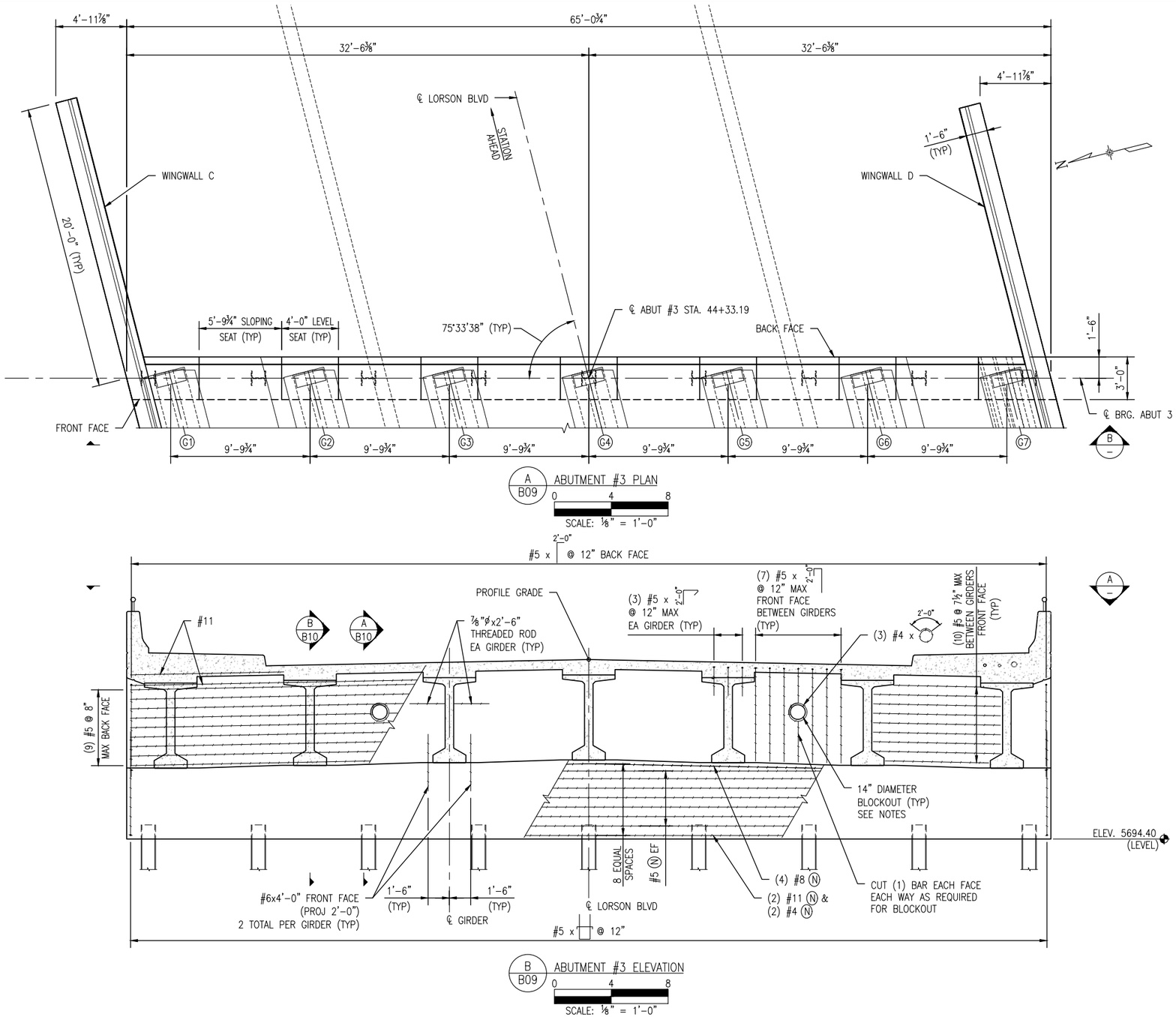

SEAT ELEVATIONS

GIRDER	ELEVATION
G1	5699.40
G2	5699.60
G3	5699.80
G4	5700.01
G5	5699.84
G6	5699.67
G7	5699.49

COLORADO LICENSED Todd Daniel Bazzel 33594 12/3/2018 PROFESSIONAL ENGINEER

NOTES

1. ABUTMENT SHALL BE CONCRETE CLASS D.
2. DECK AND DIAPHRAGM SHALL BE PLACED MONOLITHICALLY.
3. SEAT ELEVATIONS SHOWN ARE AT ℄ ABUTMENT AND ℄ GIRDER.
4. FOR WINGWALL REINFORCING PROJECTING INTO ABUTMENT SEE SHEET B11.
5. FOR SIDEWALK REINFORCING PROJECTING INTO ABUTMENT SEE SHEET B16.
6. FOR BRIDGE RAIL REINFORCING PROJECTING INTO ABUTMENT SEE SHEET B22.
7. THREADED ROD SHALL BE PLACED IN ⅞"ø INSERTS PROVIDED IN GIRDERS.
8. PLACE STIRRUP REINFORCING PARALLEL TO ℄ GIRDER.
9. AFTER INSTALLATION OF CONDUIT, SEAL GAP BETWEEN THE CONDUIT AND THE BLOCKOUT WITH MASTIC.

Print Date:	Sheet Revisions		
File Name:	Date:	Comments	Init.
Horiz. Scale: Vert. Scale: As Noted			
Unit Information Unit Leader Initials			

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CORE ENGINEERING GROUP — 212 N. WAHSATCH AVE., SUITE 206, COLORADO SPRINGS, CO 80903, PH: 719.570.1100, FAX: 719.570.1106, CONTACT: RICHARD L. SCHINDLER, P.E., EMAIL: RichS@ceg1.com

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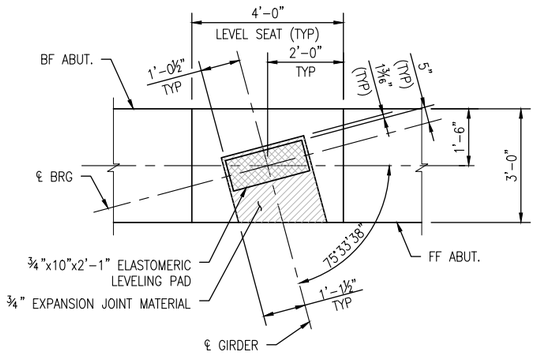
LORSON BRIDGE
ABUTMENT#3 PLAN & ELEVATION

Designer: TDB
Detailer: JWJ
Sheet Subset:
Structure Numbers
Subset Sheets:

Project No./Code: –
–
Sheet Number B09

G:\7-2 Clients\369 - Lorson\16136 - Lorson Bridge\50 DWG\16136 (B08-B11) Abutment & Wingwall Details.dwg Apr 03, 2018 - 11:23am

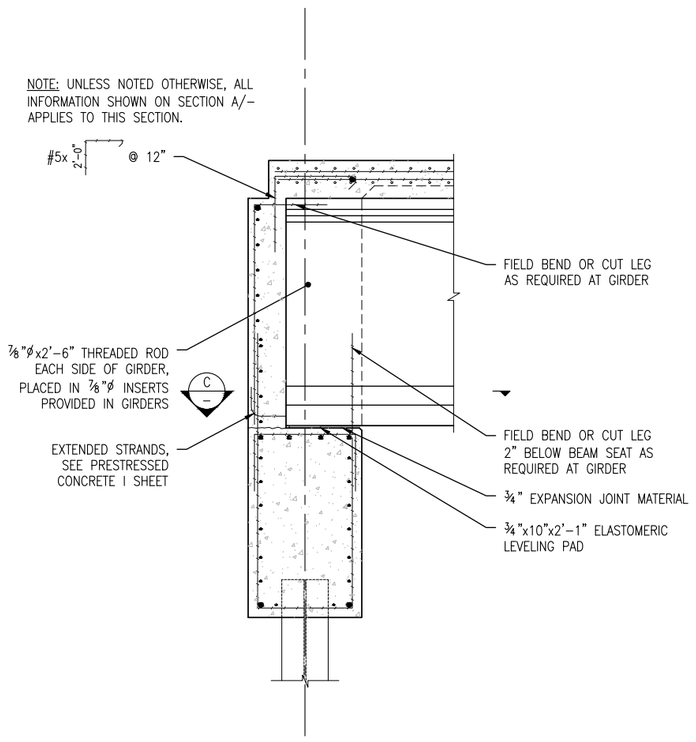
AWARD SET



C / B10 BEARING SEAT DETAIL

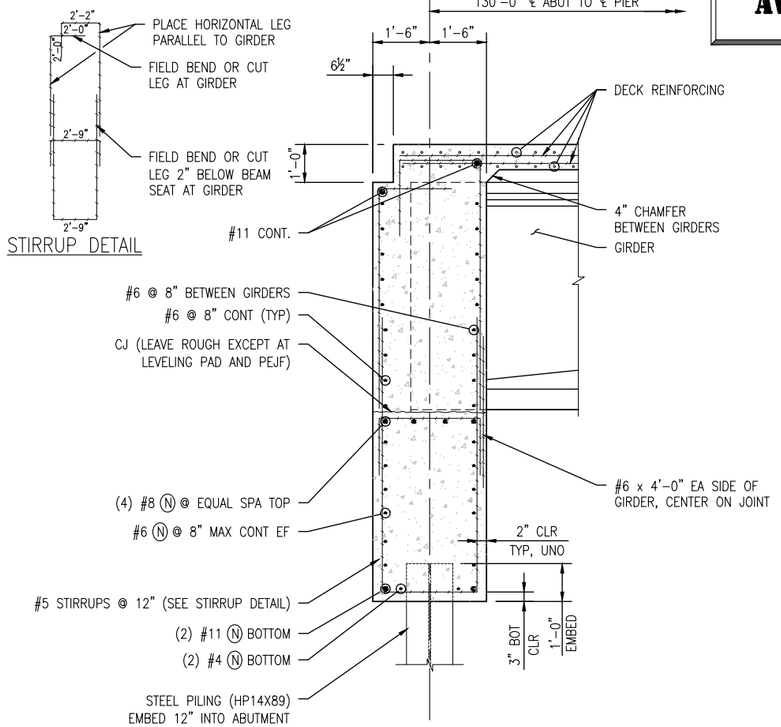
SCALE: ¼" = 1'-0"

NOTE: UNLESS NOTED OTHERWISE, ALL INFORMATION SHOWN ON SECTION A/– APPLIES TO THIS SECTION.



B / B10 TYPICAL ABUTMENT SECTION AT GIRDERS

SCALE: ¼" = 1'-0"



A / B10 TYPICAL ABUTMENT SECTION BETWEEN GIRDERS

SCALE: ¼" = 1'-0"

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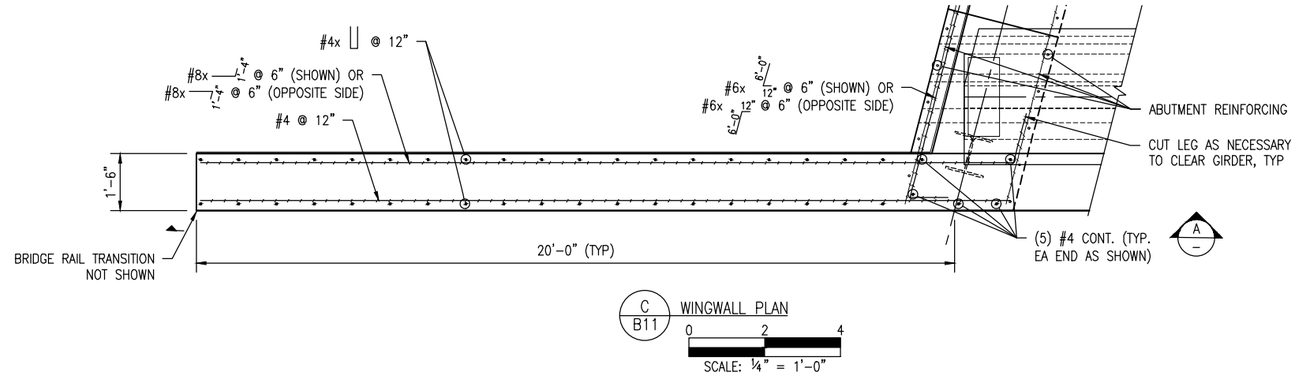
File Name:		Date:	Comments	Init.				No Revisions:		–
Horiz. Scale:	Vert. Scale: As Noted							Revised:	Designer: TDB / Detailer: TDB / Structure Numbers	–
Unit Information	Unit Leader Initials							Void:	Sheet Subset: / Subset Sheets:	Sheet Number B10

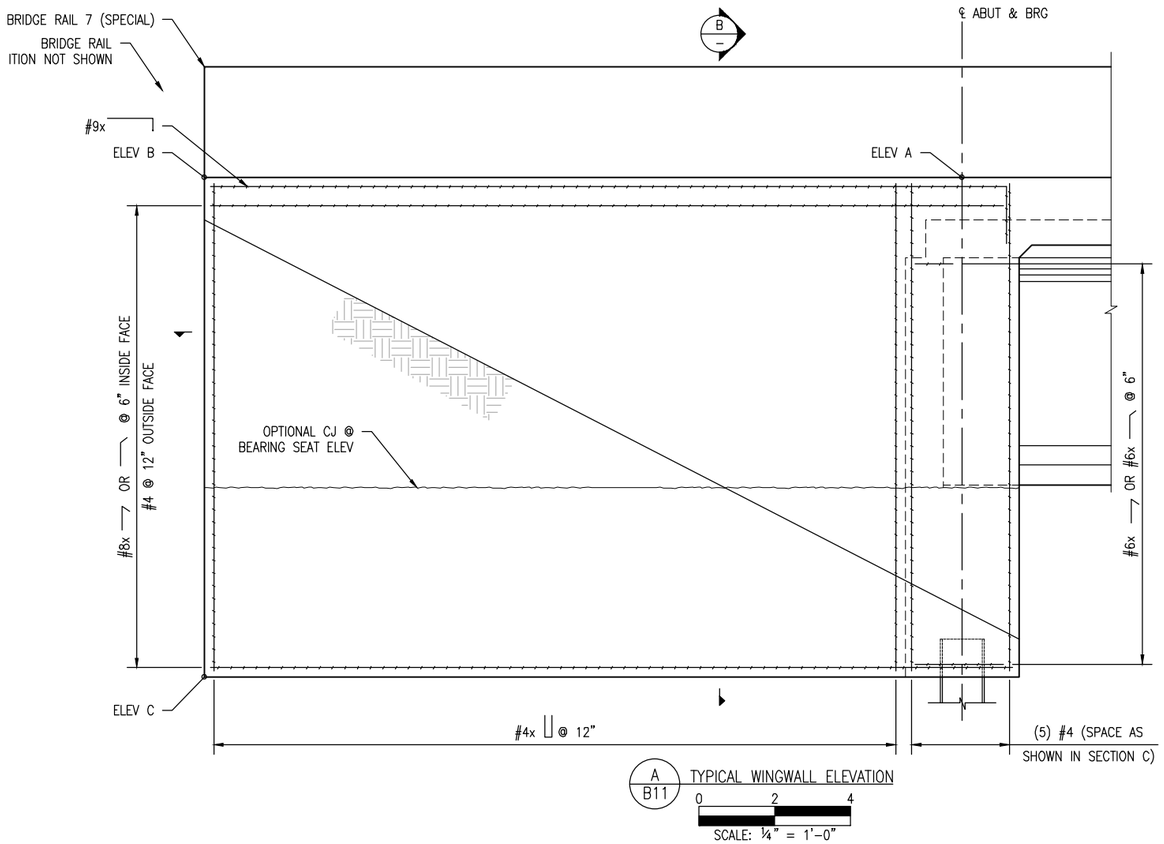
G:\7-2 Clients\369 - Lorson\16136 - Lorson Bridge\50 DWG\16136 (B08-B11) Abutment & Wingwall Details.dwg Apr 03, 2018 - 11:24am

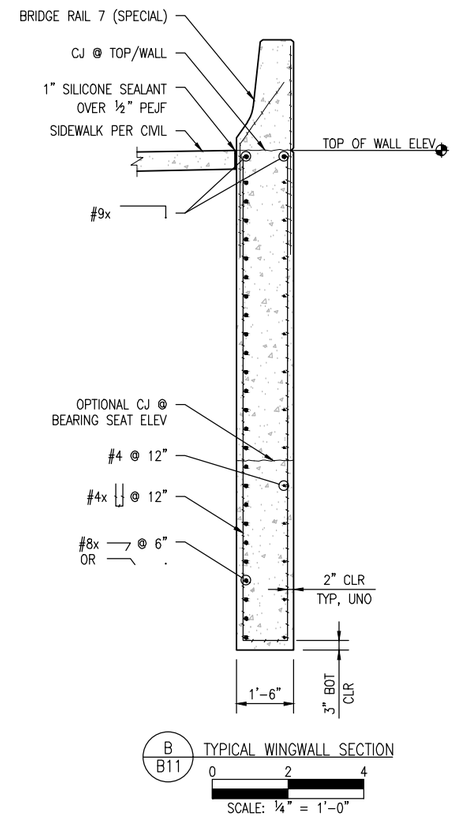
AWARD SET



WINGWALL ELEVATIONS			
WINGWALL	ELEV. A	ELEV. B	ELEV. C
A	5709.55	5709.70	5696.35
B	5709.67	5709.82	5696.35
C	5707.60	5707.45	5694.40
D	5707.72	5707.57	5694.40

Know what's **below.** **Call** before you dig.

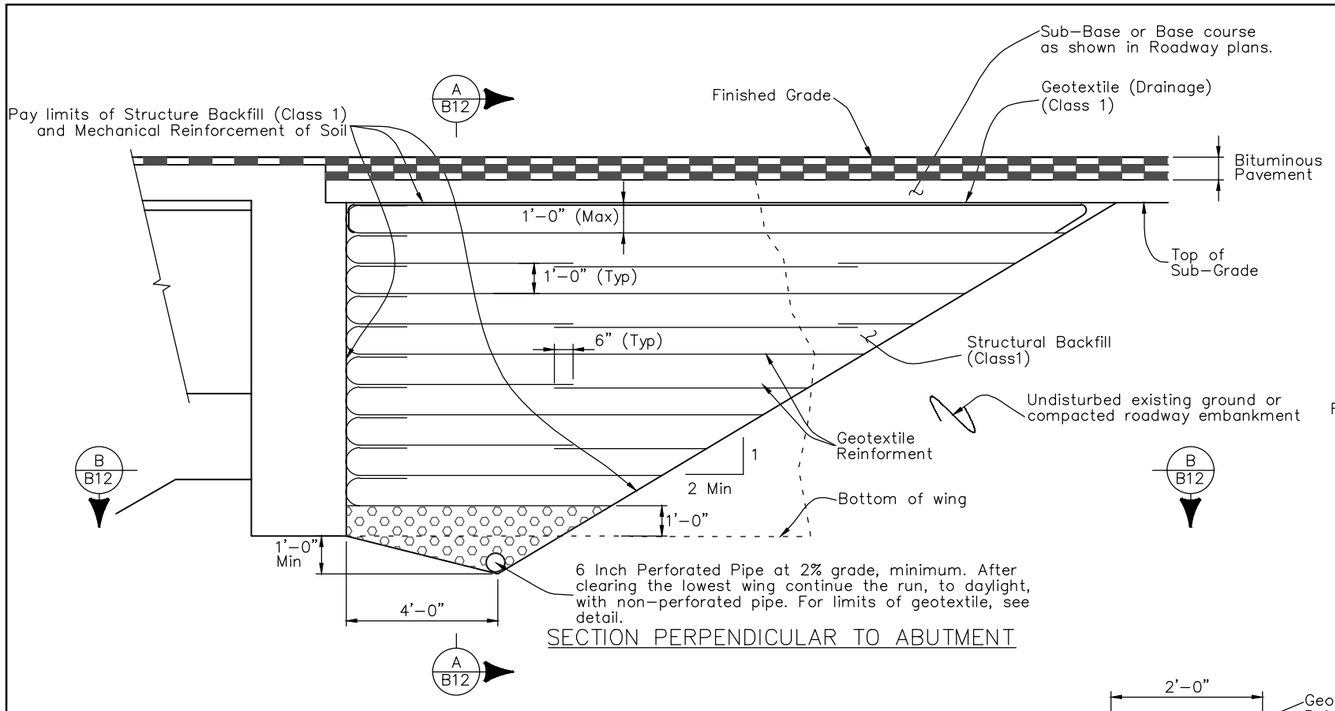




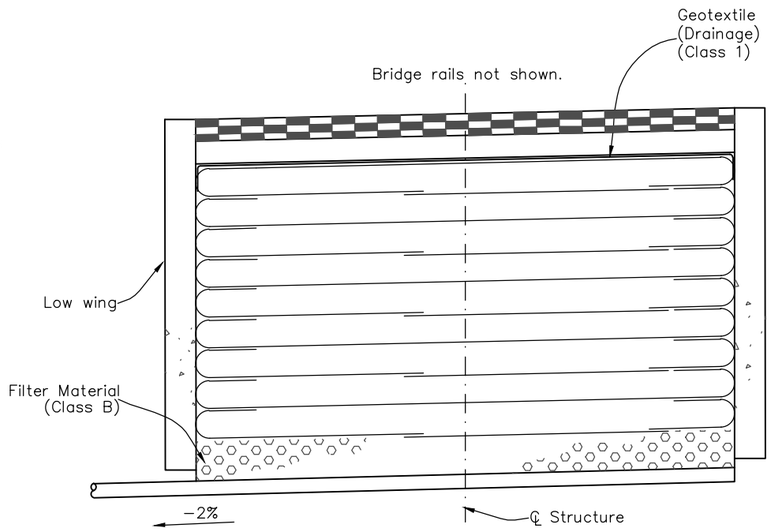
Print Date:		Sheet Revisions			Loris A DIVISION OF OTAK	LORSON RANCH THE LANDHUIS COMPANY 212 N. WASATCH, SUITE 301 COLORADO SPRINGS, CO 80903 PHONE: 719-635-3200	CORE ENGINEERING GROUP 212 N. WAHSATCH AVE., SUITE 206 COLORADO SPRINGS, CO 80903 PH: 719.570.1100 FAX: 719.570.1106 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich5@engf.com	As Constructed	LORSON BRIDGE WINGWALL DETAILS		Project No./Code
File Name:		Date:	Comments	Init.				No Revisions:			–
Horiz. Scale:	Vert. Scale: As Noted							Revised:	Designer: TDB	Structure Numbers	–
Unit Information	Unit Leader Initials							Void:	Detailer: TDB		Sheet Number B11
									Sheet Subset:	Subset Sheets:	

G:\7.2 Clients\369 - Lorson\16136 - Lorson Bridge\50 DWG\16136 (B08-B11) Abutment & Wingwall Details.dwg Apr 03, 2018 - 11:16am

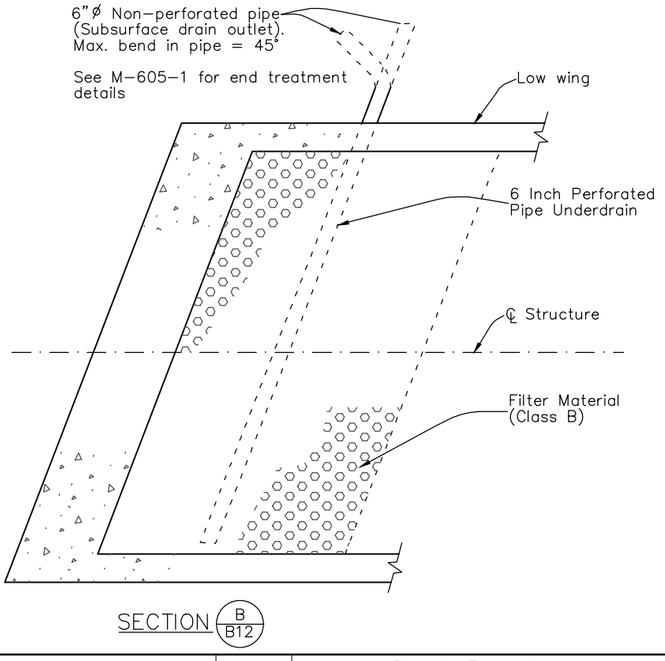
AWARD SET



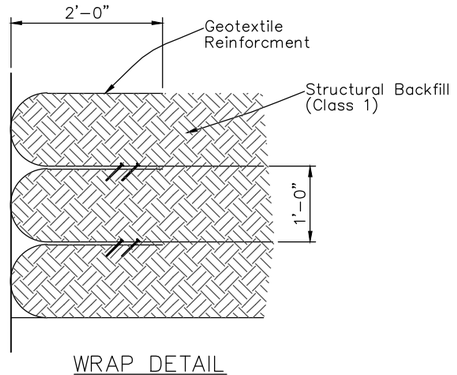
SECTION PERPENDICULAR TO ABUTMENT



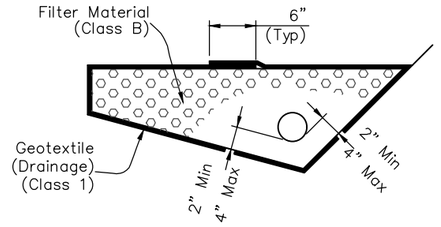
SECTION A B12



SECTION B B12



WRAP DETAIL



6 INCH PERFORATEDPIPE UNDERDRAIN

6 Inch Perforated Pipe Underdrain includes all Filter Material (Class B) and Geotextile (Drainage) (Class 1) surrounding the Filter Material (Class B).

NOTES:

Geotextile Reinforcement shall be woven fabric with a Minimum Average Roll Value of 2400 lb/ft based on ASTM D4595.

Geotextile Reinforcement shall be placed by alternating Machine Direction (MD) with Cross Machine Direction (XD) from layer to layer.

The Geotextile Reinforcement wrap at Back Face of Abutment shall be pulled back slack free with its end anchored to soil underneath with staples or pins.

Minimum splice of all Geofabric shall consist of 6" of overlap.

Payment for all work items shown will be made under item 206 Mechanical Reinforcement of Soil (CY) and item 206 Structure Backfill (Class 1) (CY) and shall include the cost for 6 Inch Perforated Pipe Underdrain and Subsurface Drain Outlet (6"Ø Non–Perforated Pipe).

Installation of Pipe Underdrain and Subsurface Drain Outlet will Conform to the Construction requirements of Section 605.03 and 605.06, respectively.

COLORADO LICENSED Todd D. Daniel 33594 11/3/2018 PROFESSIONAL ENGINEER

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File Name:		Date:	Comments	Init.				No Revisions:			–
Horiz. Scale:	Vert. Scale: As Noted							Revised:	Designer: TDB	Structure Numbers	–
Unit Information	Unit Leader Initials							Void:	Detailer: JWJ		Sheet Number B12
									Sheet Subset:	Subset Sheets:	

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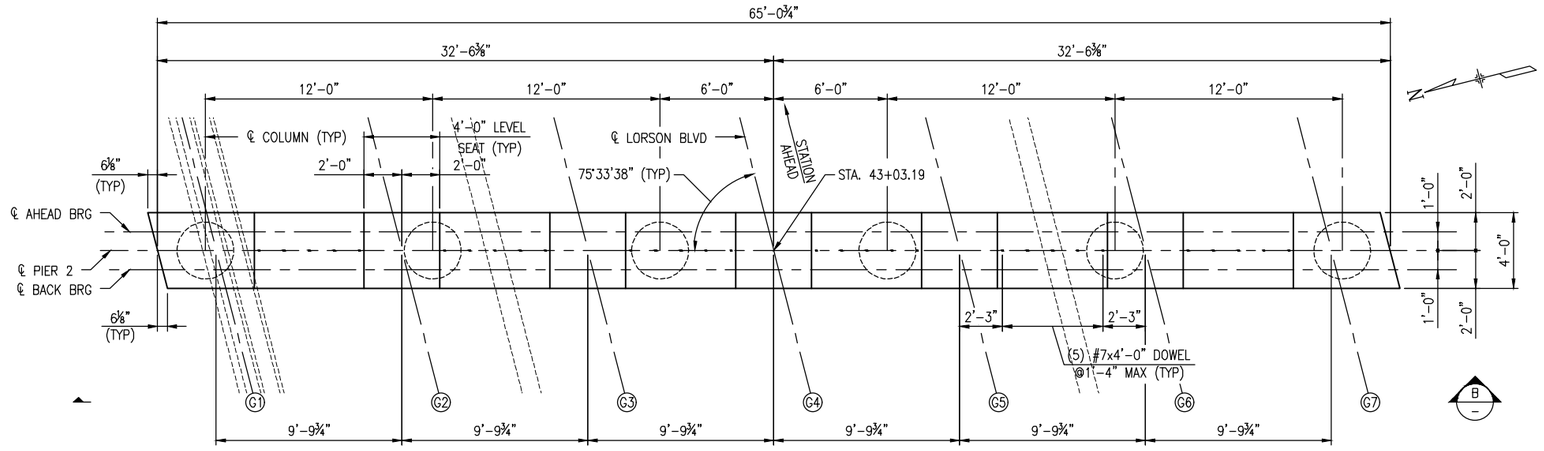
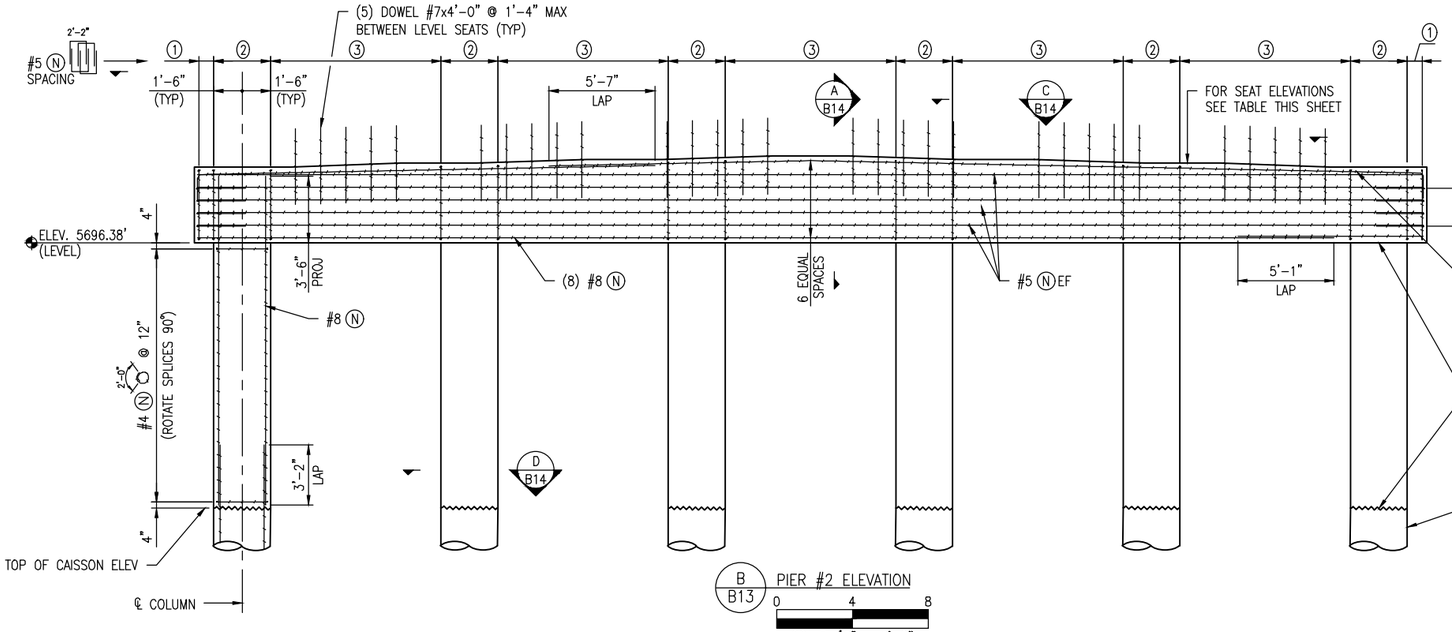


A / B13 PIER #2 PLAN

0 4 8

SCALE: ⅛" = 1'-0"



B / B13 PIER #2 ELEVATION

0 4 8

SCALE: ⅛" = 1'-0"

① (2) SPACES @ 9" MAX
② (3) SPACES @ 1'-0" = 3'-0"
③ (12) SPACES @ 9" = 9'-0"

SEAT ELEVATIONS

GIRDER	ELEVATION
G1	5700.38
G2	5700.57
G3	5700.78
G4	5700.99
G5	5700.82
G6	5700.65
G7	5700.47

NOTES

1. PIER SHALL BE CONCRETE CLASS D.
2. ALTERNATE LAP SPLICES AS SHOW.
3. SEAT ELEVATIONS SHOWN ARE AT ℄ PIER AND ℄ GIRDER
4. FOR TOP OF CAISSON ELEVATIONS SEE SHEET B07
5. FOR BEARING SEAT DETAIL SEE SHEET B13

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Print Date:	Sheet Revisions			As Constructed	LORSON BRIDGE PIER#2 PLAN & ELEVATION
File Name:	Date:	Comments	Init.	No Revisions:	
Horiz. Scale: Vert. Scale: As Noted				Revised:	Designer: TDB / Detailer: JWJ / Structure Numbers
Unit Information Unit Leader Initials				Void:	Sheet Subset: / Subset Sheets:
					Project No./Code: – / –
					Sheet Number B13

Loris — A DIVISION OF OTAK

LORSON RANCH — THE LANDHUIS COMPANY, 212 N. WASATCH, SUITE 301, COLORADO SPRINGS, CO 80903, PHONE: 719-635-3200

CORE ENGINEERING GROUP — 212 N. WASATCH AVE., SUITE 206, COLORADO SPRINGS, CO 80903, Ph: 719.570.1100, FAX: 719.570.1106, CONTACT: RICHARD L. SCHINDLER, P.E., EMAIL: RichS@cegi.com

G:\7.2 Clients\369 - Larson\16136 - Lorson Bridge\50 DWG\16136 (B13-B14) Pier Details.dwg Apr 03, 2018 - 11:16am

AWARD SET

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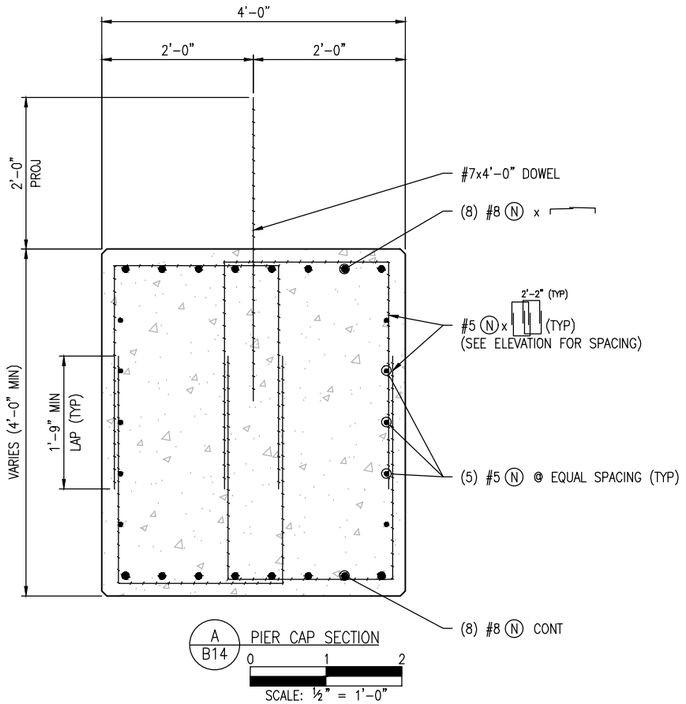
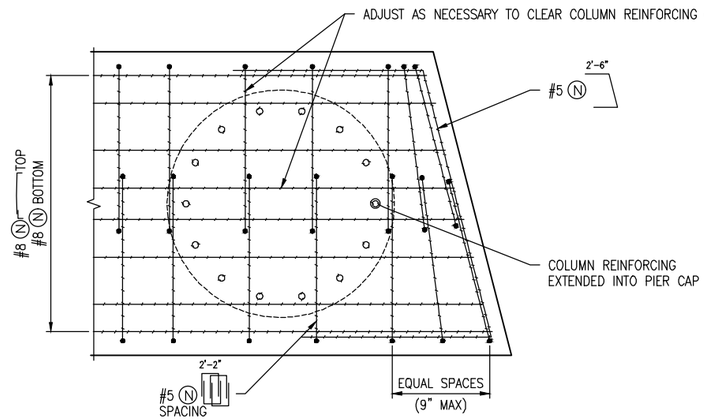


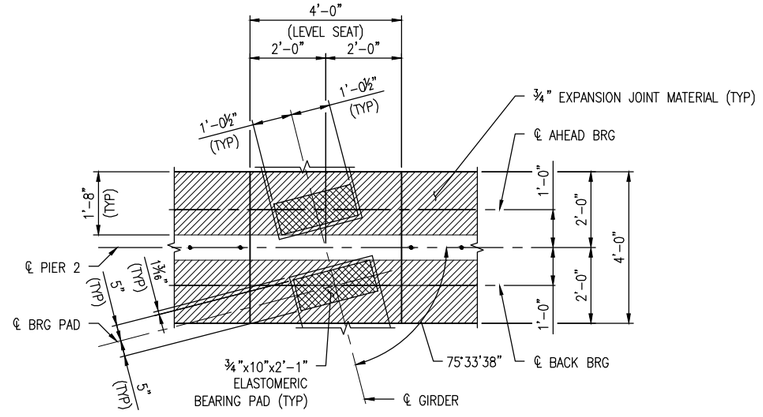
A / B14 PIER CAP SECTION

SCALE: ½" = 1'-0"



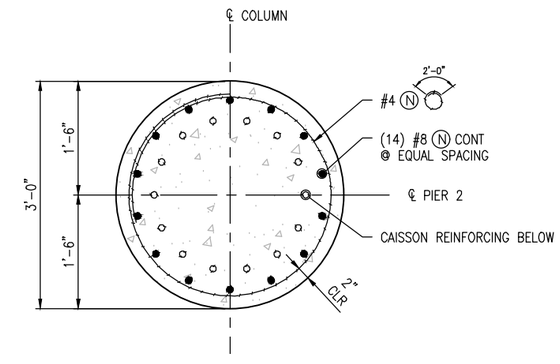
B / B14 PIER CAP END REINFORCING PLAN

SCALE: ½" = 1'-0"



C / B14 BEARING SEAT DETAILS

SCALE: ¼" = 1'-0"



D / B14 PIER COLUMN SECTION

SCALE: ½" = 1'-0"

COLORADO LICENSED Todd Daniel Bjerke 33594 12/3/2018 PROFESSIONAL ENGINEER

Print Date:	Sheet Revisions			
File Name:	Date:	Comments	Init.	
Horiz. Scale: Vert. Scale: As Noted				
Unit Information Unit Leader Initials				

Loris — A DIVISION OF OTAK

LORSON RANCH — THE LANDHUIS COMPANY, 212 N. WABASH, SUITE 301, COLORADO SPRINGS, CO 80903, PHONE: 719-955-9200

CORE ENGINEERING GROUP — 212 N. WAHSATCH AVE., SUITE 206, COLORADO SPRINGS, CO 80903, Ph: 719.570.1100, FAX: 719.570.1106, CONTACT: RICHARD L. SCHINDLER, P.E., EMAIL: RichS@engT.com

As Constructed
No Revisions:
Revised:
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LORSON BRIDGE
PIER#2 DETAILS

Designer:	TDB	Structure Numbers	
Detailer:	JWJ		
Sheet Subset:		Subset Sheets:	

Project No./Code: –

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Sheet Number B14

G:\7.2 Clients\369 - Lorson\16136 - Lorson Bridge\50 DWG\16136 (B13-B14) Pier Details.dwg Apr 03, 2018 - 11:16am

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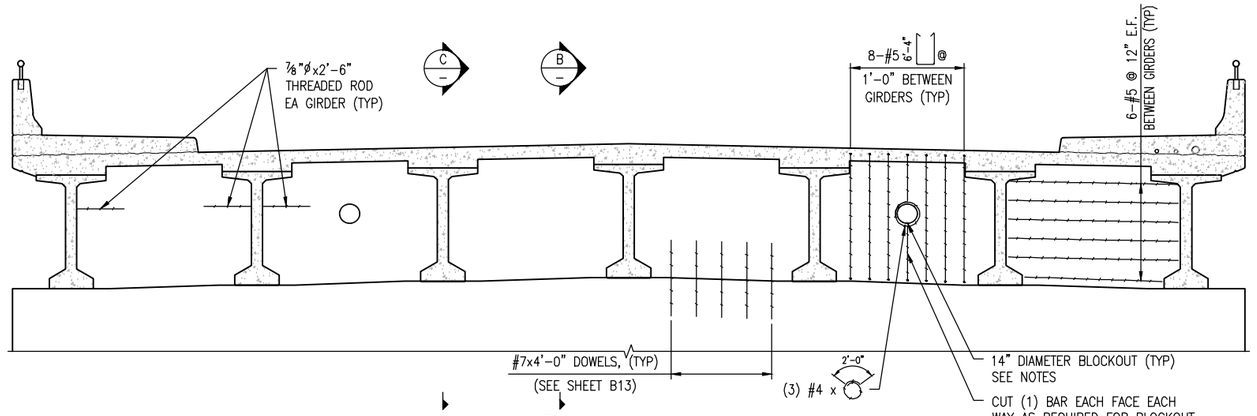
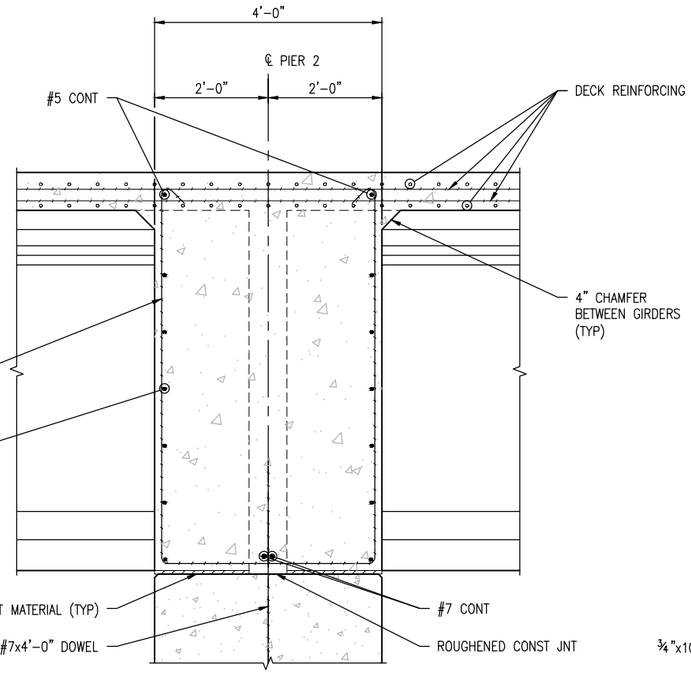


A/B15 PIER #2 ELEVATION

0 4 8

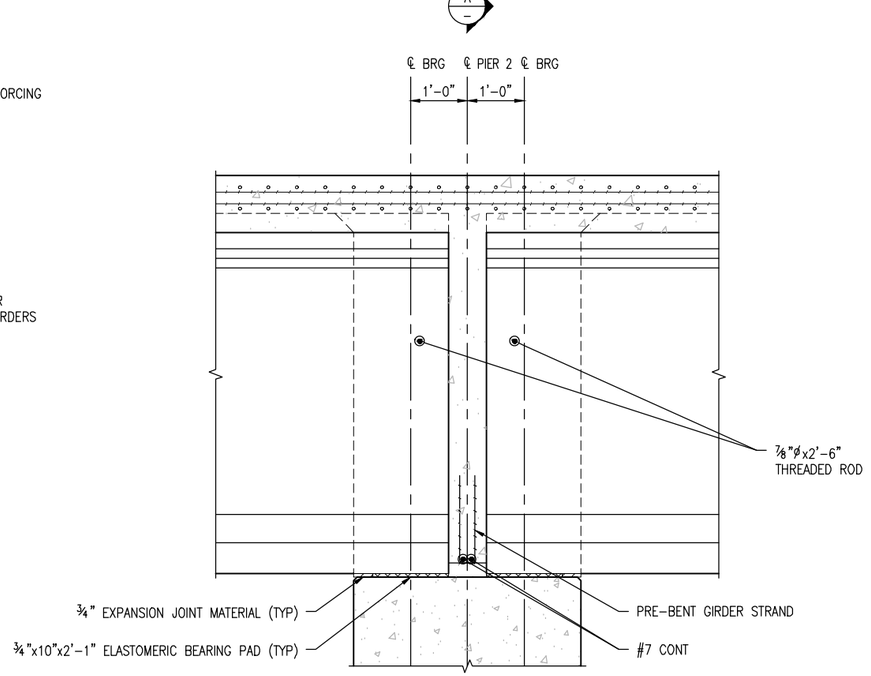
SCALE: ⅛" = 1'-0"



B/B15 DIAPHRAGM SECTION BETWEEN GIRDERS

0 1 2

SCALE: ⅜" = 1'-0"



C/B15 DIAPHRAGM SECTION AT GIRDER

0 1 2

SCALE: ⅜" = 1'-0"

COLORADO LICENSED Todd Daniel Blazer 33594 12/3/2018 PROFESSIONAL ENGINEER

NOTES

1. PIER DIAPHRAGM SHALL BE CONCRETE CLASS D.
2. DECK AND PIER DIAPHRAGM SHALL BE PLACED MONOLITHICALLY.
3. THREADED ROD SHALL BE PLACED IN ⅞"ø INSERTS PROVIDED IN GIRDERS. PROVIDE TWO BARS PER GIRDER END AT INTERIOR GIRDERS AND ONE BAR PER END AT EXTERIOR GIRDERS AS SHOWN.
4. PLACE STIRRUP REINFORCING PARALLEL TO ℄ GIRDER.
9. AFTER INSTALLATION OF CONDUIT, SEAL GAP BETWEEN THE CONDUIT AND THE BLOCKOUT WITH MASTIC.

Print Date:	Sheet Revisions			As Constructed	LORSON BRIDGE PIER#2 DIAPHRAGM DETAILS
File Name:	Date:	Comments	Init.	No Revisions:	
Horiz. Scale: Vert. Scale: As Noted				Revised:	Designer: TDB / Detailer: JWJ / Sheet Subset: / Structure Numbers / Subset Sheets:
Unit Information Unit Leader Initials				Void:	Project No./Code: – / – / Sheet Number B15

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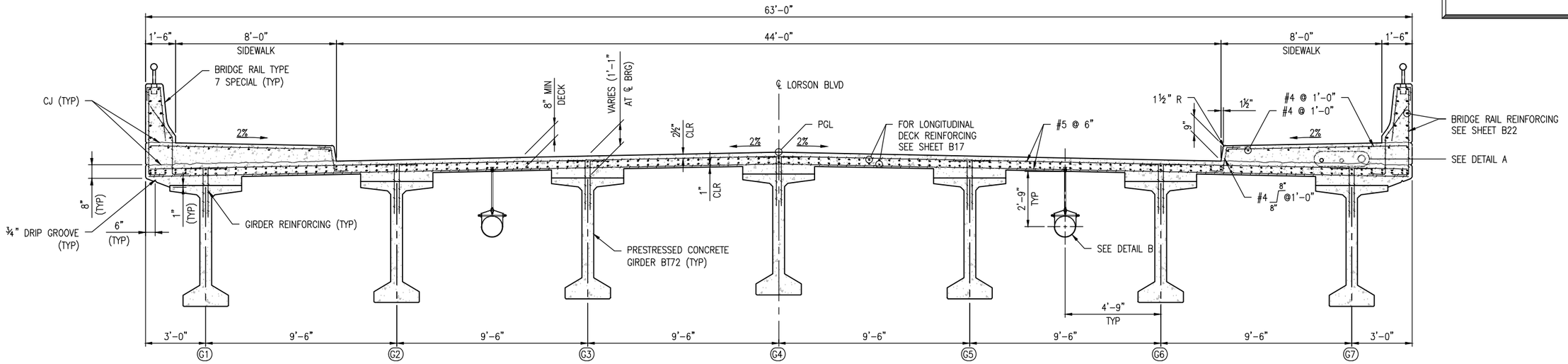
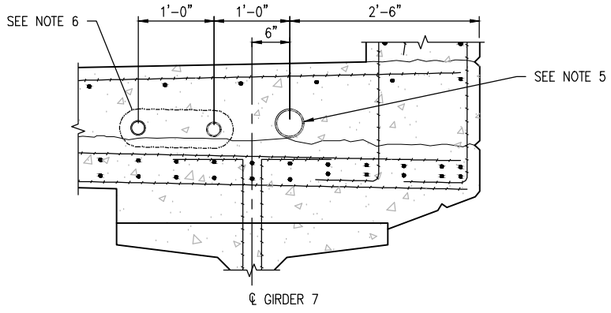
CORE ENGINEERING GROUP — 212 N. WAHSATCH AVE., SUITE 206, COLORADO SPRINGS, CO 80903, PH: 719.570.1100, FAX: 719.570.1106, CONTACT: RICHARD L. SCHINDLER, P.E., EMAIL: Rich5@cegl.com

G:\7.2 Clients\369 - Lorson\16136 - Lorson Bridge\50 DWG\16136 (B15) Pier Diaphragm.dwg Apr 03, 2018 - 11:16am

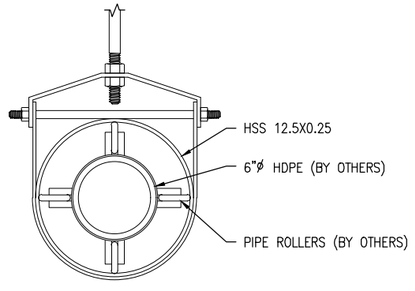
AWARD SET



TYPICAL SECTION
LOOKING UPSTATION
0 2 4
SCALE: 3/16" = 1'-0"



DETAIL A
0 1 2
SCALE: ½" = 1'-0"



DETAIL B
SEE NOTE 7
0 ½ 1
SCALE: 1" = 1'-0"

NOTES
1. DECK SHALL BE CONCRETE CLASS D.
2. SIDEWALK SURFACE SHALL BE BROOM-FINISHED IN ACCORDANCE WITH SECTION 608.
3. FOR BRIDGE RAIL REINFORCING PROJECTING FROM DECK, SEE SHEET B17.
4. PLACE TRANSVERSE BARS PARALLEL TO ℄ BRG.
5. FOR CENTURY LINK, PROVIDE (1) 4"ø SCHEDULE 80 PVC.
6. FOR COMCAST, PROVIDE (2) 2"ø SCHEDULE 80 PVC.
7. FOR MOUNTAIN VIEW ELECTRIC ASSOCIATION, INC. (MVEA), PROVIDE TWO (2); CARRIER PIPES, AND HANGER ASSEMBLY. CARRIER PIPE SHALL BE ASTM A847; Fy=50 KSI. HANGER ASSEMBLY SHALL BE GALVANIZED ADJUSTABLE CLEVIS HANGER WITH ⅞" ALL-THREAD RODS, HEX NUTS AND SCREW CONCRETE INSERT AS MANUFACTURED BY ANVIL INTERNATIONAL, INC. OR APPROVED EQUIVALENT. LONGITUDINAL SPACING SHALL BE 16'-0" MAX. SUBMIT SHOP DRAWINGS TO MVEA FOR APPROVAL PRIOR TO CONSTRUCTION.

COLORADO LICENSED Todd Daniel Jones 33594 11/30/18 PROFESSIONAL ENGINEER

Print Date:	Sheet Revisions			As Constructed
File Name:	Date:	Comments	Init.	No Revisions:
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LORSON BRIDGE
SUPERSTRUCTURE DETAILS

Designer:	TDB	Structure Numbers	
Detailer:	JWJ		
Sheet Subset:		Subset Sheets:	

Project No./Code: –
–
Sheet Number B16

G:\7.2 Clients\369 - Lorson\16136 - Lorson Bridge\50 DWG\16136 (B16) Superstructure Details.dwg Apr 03, 2018 - 11:16am

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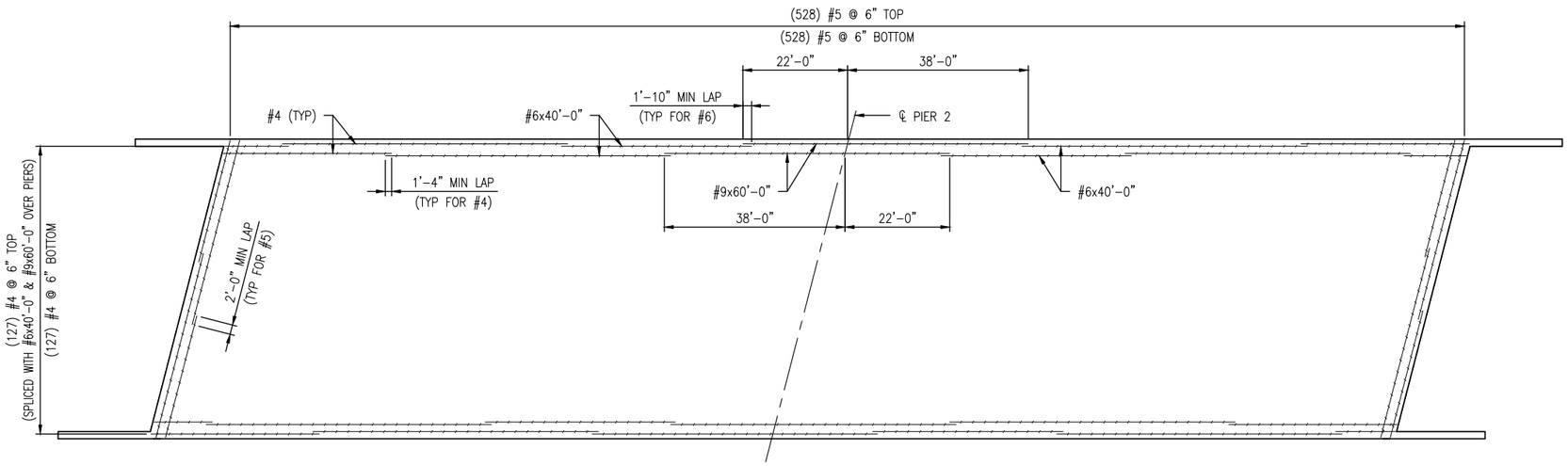

DECK PLAN – REINFORCING

0 15 30

SCALE: 1" = 30'

N

COLORADO LICENSED
Todd Daniel Zeller
33594
12/13/2018
PROFESSIONAL ENGINEER

NOTES

1. ALTERNATE LAP SPLICES AS SHOWN.
2. FOR TOP REINFORCING IN ABUTMENT DIAPHRAGMS SEE SHEET B10.
3. FOR REINFORCING IN SIDEWALK SEE SHEET B16.
4. FOR TOP REINFORCING IN PIER DIAPHRAGMS SEE SHEET B14.
5. FOR BRIDGE RAIL REINFORCING PROJECTIONG FROM DECK SEE SHEET B22.

Print Date:	Sheet Revisions		
File Name:	Date:	Comments	Init.
Horiz. Scale: Vert. Scale: As Noted			
Unit Information Unit Leader Initials			

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As Constructed
No Revisions:
Revised:
Void:

LORSON BRIDGE
DECK REINFORCING PLAN

Designer:	TDB	Structure Numbers	
Detailer:	JWJ		
Sheet Subset:		Subset Sheets:	

Project No./Code
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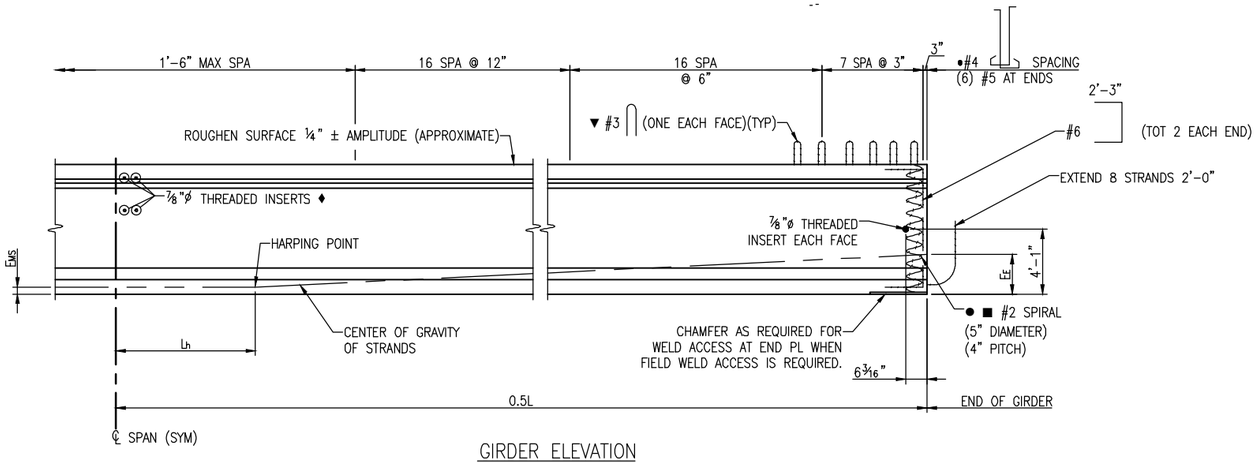
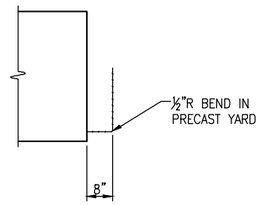
–
Sheet Number B17

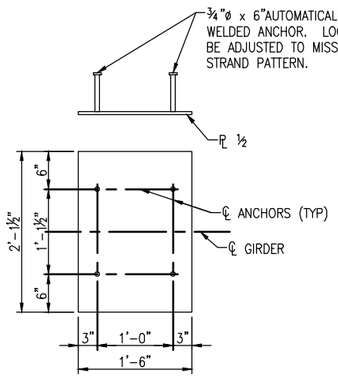
G:\7.2 Clients\369 - Lorson\16136 - Lorson Bridge\50 DWG\16136 (B17) Deck Reinforcing Plan.dwg Apr 03, 2018 - 11:25am



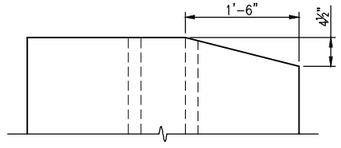
GIRDER ELEVATION



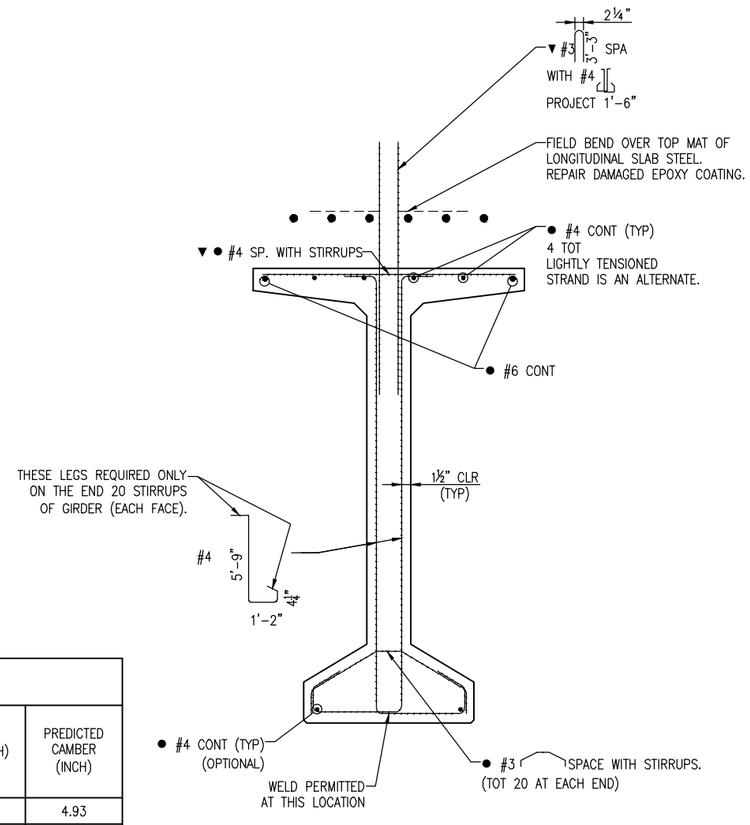
PRE-BENT STRAND DETAIL



END PLATE DETAIL
GALVANIZE AFTER FABRICATION.



TOP FLANGE CLIP DETAIL
CLIP TOP FLANGE AT ABUTMENT END ONLY. CLIP MAY BE FORMED OR SAWCUT FOLLOWING FABRICATION.



TYPICAL GIRDER SECTION

GIRDER SCHEDULE													
GIRDER TYPE	SPAN NO.	GIRDER NO.	L (FEET)	L_h (FEET)	A_s* (SQUARE INCH)	E_{MS} (INCH)	E_E (INCH)	F_i (KIPS)	F_f (KIPS)	CONCRETE STRENGTH f'_{ci} (PSI)	CONCRETE STRENGTH f'_c (PSI)	Δ (INCH)	PREDICTED CAMBER (INCH)
BT72	1 & 2	G1-G7	130'-0"	13'-0"	8.680	5.00	14.75	1757.7	1401.8	7500	9000	2.40	4.93

NOTES:

ALL WORK NECESSARY TO FABRICATE AND INSTALL THE INTEGRAL PARTS OF THE GIRDER (INCLUDING THE INTERMEDIATE DIAPHRAGMS, ⅞"ø THREADED RODS, AND LEVELING PADS), AS SHOWN ON THE PLANS, SHALL BE INCLUDED IN THE BID PRICE FOR ITEM NO. 618, PRESTRESSED CONCRETE I (BT72), WITH A PAY UNIT OF LF WHICH SHALL BE MEASURED BY DIMENSION L.

WHEN APPROVED BY THE ENGINEER, A MINIMUM OF TACK WELDING WILL BE PERMITTED ON ASTM A706 UNCOATED REINFORCING STEEL.

REINFORCING PROJECTING FROM THE TOP OF THE GIRDER AND REINFORCING WITHIN EIGHT FEET OF AN EXPANSION DEVICE IN THE BRIDGE DECK SHALL BE EPOXY COATED. DAMAGED COATING ON GIRDER REINFORCING NEED NOT BE REPAIRED. THE MINIMUM COVER FOR REINFORCING STEEL IS 1".

AT GIRDER ENDS NOT EMBEDDED IN CONCRETE DIAPHRAGMS, CUT STRANDS OFF 1" BELOW THE SURFACE OF THE CONCRETE AND FINISH WITH AN APPROVED EPOXY GROUT. AT GIRDER ENDS EMBEDDED IN CONCRETE DIAPHRAGMS, CUT STRANDS TO PROJECT 3", EXCEPT AS SHOWN. DO NOT MAKE COSMETIC REPAIRS (DAMAGE LESS THAN 1½" DEEP) TO THE PARTS OF THE GIRDERS EMBEDDED IN CONCRETE.

USE LOW RELAXATION STRANDS MEETING THE REQUIREMENTS OF ASTM A-416 GRADE 270. THE MINIMUM CLEAR DISTANCE BETWEEN GROUPS OR INDIVIDUAL STRANDS SHALL BE $2.3(d_s)$ BUT NOT LESS THAN 1¼". THE MINIMUM COVER FOR PRESTRESSING STEEL IS 1½".

A MINIMUM OF TWO HARPING POINTS SHALL BE USED PER GIRDER. HARPED STRANDS SHALL BE WELL DISTRIBUTED AT THE GIRDER ENDS, STARTING WITHIN 4" OF THE TOP OF THE GIRDER AND DISTRIBUTED SUCH THAT THERE IS NO SPACE BETWEEN STRANDS GREATER THAN 1'-0" AT THE END OF THE GIRDER. AS AN ALTERNATE THE CONTRACTOR MAY PLACE #4 X 10'-0" IN THE SIDES OF THE END OF THE WEB PARALLEL TO THE HARPED STRANDS SUCH THAT THERE IS NO SPACE GREATER THAN 1'-0".

A_s* = MINIMUM AREA OF THE PRESTRESSING STEEL.
d_s = NOMINAL STRAND DIAMETER.
f'_s = ULTIMATE STRENGTH OF PRESTRESSING STEEL.
F_i = JACKING FORCE PER GIRDER.
F_f = FINAL FORCE PER GIRDER AFTER ALL LOSSES.
f'_{ci} = REQUIRED CONCRETE STRENGTH AT RELEASE OF PRESTRESS FORCE.
f'_c = REQUIRED CONCRETE STRENGTH AT 28 DAYS OF AGE.
L = LENGTH OF GIRDER ALONG THE GRADE OF THE GIRDER.
Δ = DEFLECTION AT CENTERLINE OF SPAN DUE TO CAST-IN-PLACE SLAB, DIAPHRAGMS, ASPHALT, CURBS, RAILS, AND WALKS.

CONCRETE SHALL BE CLASS PS.

ENTRAINED AIR IS NOT REQUIRED FOR GIRDER CONCRETE.

USE ¼" CHAMFER ON ALL CORNERS, EXCEPT AS NOTED.

PREDICTED CAMBER IS THE CAMBER FOR THE GIRDER ALONE AT 60 DAYS. ACCEPTABLE CAMBER VARIABILITY IS LIMITED TO 20% OVER THE PREDICTED CAMBER AND 50% UNDER THE PREDICTED CAMBER OR 1 INCH, WHICHEVER IS GREATER. THE CONTRACTOR SHALL REPORT TO THE ENGINEER VALUES OF CAMBER WHICH REQUIRE REMEDIAL MEASURES. THE REMEDIAL MEASURES SHALL BE REVIEWED AND APPROVED BY THE ENGINEER. THE COSTS ASSOCIATED WITH ALL REMEDIAL MEASURES SHALL BE BORNE BY THE CONTRACTOR.

▼ SPACE WITH #4 FOR STIRRUP SPACINGS OF 9" OR MORE. SPACE AT 1'-0" FOR STIRRUP SPACINGS LESS THAN 9".

D20 WIRES MAY BE USED IN LIEU OF #4.
2 - D20 WIRES MAY BE USED IN LIEU OF #6.
D11 OR W10.9 WIRES MAY BE USED IN LIEU OF #3.
W5 WIRES MY BE USED IN LIEU OF #2.

■ THE CONTRACTOR MAY SUBMIT AN ALTERNATE CROSS TIE ARRANGEMENT, AT THE END OF THE WEB, FOR APPROVAL BY THE ENGINEER.

♦ SEE CONSTRUCTION LAYOUT FOR INTERMEDIATE DIAPHRAGM LOCATIONS.

AWARD SET

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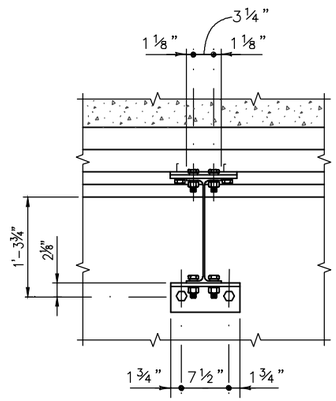
File Name:		Date:	Comments	Init.			
Horiz. Scale:	Vert. Scale: As Noted						
Unit Information	Unit Leader Initials						

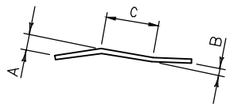
As Constructed	LORSON BRIDGE PRESTRESSED CONCRETE I (SHEET 1)			Project No./Code
No Revisions:				-
Revised:	Designer: TDB	Structure Numbers		-
Void:	Detailer: JWJ			
	Sheet Subset:	Subset Sheets:		Sheet Number B18

G:\7-2 Clients\369 - Lorson\16136 - Lorson Bridge\50 DWG\16136 (B18) Prestressed Concrete I - BT72.dwg Apr 03, 2018 - 11:16am

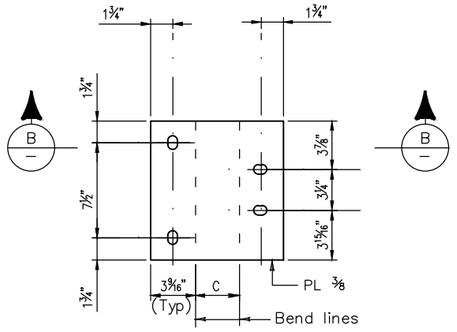
AWARD SET



SECTION A



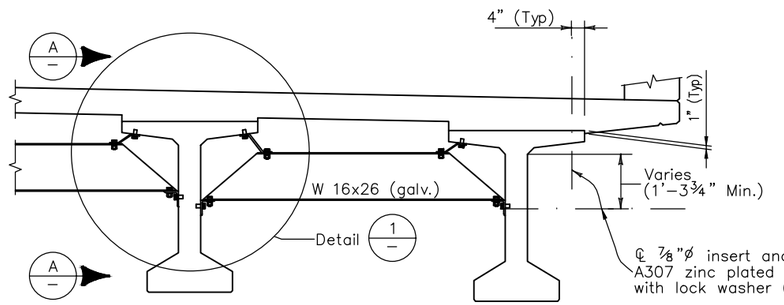
▲ SECTION B



PLAN
(Before bending)

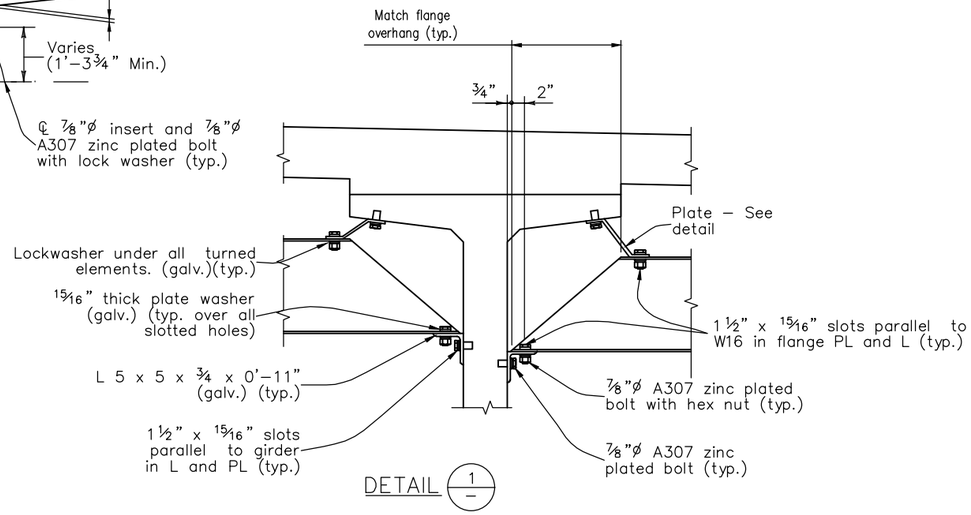
PLATE DETAIL

BT 72 DETAIL



INTERMEDIATE DIAPHRAGM DETAILS

★ For location of diaphragms, see Construction Layout.



DETAIL 1

NOTES

All diaphragm materials, including bolts, nuts, and washers shall be galvanized. Galvanize after fabrication.

★ If the construction layout does not specify diaphragms, there shall be at least one diaphragm at mid span.

Bolts, nuts and lock washers may be zinc plated in lieu of being galvanized.

▲ Dimensions A, B and C shall be shown on the shop drawings.

The diaphragms may be placed on a skew such that they are between 80° and 100° to the girders. Additionally, all diaphragms shall be installed level.

The Contractor is responsible for determining necessary bracing requirements and for providing adequate bracing for the specific wind and weather conditions to be encountered for each specific project.

When bracing or diaphragms are required, no girders shall be erected and left unbraced. The intermediate diaphragms (when used) shall be connected to the adjacent girders simultaneously with the erection of the girders.

Use and installation of the intermediate diaphragms shall not relieve the Contractor of full responsibility to construct the Work in a manner which provides all necessary rigidity, supports all loads imposed, and provides in the finished structure the lines and grades indicated on the plans.

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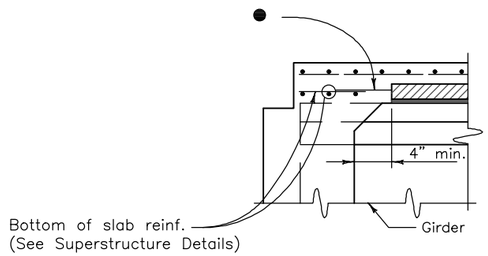
File Name:		Date:	Comments	Init.				No Revisions:			–
Horiz. Scale:	Vert. Scale: As Noted							Revised:	Designer: TDB	Structure Numbers	–
Unit Information	Unit Leader Initials							Void:	Detailer: JWJ		Sheet Number B19
									Sheet Subset:	Subset Sheets:	

G:\7-2 Clients\369 - Larson\16136 - Larson Bridge\50 DWG\16136 (B19) Intermediate Diaphragm Details.dwg Apr 03, 2018 - 11:16am

AWARD SET



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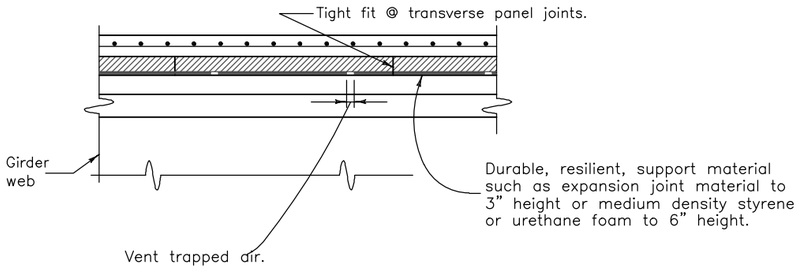
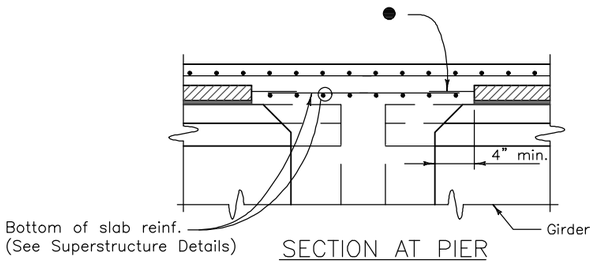


SECTION THRU TRANSVERSE PANEL JOINTS



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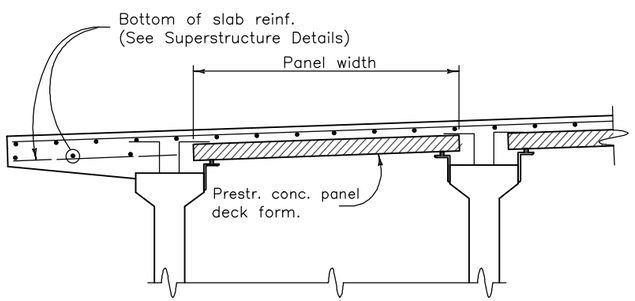

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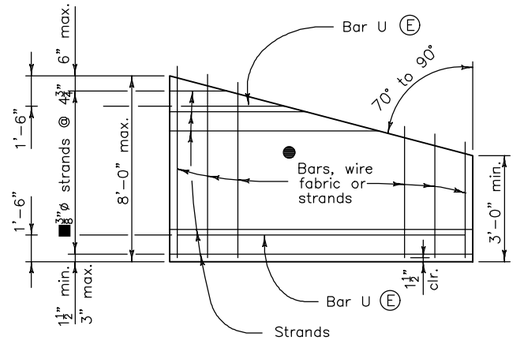
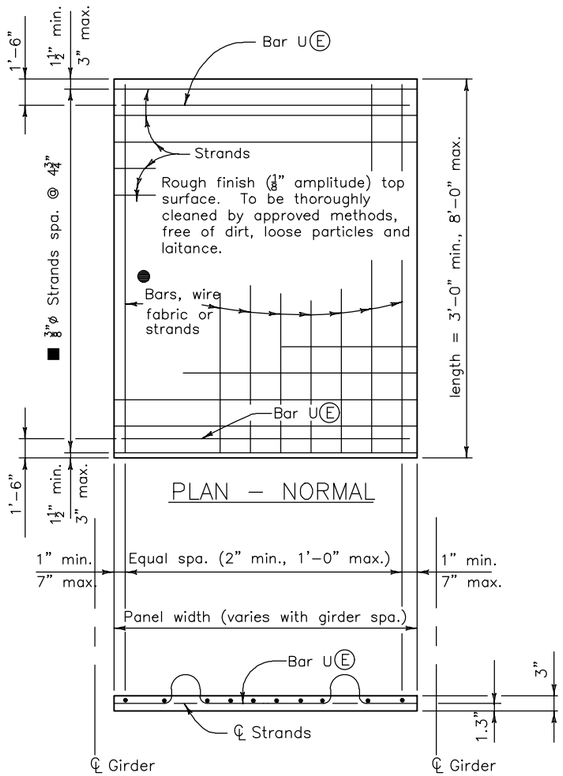


PLAN – SKEWS 70° TO 90°
OPTIONAL END PANEL



PRESTRESSED PANEL DETAILS

Notes:
Sawing of panels is acceptable in areas where projecting reinforcement is not required. It is desirable to have the prestressing strands project from the panels as long as the projecting strands do not interfere with other bridge components.

● Reinforcing perpendicular to strands may be deformed reinf. bars, welded wire fabric, or welded deformed bar mats, and shall be placed directly above the strands. Minimum area of reinforcing perpendicular to strands shall be 0.11 sq. in. per ft. Tensioned or untensioned strands may also be used. These individual bars or wires shall be no larger than .375" diameter. For location of longitudinal bar extensions, see sheet 2 of 2.

■ May be reduced to $\frac{3}{8}$"ø strands at 9½" when the panel width is less than 5'–7" and the design span is less than 7'–7".

The longitudinal reinforcing steel in the cast–in–place portion of the deck may rest directly on the panels as necessary to obtain clearances at the top of deck, unless otherwise noted.

(E) denotes epoxy coated reinforcing.

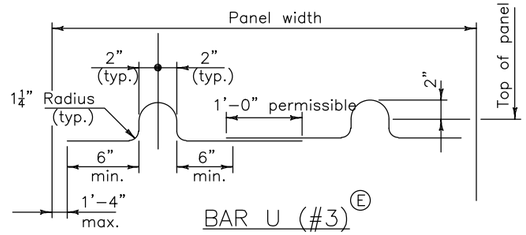
The tolerance on strand placement shall not exceed ±¼".

The tolerance on panel thickness shall not exceed ±¼".

Concentrated construction loads shall not exceed 500 lb for 3" panels, 700 lb for 3.5" panels, nor 1100 lb for 4" panels unless the load is distributed to less than 117 psf.

Total loads applied to any panel during construction shall not exceed 117 psf.

Bottom flexural cracks, sags greater than .5", or cambers greater than .5" will be considered evidence of mishandling, overloading, or exceeding allowable tolerances, and may be cause for rejecting panels at the Engineer's discretion.



BAR U (#3) (E)

PRESTRESSED PANEL DETAILS

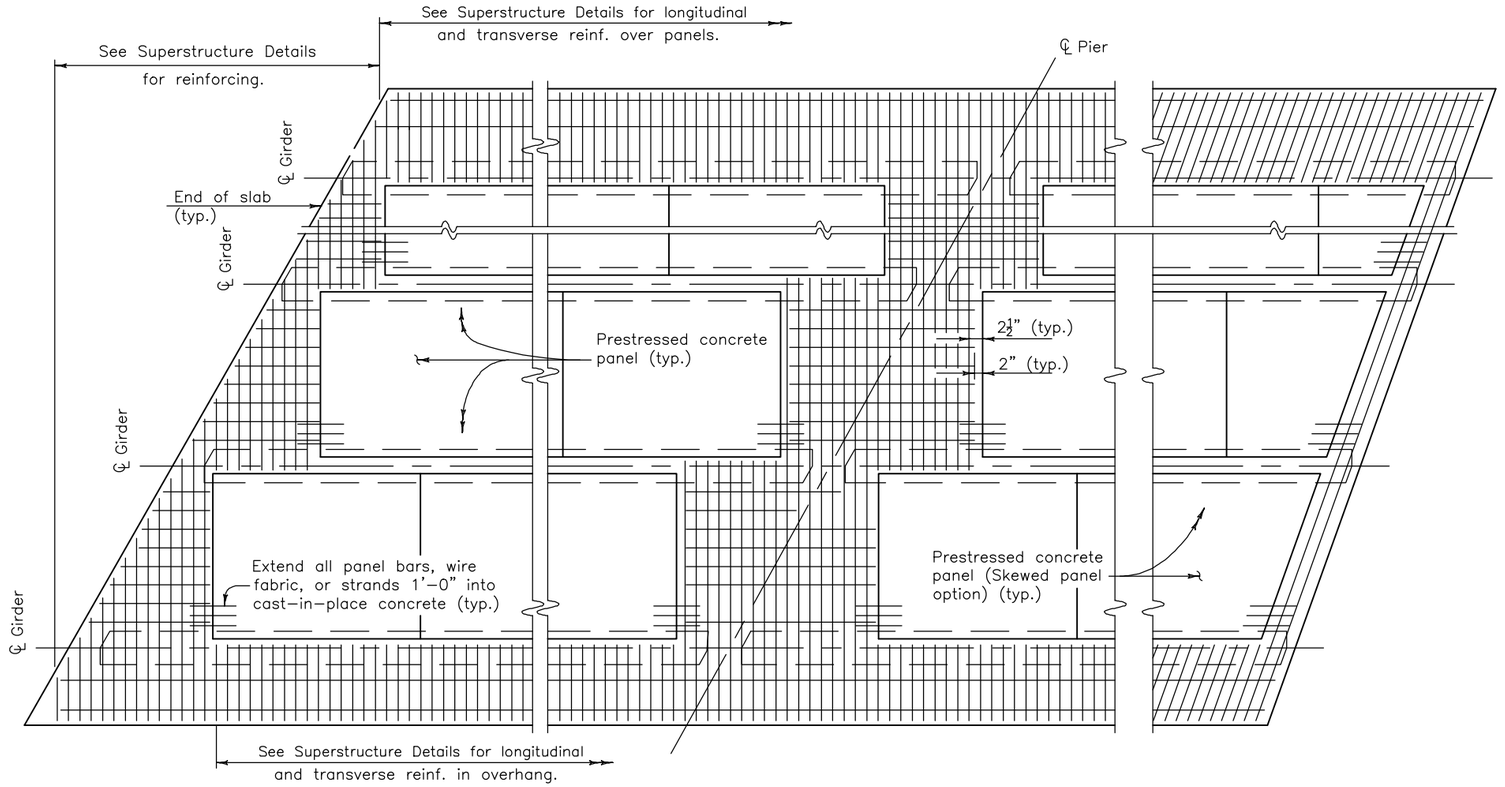
Print Date:	Sheet Revisions			As Constructed	LORSON BRIDGE
File Name:	Date:	Comments	Init.	No Revisions:	PRECAST PANEL DECK FORM (SHEET 1)
Horiz. Scale: Vert. Scale: As Noted				Revised:	Designer: TDB / Detailer: JWJ / Sheet Subset: / Structure Numbers / Subset Sheets:
Unit Information Unit Leader Initials				Void:	Project No./Code: – / – / Sheet Number B20

Loris — A DIVISION OF OTAK

LORSON RANCH — THE LANDHUS COMPANY, 212 N. WASATCH, SUITE 301, COLORADO SPRINGS, CO 80903, PHONE: 719-635-3200

CORE ENGINEERING GROUP — 212 N. WAHSATCH AVE., SUITE 205, COLORADO SPRINGS, CO 80903, Ph: 719.570.1100, FAX: 719.570.1106, CONTACT: RICHARD L. SCHINDLER, P.E., EMAIL: RichS@ceg1.com

G:\7.2 Clients\369 – Lorson\16136 – Lorson Bridge\50 DWG\16136 (B20–B21) Pre-cast Deck Form.dwg Apr 03, 2018 – 11:16am



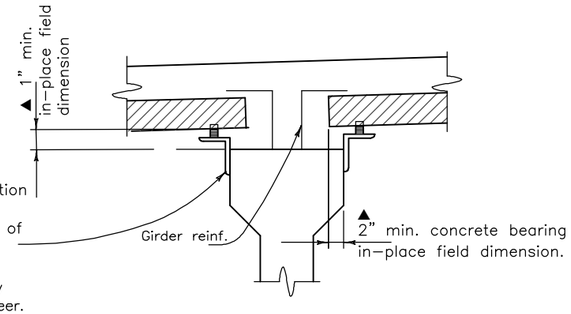
END OF SLAB
RECTANGULAR PANEL OPTION AND
SKEWS LESS THAN 70°

CONTINUOUS SLAB
OVER PIER

END OF SLAB
SKEWED PANEL OPTION FOR
SKEWS 70° to 90°

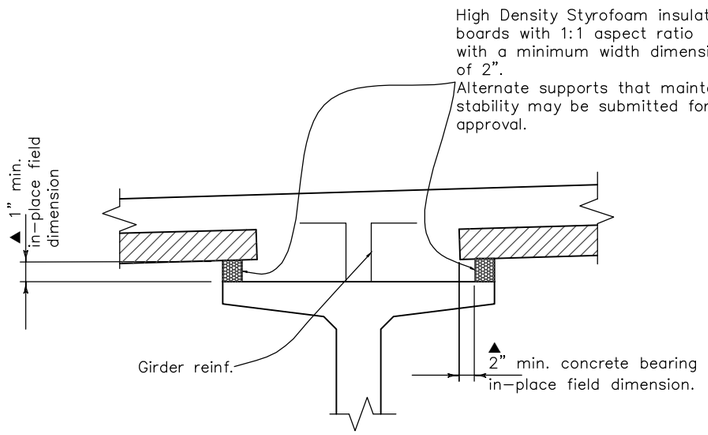
Rectangular panel option shall be used for skews less than 70°.

PART PLAN



The angle and resilient material are shown for illustration and show only one potential method of support. The Contractor is responsible for the selection and design of the panel support and attachment to the girder. Support details shall be shown on the shop plans. Alternate methods for support may be used, provided they are shown on the shop plans and approved by the Engineer.

SUPPORT DETAIL



ALTERNATE SUPPORT DETAIL

NOTES:
Composite total slab designed for HS 25–44 and Alternate Military Loading.

All concrete shall be Class PS with release strength f'_{ci} = 4500 psi and minimum 28 day strength f'_c = 6000 psi. The strength shall be at least 5000 psi at the time of the deck pour.

Use $\frac{3}{8}$"ø low relaxation strands meeting the requirements of ASTM A416 grade 270. Jacking force per strand (F_i) shall be at least 17.2 kips. Final force per strand (F_f) is estimated to be 14.2 kips.

Installation of Bar U (#3) is mandatory. All four Bar U (#3) loops shall be used simultaneously for lifting the panels. Alternate methods may be used, for lifting, provided they are shown on the shop plans and approved by the Engineer.

Care must be taken to ensure proper cleaning of construction debris and consolidation of concrete mortar under the edges of the panels. It is also important that adequate space (▲ min. 1" x 2") is provided for the concrete to fill the space under the panel as the slab concrete is placed. Panel lengths and width shall be determined by the Contractor and shown on the shop plans.

The Contractor is responsible for the stability of the panels on the girders. Erected panels shall be uniformly supported along the length of the panel. The Contractor is responsible for meeting the total slab thickness shown on the Superstructure Details.

All planes of reinforcing steel shown in the superstructure details are required for areas not formed with precast panels.

COLORADO LICENSED
Todd Daniel Hatzer
33594
12/3/2018
PROFESSIONAL ENGINEER

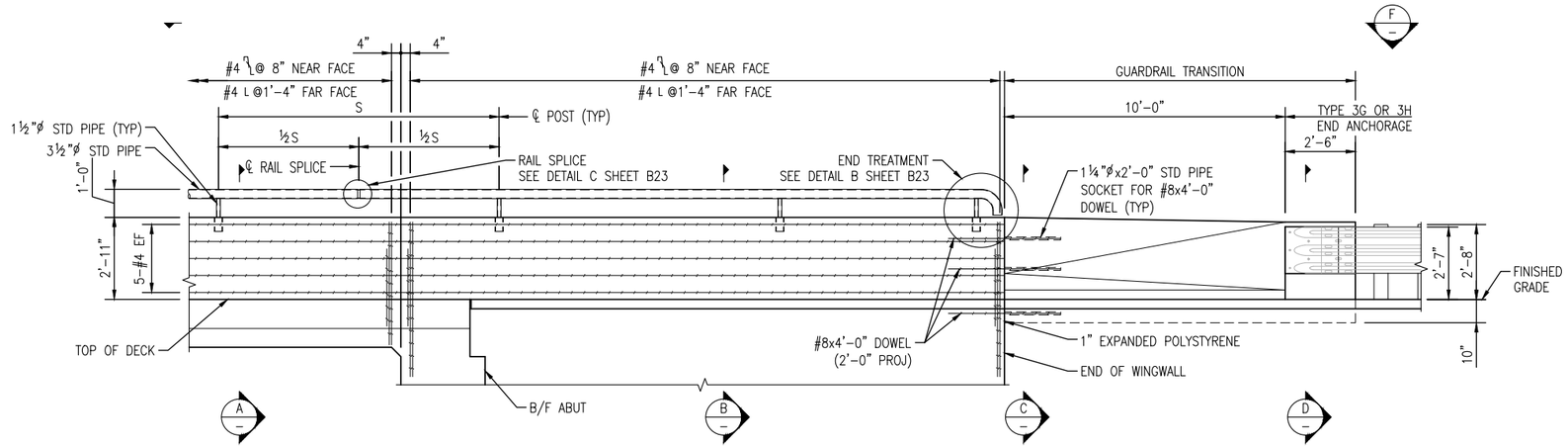
AWARD SET

Print Date:		Sheet Revisions			Loris A DIVISION OF OTAK	LORSON RANCH THE LANDHUIS COMPANY 212 N. WASATCH, SUITE 301 COLORADO SPRINGS, CO 80903 PHONE: 719-635-3200	CORE ENGINEERING GROUP 212 N. WASATCH AVE., SUITE 206 COLORADO SPRINGS, CO 80903 Ph: 719.570.1100 FAX: 719.570.1106 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: RichS@cegl.com	As Constructed	LORSON BRIDGE PRECAST PANEL DECK FORM (SHEET 2)	Project No./Code
File Name:		Date:	Comments	Init.				No Revisions:		–
Horiz. Scale:	Vert. Scale: As Noted							Revised:	Designer: TDB / Detailer: JWJ / Structure Numbers	–
Unit Information	Unit Leader Initials							Void:	Sheet Subset: / Subset Sheets:	Sheet Number B21

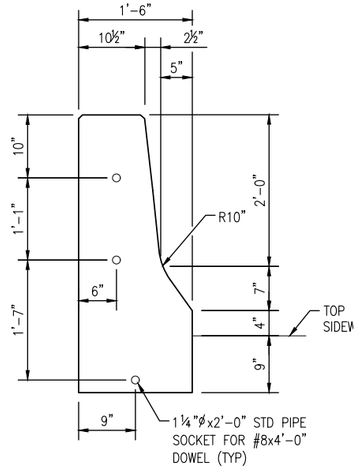
G:\7.2 Clients\369 - Larson\16136 - Lorson Bridge\50 DWG\16136 (B20-B21) Pre-cast Deck Form.dwg Apr 03, 2018 - 11:16am

AWARD SET

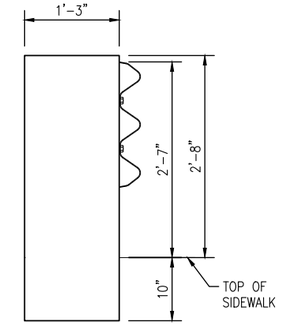
Know what's below. Call before you dig.



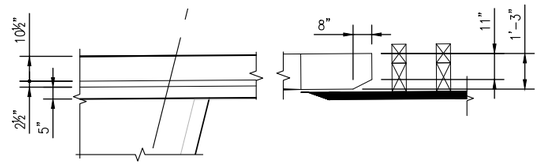
E B22 BRIDGE RAIL ELEVATION
0 2 4
SCALE: 3/16" = 1'-0"



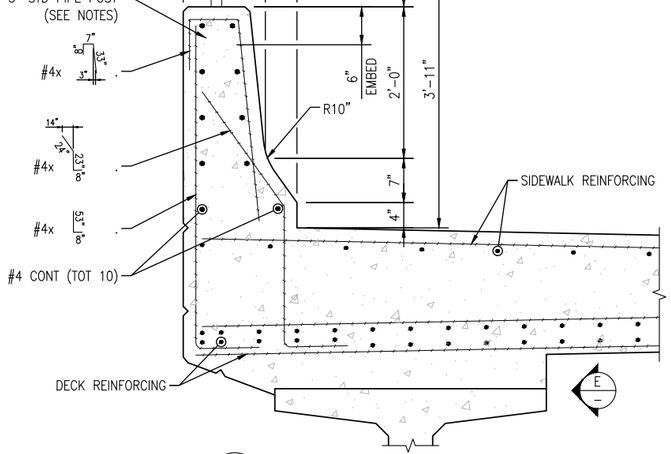
C B22 SECTION
0 1 2
SCALE: ½" = 1'-0"



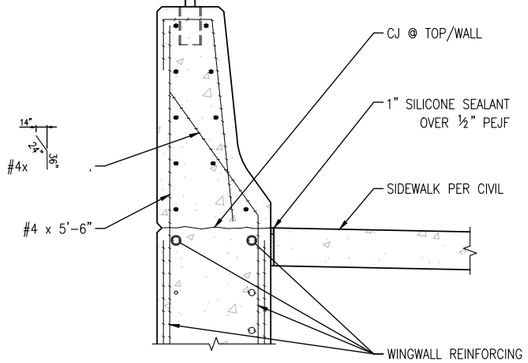
D B22 SECTION
0 1 2
SCALE: ½" = 1'-0"



F B22 BRIDGE RAIL PLAN
0 2 4
SCALE: 3/16" = 1'-0"



A B22 TYPICAL BRIDGE RAIL SECTION ON DECK
0 1 2
SCALE: ½" = 1'-0"



NOTE: ALL INFORMATION SHOWN ON SECTION A/– APPLIES TO THIS SECTION, UNO.

B B22 TYPICAL BRIDGE RAIL SECTION ON WINGWALL
0 1 2
SCALE: ½" = 1'-0"

NOTES:

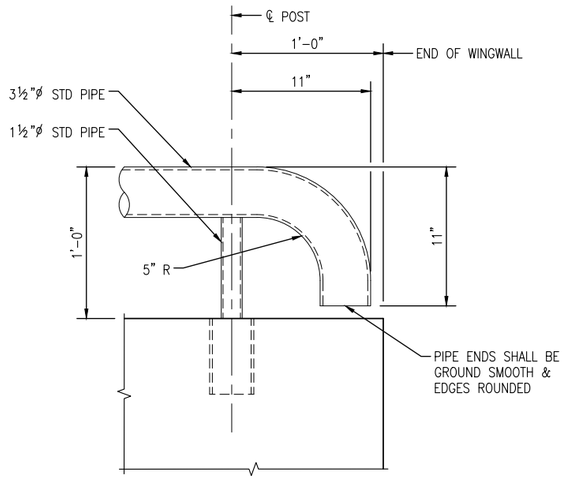
1. FOR DETAILS OF GUARDRAIL TYPE 3 AND END ANCHORAGE, SEE CDOT STD PLAN NOS. M-606-1 AND M-606-13. SEE DRAWING B23 FOR LOCATIONS.
2. RAIL SHALL BE CONTINUOUS OVER NOT LESS THAN TWO POSTS. MAXIMUM SPLICE SPACING SHALL BE 20'-0". NO WELD BUTT SPLICES WILL BE ALLOWED IN THE RAIL LOCATIONS.
3. FOR POST SPACING, SEE DRAWING B3.
4. GROUT POSTS INTO SLEEVES WITH APPROVED NON-SHRINK GROUT.
5. BACKFILL ABUTMENT AND WINGWALLS BEFORE BARRIER IS PLACED.
6. ALL BRIDGE RAIL CONCRETE SHALL BE CLASS D
7. LONGITUDINAL REINFORCEMENT SHALL STOP AT ALL EXPANSION JOINTS.
8. BRIDGE RAIL SHALL BE CONSTRUCTED PLUMB
9. CONCRETE AND REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF SECTIONS 601 AND 602, RESPECTIVELY.
10. THE SURFACE OF THE RAIL SHALL BE TESTED WITH A 10 FOOT STRAIGHT EDGE LAID ALONG THE SURFACE IN THE LONGITUDINAL DIRECTION. DEVIATION OF THE CONCRETE SURFACE FROM THE STRAIGHT EDGE SHALL BE LESS THAN ¼" PLUS ALLOWANCE FOR THE ROADWAY HORIZONTAL AND VERTICAL CLEARANCE, IF ANY.
11. STEEL ELEMENTS SHALL CONFORM TO THE REQUIREMENTS OF 509.
12. WELLDING SHALL BE IN ACCORDANCE WITH AWS D1.1
13. ALL PIPE SHALL BE ASTM A-53, GRADE B.
14. ALL RAILING STEEL SHALL BE PAINTED AFTER FABRICATION IN ACCORDANCE WITH SECTION 509 OF THE STANDARD SPECIFICATIONS. COLOR SHALL BE SELECTED BY THE OWNER.
15. PIPE SLEEVES SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 509.
16. POSTS SHALL BE PERPENDICULAR TO THE LONGITUDINAL ROADWAY GRADE.
17. PRIOR TO FABRICATION OF THIS ITEM, THREE SETS OF WORKING DRAWINGS WHICH COMPLY WITH THE REQURIEMENTS OF SECTION 105, SHALL BE SUBMITTED TO THE ENGINEER, FOR INFORMATION ONLY.
18. FOR END TREATMENT AND RAIL SPLICE DETAILS, SEE DRAWING B23.

Print Date:		Sheet Revisions			Loris A DIVISION OF OTAK	LORSON RANCH THE LANDHUIS COMPANY 212 N. WASATCH, SUITE 301 COLORADO SPRINGS, CO 80903 PHONE: 719-635-3200	CORE ENGINEERING GROUP 212 N. WAHSATCH AVE., SUITE 206 COLORADO SPRINGS, CO 80903 PH: 719.570.1100 FAX: 719.570.1106 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich5@ceg1.com	As Constructed	LORSON BRIDGE BRIDGE RAIL TYPE 7 (SPECIAL) (SHEET 1)		Project No./Code
File Name:		Date:	Comments	Init.				No Revisions:			–
Horiz. Scale:	Vert. Scale: As Noted							Revised:	Designer: TDB	Structure Numbers	–
Unit Information	Unit Leader Initials							Void:	Detailer: TDB		Sheet Number B22
									Sheet Subset:	Subset Sheets:	

G:\7.2 Clients\369 - Lorson\16136 - Lorson Bridge\50 DWG\16136 (B22-B23) Bridge Rail Type 7 (Special).dwg Apr 03, 2018 - 11:26am

AWARD SET

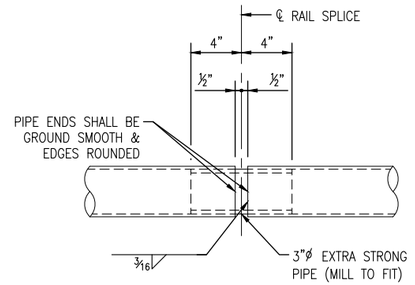
811 Know what's **below.** **Call** before you dig.



A / B22 TYPICAL END TREATMENT ON DECK

0 ½ 1

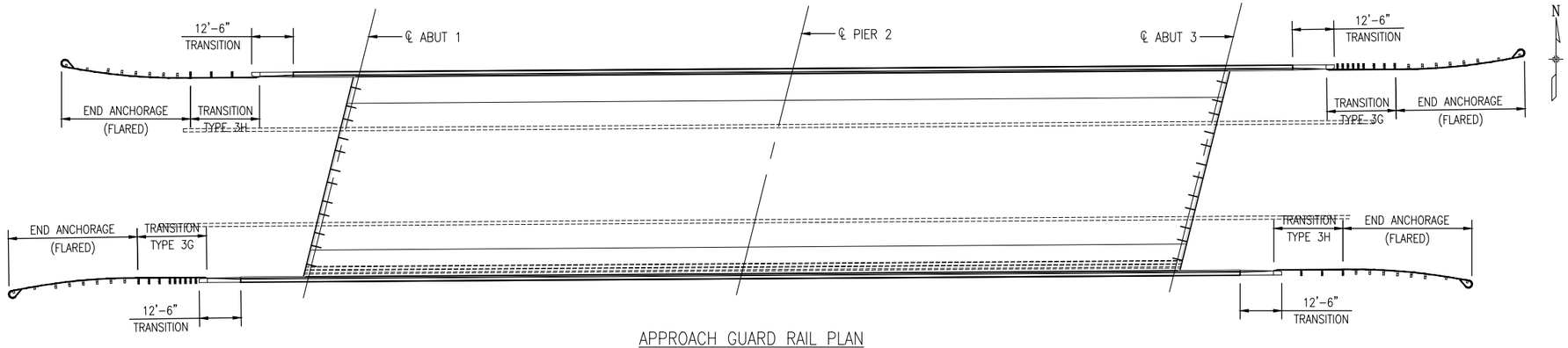
SCALE: 1" = 1'–0"



B / B22 RAIL SPLICE

0 ½ 1

SCALE: 1" = 1'–0"



APPROACH GUARD RAIL PLAN

0 20 40

SCALE: 1" = 40'

COLORADO LICENSED Todd Daniel Bjerke 33594 12/3/2018 PROFESSIONAL ENGINEER

Print Date:	Sheet Revisions			
File Name:	Date:	Comments	Init.	
Horiz. Scale: Vert. Scale: As Noted				
Unit Information Unit Leader Initials				

Loris — A DIVISION OF OTAK

LORSON RANCH — THE LANDHUIS COMPANY, 212 N. WASATCH, SUITE 301, COLORADO SPRINGS, CO 80903, PHONE: 719-635-3200

CORE ENGINEERING GROUP — 212 N. WAHSATCH AVE., SUITE 206, COLORADO SPRINGS, CO 80903, PH: 719.570.1100, FAX: 719.570.1106, CONTACT: RICHARD L. SCHINDLER, P.E., EMAIL: RichS@cegl.com

As Constructed
No Revisions:
Revised:
Void:

LORSON BRIDGE
BRIDGE RAIL TYPE 7 (SPECIAL)
(SHEET 2)

Designer:	TDB	Structure Numbers	
Detailer:	TDB		
Sheet Subset:		Subset Sheets:	

Project No./Code: –

–

Sheet Number B23

G:\7.2 Clients\369 - Lorson\16136 - Lorson Bridge\50 DWG\16136 (B22-B23) Bridge Rail Type 7 (Special).dwg Apr 03, 2018 - 11:26am

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STRUCTURE ID: Lorson BRIDGE GEOMETRY (WIN2.1.0e) 17/09/05 13:13 PAGE 1

DESCRIPTION

Units: feet;
Project: ; Subaccount: ;
Designer: J. Johnson; Detailer: J. Johnson;
Location: Colo. Springs;
Lorson Blvd. over Jimmy Camp Creek
Lorson Ranch
Colorado Springs, CO

HORIZONTAL ALIGNMENT DATA

HORIZONTAL TANGENT

VERTICAL ALIGNMENT DATA

ELEVATION AT PI	ELEVATION AT GRADE		STATION	ELEVATION AT GRADE	ELEVATION AT PI	PERCENT GRADE
						-0.750000
5709.1200	5709.1200	PI	41+71.6400			
						-0.750000

TABLE OF ROADWAY CROSS-SLOPES (SUPERELEVATION: E= -NC-)

STATION	SLOPE LEFT	SLOPE RIGHT	VC LENGTH
(ON TANGENT)	-0.0200	-0.0200	75.00 (MAX)

OFFSET PROFILE CONTROL TO PIVOT POINT = 0.0200 FEET RIGHT

LIMITS OF VALID ELEVATION AND CROSS-SLOPE DATA	BEGIN	END
* UNLIMITED *	* UNLIMITED *	

LAYOUT LINE DATA

LAYOUT LINE DEFINED TO BE COINCIDENT WITH HORIZONTAL CONTROL

	HCL STA	OFFSET	X	Y
LAYOUT LINE INTERSECTS REF LINE AT	41+73.1900	0.00000000	0.0000	0.0000

DEAD LOAD DEFLECTION DATA

DEFLECTIONS AT TENTH POINTS FROM FITTED CURVE

	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	
FOR BENT LINE: CL ABUT 1						07 CARD(S): 1		GIRDER LINES REFERENCED BY: A				A4=-5.36454
INCH	0.0000	0.7302	1.3787	1.8918	2.2216	2.3354	2.2216	1.8918	1.3787	0.7302	0.0000	A3= 10.7291
FOOT	0.0000	0.0608	0.1149	0.1577	0.1851	0.1946	0.1851	0.1577	0.1149	0.0608	0.0000	A2=0.489024
												A1=-5.85357
SLOPE	0.628573										-0.628573	A0=-7.54287
FOR BENT LINE: AH BRG P2						07 CARD(S): 1		GIRDER LINES REFERENCED BY: A				A4=-5.36454
INCH	0.0000	0.7302	1.3787	1.8918	2.2216	2.3354	2.2216	1.8918	1.3787	0.7302	0.0000	A3= 10.7291
FOOT	0.0000	0.0608	0.1149	0.1577	0.1851	0.1946	0.1851	0.1577	0.1149	0.0608	0.0000	A2=0.489024
												A1=-5.85357
SLOPE	0.628573										-0.628573	A0=-7.54287
	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	

COLORADO LICENSED Todd Dania 33594 11/3/2016 PROFESSIONAL ENGINEER

BENT LINE DESCRIPTION	INTERSECTION POINT STATION	OFFSET	ELEVATION		FROM LAYOUT LINE OFFSET X	ORDINATE Y	BENT LINE LENGTH FROM Y-AXIS	SKEW D M S	GIRDER LINE LENGTH FROM REF LINE	ROADWAY CROSS-SLOPE
* HORIZONTAL CONTROL LINE *			AT FINISHED GRADE							
BF ABUT 1	41+71.6411	0.0000	5709.1200		0.0000	-1.5489	0.0000	14 26 22.00	-1.5489	
CL ABUT 1	41+73.1900	0.0000	5709.1084	10	0.0000	0.0000	0.0000	14 26 22.00	0.0000	
BK BRG P2	43+02.1574	0.0000	5708.1411		0.0000	128.9674	0.0000	14 26 22.00	128.9674	
CL PIER 2	43+03.1900	0.0000	5708.1334		0.0000	130.0000	0.0000	14 26 22.00	130.0000	
AH BRG P2	43+04.2226	0.0000	5708.1256	10	0.0000	131.0326	0.0000	14 26 22.00	131.0326	
CL ABUT 3	44+33.1900	0.0000	5707.1584		0.0000	260.0000	0.0000	14 26 22.00	260.0000	
BF ABUT 3	44+34.7389	0.0000	5707.1468	0.0	0.0000	261.5489	0.0000	14 26 22.00	261.5489	

	LEFT EDGE OF DECK		PARALLEL TO HORIZONTAL CONTROL						AT FINISHED GRADE	
BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
BF ABUT 1	41+79.7520	-31.5000	5708.4292		-31.5000	6.5620	-32.5275	14 26 22.00	-1.5489	-0.020000
CL ABUT 1	41+81.3009	-31.5000	5708.4175	708.4175	-31.5000	8.1109	-32.5275	14 26 22.00	0.0000	-0.020000
F-1	41+94.4042	-31.5000	5708.3193	708.3801	-31.5000	21.2142			13.1033	-0.020000
F-2	42+07.5075	-31.5000	5708.2210	708.3359	-31.5000	34.3175			26.2065	-0.020000
F-3	42+20.6107	-31.5000	5708.1227	708.2804	-31.5000	47.4207			39.3098	-0.020000
F-4	42+33.7140	-31.5000	5708.0244	708.2096	-31.5000	60.5240			52.4130	-0.020000
F-5	42+46.8173	-31.5000	5707.9262	708.1208	-31.5000	73.6273			65.5163	-0.020000
F-6	42+59.9205	-31.5000	5707.8279	708.0130	-31.5000	86.7305			78.6196	-0.020000
F-7	42+73.0238	-31.5000	5707.7296	707.8873	-31.5000	99.8338			91.7228	-0.020000
F-8	42+86.1270	-31.5000	5707.6313	707.7462	-31.5000	112.9370			104.8261	-0.020000
F-9	42+99.2303	-31.5000	5707.5331	707.5939	-31.5000	126.0403			117.9294	-0.020000
BK BRG P2	43+10.2683	-31.5000	5707.4503	707.4602	-31.5000	137.0783	-32.5275	14 26 22.00	128.9674	-0.020000
CL PIER 2	43+11.3009	-31.5000	5707.4425	707.4475	-31.5000	138.1109	-32.5275	14 26 22.00	130.0000	-0.020000
AH BRG P2	43+12.3336	-31.5000	5707.4348	707.4348	-31.5000	139.1436	-32.5275	14 26 22.00	131.0326	-0.020000
F-1	43+25.3852	-31.5000	5707.3369	707.3978	-31.5000	152.1952			144.0842	-0.020000
F-2	43+38.4368	-31.5000	5707.2390	707.3539	-31.5000	165.2468			157.1359	-0.020000
F-3	43+51.4885	-31.5000	5707.1411	707.2988	-31.5000	178.2985			170.1875	-0.020000
F-4	43+64.5401	-31.5000	5707.0432	707.2284	-31.5000	191.3501			183.2391	-0.020000
F-5	43+77.5917	-31.5000	5706.9454	707.1400	-31.5000	204.4017			196.2908	-0.020000
F-6	43+90.6433	-31.5000	5706.8475	707.0326	-31.5000	217.4533			209.3424	-0.020000
F-7	44+03.6950	-31.5000	5706.7496	706.9072	-31.5000	230.5050			222.3940	-0.020000
F-8	44+16.7466	-31.5000	5706.6517	706.7666	-31.5000	243.5566			235.4457	-0.020000
F-9	44+29.7982	-31.5000	5706.5538	706.6147	-31.5000	256.6082			248.4973	-0.020000
CL ABUT 3	44+41.3009	-31.5000	5706.4675	706.4750	-31.5000	268.1109	-32.5275	14 26 22.00	260.0000	-0.020000
BF ABUT 3	44+42.8499	-31.5000	5706.4559	706.4559	-31.5000	269.6599	-32.5275	14 26 22.00	261.5489	-0.020000

	LEFT GUTTER		PARALLEL TO HORIZONTAL CONTROL						AT FINISHED GRADE	
BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
BF ABUT 1	41+77.3059	-22.0000	5708.6375		-22.0000	4.1159	-22.7176	14 26 22.00	-1.5489	-0.020000
CL ABUT 1	41+78.8548	-22.0000	5708.6259	708.6259	-22.0000	5.6648	-22.7176	14 26 22.00	0.0000	-0.020000
F-1	41+91.9580	-22.0000	5708.5276	708.5885	-22.0000	18.7680			13.1033	-0.020000
F-2	42+05.0613	-22.0000	5708.4293	708.5442	-22.0000	31.8713			26.2065	-0.020000
F-3	42+18.1646	-22.0000	5708.3311	708.4887	-22.0000	44.9746			39.3098	-0.020000
F-4	42+31.2678	-22.0000	5708.2328	708.4179	-22.0000	58.0778			52.4130	-0.020000
F-5	42+44.3711	-22.0000	5708.1345	708.3291	-22.0000	71.1811			65.5163	-0.020000
F-6	42+57.4744	-22.0000	5708.0362	708.2214	-22.0000	84.2844			78.6196	-0.020000
F-7	42+70.5776	-22.0000	5707.9380	708.0956	-22.0000	97.3876			91.7228	-0.020000
F-8	42+83.6809	-22.0000	5707.8397	707.9546	-22.0000	110.4909			104.8261	-0.020000
F-9	42+96.7841	-22.0000	5707.7414	707.8023	-22.0000	123.5941			117.9294	-0.020000
BK BRG P2	43+07.8222	-22.0000	5707.6586	707.6685	-22.0000	134.6322	-22.7176	14 26 22.00	128.9674	-0.020000
CL PIER 2	43+08.8548	-22.0000	5707.6509	707.6558	-22.0000	135.6648	-22.7176	14 26 22.00	130.0000	-0.020000
AH BRG P2	43+09.8874	-22.0000	5707.6431	707.6431	-22.0000	136.6974	-22.7176	14 26 22.00	131.0326	-0.020000
F-1	43+22.9390	-22.0000	5707.5453	707.6061	-22.0000	149.7490			144.0842	-0.020000
F-2	43+35.9907	-22.0000	5707.4474	707.5623	-22.0000	162.8007			157.1359	-0.020000
F-3	43+49.0423	-22.0000	5707.3495	707.5071	-22.0000	175.8523			170.1875	-0.020000
F-4	43+62.0939	-22.0000	5707.2516	707.4367	-22.0000	188.9039			183.2391	-0.020000
F-5	43+75.1456	-22.0000	5707.1537	707.3483	-22.0000	201.9556			196.2908	-0.020000
F-6	43+88.1972	-22.0000	5707.0558	707.2410	-22.0000	215.0072			209.3424	-0.020000
F-7	44+01.2488	-22.0000	5706.9579	707.1156	-22.0000	228.0588			222.3940	-0.020000
F-8	44+14.3005	-22.0000	5706.8600	706.9749	-22.0000	241.1105			235.4457	-0.020000
F-9	44+27.3521	-22.0000	5706.7622	706.8230	-22.0000	254.1621			248.4973	-0.020000
CL ABUT 3	44+38.8548	-22.0000	5706.6759	706.6833	-22.0000	265.6648	-22.7176	14 26 22.00	260.0000	-0.020000
BF ABUT 3	44+40.4037	-22.0000	5706.6643	706.6643	-22.0000	267.2137	-22.7176	14 26 22.00	261.5489	-0.020000

AWARD SET

G:\7.2 Clients\369 - Lorson\16\36 - Lorson Bridge\50 DWG\16\36 (B24-B27) Deck Elevations.dwg Apr 03, 2018 - 11:17am

Print Date:		Sheet Revisions			Loris A DIVISION OF OTAK	LORSON RANCH THE LANDHUIS COMPANY 212 N. WABASATCH, SUITE 201 COLORADO SPRINGS, CO 80903 PHONE: 719-635-3200	CORE ENGINEERING GROUP 212 N. WAHSATCH AVE., SUITE 206 COLORADO SPRINGS, CO 80903 PHs: 719.570.1100 FAX: 719.570.1106 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: RichS@ceg1.com	As Constructed	LORSON BRIDGE DECK ELEVATIONS (SHEET 1)	Project No./Code
File Name:		Date:	Comments	Init.				No Revisions:		–
Horiz. Scale:	Vert. Scale: As Noted							Revised:	Designer: TDB	–
Unit Information	Unit Leader Initials								Detailer: JWJ	Structure Numbers
								Void:	Sheet Subset:	Subset Sheets:
										Sheet Number B24

GIRDER 1 — PARALLEL TO HORIZONTAL CONTROL — AT FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
BF ABUT 1	41+78.9795	-28.5000	5708.4950		-28.5000	5.7895	-29.4296	14 26 22.00	-1.5489	-0.020000
CL ABUT 1	41+80.5285	-28.5000	5708.4833	708.4833	-28.5000	7.3385	-29.4296	14 26 22.00	0.0000	-0.020000
F-1	41+93.6317	-28.5000	5708.3851	708.4459	-28.5000	20.4417			13.1033	-0.020000
F-2	42+06.7350	-28.5000	5708.2868	708.4017	-28.5000	33.5450			26.2065	-0.020000
F-3	42+19.8383	-28.5000	5708.1885	708.3462	-28.5000	46.6483			39.3098	-0.020000
F-4	42+32.9415	-28.5000	5708.0902	708.2754	-28.5000	59.7515			52.4130	-0.020000
F-5	42+46.0448	-28.5000	5707.9920	708.1866	-28.5000	72.8548			65.5163	-0.020000
F-6	42+59.1480	-28.5000	5707.8937	708.0788	-28.5000	85.9580			78.6196	-0.020000
F-7	42+72.2513	-28.5000	5707.7954	707.9531	-28.5000	99.0613			91.7228	-0.020000
F-8	42+85.3546	-28.5000	5707.6971	707.8120	-28.5000	112.1646			104.8261	-0.020000
F-9	42+98.4578	-28.5000	5707.5989	707.6597	-28.5000	125.2678			117.9294	-0.020000
BK BRG P2	43+09.4959	-28.5000	5707.5161	707.5260	-28.5000	136.3059	-29.4296	14 26 22.00	128.9674	-0.020000
CL PIER 2	43+10.5285	-28.5000	5707.5083	707.5133	-28.5000	137.3385	-29.4296	14 26 22.00	130.0000	-0.020000
AH BRG P2	43+11.5611	-28.5000	5707.5006	707.5006	-28.5000	138.3711	-29.4296	14 26 22.00	131.0326	-0.020000
F-1	43+24.6127	-28.5000	5707.4027	707.4636	-28.5000	151.4227			144.0842	-0.020000
F-2	43+37.6644	-28.5000	5707.3048	707.4197	-28.5000	164.4744			157.1359	-0.020000
F-3	43+50.7160	-28.5000	5707.2069	707.3646	-28.5000	177.5260			170.1875	-0.020000
F-4	43+63.7676	-28.5000	5707.1090	707.2942	-28.5000	190.5776			183.2391	-0.020000
F-5	43+76.8192	-28.5000	5707.0112	707.2058	-28.5000	203.6292			196.2908	-0.020000
F-6	43+89.8709	-28.5000	5706.9133	707.0984	-28.5000	216.6809			209.3424	-0.020000
F-7	44+02.9225	-28.5000	5706.8154	706.9730	-28.5000	229.7325			222.3940	-0.020000
F-8	44+15.9741	-28.5000	5706.7175	706.8324	-28.5000	242.7841			235.4457	-0.020000
F-9	44+29.0258	-28.5000	5706.6196	706.6805	-28.5000	255.8358			248.4973	-0.020000
CL ABUT 3	44+40.5285	-28.5000	5706.5333	706.5408	-28.5000	267.3385	-29.4296	14 26 22.00	260.0000	-0.020000
BF ABUT 3	44+42.0774	-28.5000	5706.5217	706.5217	-28.5000	268.8874	-29.4296	14 26 22.00	261.5489	-0.020000

GIRDER 2 — PARALLEL TO HORIZONTAL CONTROL — AT FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
BF ABUT 1	41+76.5334	-19.0000	5708.7033		-19.0000	3.3434	-19.6198	14 26 22.00	-1.5489	-0.020000
CL ABUT 1	41+78.0823	-19.0000	5708.6917	708.6917	-19.0000	4.8923	-19.6198	14 26 22.00	0.0000	-0.020000
F-1	41+91.1856	-19.0000	5708.5934	708.6543	-19.0000	17.9956			13.1033	-0.020000
F-2	42+04.2888	-19.0000	5708.4951	708.6100	-19.0000	31.0988			26.2065	-0.020000
F-3	42+17.3921	-19.0000	5708.3969	708.5545	-19.0000	44.2021			39.3098	-0.020000
F-4	42+30.4954	-19.0000	5708.2986	708.4837	-19.0000	57.3054			52.4130	-0.020000
F-5	42+43.5986	-19.0000	5708.2003	708.3949	-19.0000	70.4086			65.5163	-0.020000
F-6	42+56.7019	-19.0000	5708.1020	708.2872	-19.0000	83.5119			78.6196	-0.020000
F-7	42+69.8051	-19.0000	5708.0038	708.1614	-19.0000	96.6151			91.7228	-0.020000
F-8	42+82.9084	-19.0000	5707.9055	708.0204	-19.0000	109.7184			104.8261	-0.020000
F-9	42+96.0117	-19.0000	5707.8072	707.8681	-19.0000	122.8217			117.9294	-0.020000
BK BRG P2	43+07.0497	-19.0000	5707.7244	707.7343	-19.0000	133.8597	-19.6198	14 26 22.00	128.9674	-0.020000
CL PIER 2	43+08.0823	-19.0000	5707.7167	707.7216	-19.0000	134.8923	-19.6198	14 26 22.00	130.0000	-0.020000
AH BRG P2	43+09.1149	-19.0000	5707.7089	707.7089	-19.0000	135.9249	-19.6198	14 26 22.00	131.0326	-0.020000
F-1	43+22.1666	-19.0000	5707.6111	707.6719	-19.0000	148.9766			144.0842	-0.020000
F-2	43+35.2182	-19.0000	5707.5132	707.6281	-19.0000	162.0282			157.1359	-0.020000
F-3	43+48.2698	-19.0000	5707.4153	707.5729	-19.0000	175.0798			170.1875	-0.020000
F-4	43+61.3215	-19.0000	5707.3174	707.5025	-19.0000	188.1315			183.2391	-0.020000
F-5	43+74.3731	-19.0000	5707.2195	707.4141	-19.0000	201.1831			196.2908	-0.020000
F-6	43+87.4247	-19.0000	5707.1216	707.3067	-19.0000	214.2347			209.3424	-0.020000
F-7	44+00.4764	-19.0000	5707.0237	707.1814	-19.0000	227.2864			222.3940	-0.020000
F-8	44+13.5280	-19.0000	5706.9258	707.0407	-19.0000	240.3380			235.4457	-0.020000
F-9	44+26.5796	-19.0000	5706.8280	706.8888	-19.0000	253.3896			248.4973	-0.020000
CL ABUT 3	44+38.0823	-19.0000	5706.7417	706.7491	-19.0000	264.8923	-19.6198	14 26 22.00	260.0000	-0.020000
BF ABUT 3	44+39.6312	-19.0000	5706.7301	706.7301	-19.0000	266.4412	-19.6198	14 26 22.00	261.5489	-0.020000

GIRDER 3 — PARALLEL TO HORIZONTAL CONTROL — AT FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
BF ABUT 1	41+74.0872	-9.5000	5708.9116		-9.5000	0.8972	-9.8099	14 26 22.00	-1.5489	-0.020000
CL ABUT 1	41+75.6362	-9.5000	5708.9000	708.9000	-9.5000	2.4462	-9.8099	14 26 22.00	0.0000	-0.020000
F-1	41+88.7394	-9.5000	5708.8018	708.8626	-9.5000	15.5494			13.1033	-0.020000
F-2	42+01.8427	-9.5000	5708.7035	708.8184	-9.5000	28.6527			26.2065	-0.020000
F-3	42+14.9459	-9.5000	5708.6052	708.7629	-9.5000	41.7559			39.3098	-0.020000
F-4	42+28.0492	-9.5000	5708.5069	708.6921	-9.5000	54.8592			52.4130	-0.020000
F-5	42+41.1525	-9.5000	5708.4087	708.6033	-9.5000	67.9625			65.5163	-0.020000
F-6	42+54.2557	-9.5000	5708.3104	708.4955	-9.5000	81.0657			78.6196	-0.020000
F-7	42+67.3590	-9.5000	5708.2121	708.3698	-9.5000	94.1690			91.7228	-0.020000
F-8	42+80.4623	-9.5000	5708.1138	708.2287	-9.5000	107.2723			104.8261	-0.020000
F-9	42+93.5655	-9.5000	5708.0156	708.0764	-9.5000	120.3755			117.9294	-0.020000
BK BRG P2	43+04.6035	-9.5000	5707.9328	707.9426	-9.5000	131.4135	-9.8099	14 26 22.00	128.9674	-0.020000
CL PIER 2	43+05.6362	-9.5000	5707.9250	707.9300	-9.5000	132.4462	-9.8099	14 26 22.00	130.0000	-0.020000
AH BRG P2	43+06.6688	-9.5000	5707.9173	707.9173	-9.5000	133.4788	-9.8099	14 26 22.00	131.0326	-0.020000
F-1	43+19.7204	-9.5000	5707.8194	707.8802	-9.5000	146.5304			144.0842	-0.020000
F-2	43+32.7720	-9.5000	5707.7215	707.8364	-9.5000	159.5820			157.1359	-0.020000
F-3	43+45.8237	-9.5000	5707.6236	707.7813	-9.5000	172.6337			170.1875	-0.020000
F-4	43+58.8753	-9.5000	5707.5257	707.7109	-9.5000	185.6853			183.2391	-0.020000
F-5	43+71.9269	-9.5000	5707.4278	707.6225	-9.5000	198.7369			196.2908	-0.020000
F-6	43+84.9786	-9.5000	5707.3300	707.5151	-9.5000	211.7886			209.3424	-0.020000
F-7	43+98.0302	-9.5000	5707.2321	707.3897	-9.5000	224.8402			222.3940	-0.020000
F-8	44+11.0818	-9.5000	5707.1342	707.2491	-9.5000	237.8918			235.4457	-0.020000
F-9	44+24.1335	-9.5000	5707.0363	707.0971	-9.5000	250.9435			248.4973	-0.020000
CL ABUT 3	44+35.6362	-9.5000	5706.9500	706.9575	-9.5000	262.4462	-9.8099	14 26 22.00	260.0000	-0.020000
BF ABUT 3	44+37.1851	-9.5000	5706.9384	706.9384	-9.5000	263.9951	-9.8099	14 26 22.00	261.5489	-0.020000

GIRDER 4 — PARALLEL TO HORIZONTAL CONTROL — AT FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
BF ABUT 1	41+71.6411	0.0000	5709.1200		0.0000	-1.5489	0.0000	14 26 22.00	-1.5489	
CL ABUT 1	41+73.1900	0.0000	5709.1084	709.1084	0.0000	0.0000	0.0000	14 26 22.00	0.0000	
F-1	41+86.2933	0.0000	5709.0101	709.0709	0.0000	13.1033			13.1033	
F-2	41+99.3965	0.0000	5708.9118	709.0267	0.0000	26.2065			26.2065	
F-3	42+12.4998	0.0000	5708.8136	708.9712	0.0000	39.3098			39.3098	
F-4	42+25.6030	0.0000	5708.7153	708.9004	0.0000	52.4130			52.4130	
F-5	42+38.7063	0.0000	5708.6170	708.8116	0.0000	65.5163			65.5163	
F-6	42+51.8096	0.0000	5708.5187	708.7039	0.0000	78.6196			78.6196	
F-7	42+64.9128	0.0000	5708.4205	708.5781	0.0000	91.7228			91.7228	
F-8	42+78.0161	0.0000	5708.3222	708.4371	0.0000	104.8261			104.8261	
F-9	42+91.1194	0.0000	5708.2239	708.2848	0.0000	117.9294			117.9294	
BK BRG P2	43+02.1574	0.0000	5708.1411	708.1510	0.0000	128.9674	0.0000	14 26 22.00	128.9674	
CL PIER 2	43+03.1900	0.0000	5708.1334	708.1383	0.0000	130.0000	0.0000	14 26 22.00	130.0000	
AH BRG P2	43+04.2226	0.0000	5708.1256	708.1256	0.0000	131.0326	0.0000	14 26 22.00	131.0326	
F-1	43+17.2742	0.0000	5708.0277	708.0886	0.0000	144.0842			144.0842	
F-2	43+30.3259	0.0000	5707.9299	708.0447	0.0000	157.1359			157.1359	
F-3	43+43.3775	0.0000	5707.8320	707.9896	0.0000	170.1875			170.1875	
F-4	43+56.4291	0.0000	5707.7341	707.9192	0.0000	183.2391			183.2391	
F-5	43+69.4808	0.0000	5707.6362	707.8308	0.0000	196.2908			196.2908	
F-6	43+82.5324	0.0000	5707.5383	707.7234	0.0000	209.3424			209.3424	
F-7	43+95.5840	0.0000	5707.4404	707.5981	0.0000	222.3940			222.3940	
F-8	44+08.6357	0.0000	5707.3425	707.4574	0.0000	235.4457			235.4457	
F-9	44+21.6873	0.0000	5707.2446	707.3055	0.0000	248.4973			248.4973	
CL ABUT 3	44+33.1900	0.0000	5707.1584	707.1658	0.0000	260.0000	0.0000	14 26 22.00	260.0000	
BF ABUT 3	44+34.7389	0.0000	5707.1468	707.1468	0.0000	261.5489	0.0000	14 26 22.00	261.5489	

COLORADO LICENSED — Todd Daniel Thurzer — 33594 — 12/3/2018 — PROFESSIONAL ENGINEER

AWARD SET

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Horiz. Scale:	Vert. Scale: As Noted		
Unit Information	Unit Leader Initials		

Loris — A DIVISION OF OTAK

LORSON RANCH — THE LANDHUIS COMPANY, 212 N. WAHSATCH, SUITE 501, COLORADO SPRINGS, CO 80903, PHONE: 719-635-3200

CORE ENGINEERING GROUP — 212 N. WAHSATCH AVE., SUITE 206, COLORADO SPRINGS, CO 80903, PH: 719.570.1100, FAX: 719.570.1106, CONTACT: RICHARD L. SCHINDLER, P.E., EMAIL: RichS@ceg1.com

As Constructed
No Revisions:
Revised:
Void:

LORSON BRIDGE
DECK ELEVATIONS
(SHEET 2)

Designer:	TDB	Structure Numbers	
Detailer:	JWJ		
Sheet Subset:		Subset Sheets:	

Project No./Code: –
–
Sheet Number: B25

GIRDER 5 — PARALLEL TO HORIZONTAL CONTROL — AT FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
BF ABUT 1	41+69.1949	9.5000	5708.9483		9.5000	-3.9951	9.8099	14 26 22.00	-1.5489	-0.020000
CL ABUT 1	41+70.7438	9.5000	5708.9367	708.9367	9.5000	-2.4462	9.8099	14 26 22.00	0.0000	-0.020000
F-1	41+83.8471	9.5000	5708.8384	708.8993	9.5000	10.6571			13.1033	-0.020000
F-2	41+96.9504	9.5000	5708.7402	708.8551	9.5000	23.7604			26.2065	-0.020000
F-3	42+10.0536	9.5000	5708.6419	708.7995	9.5000	36.8636			39.3098	-0.020000
F-4	42+23.1569	9.5000	5708.5436	708.7288	9.5000	49.9669			52.4130	-0.020000
F-5	42+36.2602	9.5000	5708.4453	708.6400	9.5000	63.0702			65.5163	-0.020000
F-6	42+49.3634	9.5000	5708.3471	708.5322	9.5000	76.1734			78.6196	-0.020000
F-7	42+62.4667	9.5000	5708.2488	708.4065	9.5000	89.2767			91.7228	-0.020000
F-8	42+75.5699	9.5000	5708.1505	708.2654	9.5000	102.3799			104.8261	-0.020000
F-9	42+88.6732	9.5000	5708.0523	708.1131	9.5000	115.4832			117.9294	-0.020000
BK BRG P2	42+99.7112	9.5000	5707.9695	707.9793	9.5000	126.5212	9.8099	14 26 22.00	128.9674	-0.020000
CL PIER 2	43+00.7438	9.5000	5707.9617	707.9667	9.5000	127.5538	9.8099	14 26 22.00	130.0000	-0.020000
AH BRG P2	43+01.7765	9.5000	5707.9540	707.9540	9.5000	128.5865	9.8099	14 26 22.00	131.0326	-0.020000
F-1	43+14.8281	9.5000	5707.8561	707.9169	9.5000	141.6381			144.0842	-0.020000
F-2	43+27.8797	9.5000	5707.7582	707.8731	9.5000	154.6897			157.1359	-0.020000
F-3	43+40.9314	9.5000	5707.6603	707.8180	9.5000	167.7414			170.1875	-0.020000
F-4	43+53.9830	9.5000	5707.5624	707.7476	9.5000	180.7930			183.2391	-0.020000
F-5	43+67.0346	9.5000	5707.4645	707.6592	9.5000	193.8446			196.2908	-0.020000
F-6	43+80.0862	9.5000	5707.3667	707.5518	9.5000	206.8962			209.3424	-0.020000
F-7	43+93.1379	9.5000	5707.2688	707.4264	9.5000	219.9479			222.3940	-0.020000
F-8	44+06.1895	9.5000	5707.1709	707.2858	9.5000	232.9995			235.4457	-0.020000
F-9	44+19.2411	9.5000	5707.0730	707.1338	9.5000	246.0511			248.4973	-0.020000
CL ABUT 3	44+30.7438	9.5000	5706.9867	706.9942	9.5000	257.5538	9.8099	14 26 22.00	260.0000	-0.020000
BF ABUT 3	44+32.2928	9.5000	5706.9751	706.9751	9.5000	259.1028	9.8099	14 26 22.00	261.5489	-0.020000

GIRDER 6 — PARALLEL TO HORIZONTAL CONTROL — AT FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
BF ABUT 1	41+66.7488	19.0000	5708.7767		19.0000	-6.4412	19.6198	14 26 22.00	-1.5489	-0.020000
CL ABUT 1	41+68.2977	19.0000	5708.7651	708.7651	19.0000	-4.8923	19.6198	14 26 22.00	0.0000	-0.020000
F-1	41+81.4009	19.0000	5708.6668	708.7276	19.0000	8.2109			13.1033	-0.020000
F-2	41+94.5042	19.0000	5708.5685	708.6834	19.0000	21.3142			26.2065	-0.020000
F-3	42+07.6075	19.0000	5708.4702	708.6279	19.0000	34.4175			39.3098	-0.020000
F-4	42+20.7107	19.0000	5708.3720	708.5571	19.0000	47.5207			52.4130	-0.020000
F-5	42+33.8140	19.0000	5708.2737	708.4683	19.0000	60.6240			65.5163	-0.020000
F-6	42+46.9173	19.0000	5708.1754	708.3606	19.0000	73.7273			78.6196	-0.020000
F-7	42+60.0205	19.0000	5708.0771	708.2348	19.0000	86.8305			91.7228	-0.020000
F-8	42+73.1238	19.0000	5707.9789	708.0938	19.0000	99.9338			104.8261	-0.020000
F-9	42+86.2270	19.0000	5707.8806	707.9414	19.0000	113.0370			117.9294	-0.020000
BK BRG P2	42+97.2651	19.0000	5707.7978	707.8077	19.0000	124.0751	19.6198	14 26 22.00	128.9674	-0.020000
CL PIER 2	42+98.2977	19.0000	5707.7901	707.7950	19.0000	125.1077	19.6198	14 26 22.00	130.0000	-0.020000
AH BRG P2	42+99.3303	19.0000	5707.7823	707.7823	19.0000	126.1403	19.6198	14 26 22.00	131.0326	-0.020000
F-1	43+12.3819	19.0000	5707.6844	707.7453	19.0000	139.1919			144.0842	-0.020000
F-2	43+25.4336	19.0000	5707.5865	707.7014	19.0000	152.2436			157.1359	-0.020000
F-3	43+38.4852	19.0000	5707.4887	707.6463	19.0000	165.2952			170.1875	-0.020000
F-4	43+51.5368	19.0000	5707.3908	707.5759	19.0000	178.3468			183.2391	-0.020000
F-5	43+64.5885	19.0000	5707.2929	707.4875	19.0000	191.3985			196.2908	-0.020000
F-6	43+77.6401	19.0000	5707.1950	707.3801	19.0000	204.4501			209.3424	-0.020000
F-7	43+90.6917	19.0000	5707.0971	707.2548	19.0000	217.5017			222.3940	-0.020000
F-8	44+03.7434	19.0000	5706.9992	707.1141	19.0000	230.5534			235.4457	-0.020000
F-9	44+16.7950	19.0000	5706.9013	706.9622	19.0000	243.6050			248.4973	-0.020000
CL ABUT 3	44+28.2977	19.0000	5706.8151	706.8225	19.0000	255.1077	19.6198	14 26 22.00	260.0000	-0.020000
BF ABUT 3	44+29.8466	19.0000	5706.8035	706.8035	19.0000	256.6566	19.6198	14 26 22.00	261.5489	-0.020000

GIRDER 7 — PARALLEL TO HORIZONTAL CONTROL — AT FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
BF ABUT 1	41+64.3026	28.5000	5708.6050		28.5000	-8.8874	29.4296	14 26 22.00	-1.5489	-0.020000
CL ABUT 1	41+65.8515	28.5000	5708.5934	708.5934	28.5000	-7.3385	29.4296	14 26 22.00	0.0000	-0.020000
F-1	41+78.9548	28.5000	5708.4951	708.5560	28.5000	5.7648			13.1033	-0.020000
F-2	41+92.0580	28.5000	5708.3969	708.5118	28.5000	18.8680			26.2065	-0.020000
F-3	42+05.1613	28.5000	5708.2986	708.4562	28.5000	31.9713			39.3098	-0.020000
F-4	42+18.2646	28.5000	5708.2003	708.3855	28.5000	45.0746			52.4130	-0.020000
F-5	42+31.3678	28.5000	5708.1020	708.2967	28.5000	58.1778			65.5163	-0.020000
F-6	42+44.4711	28.5000	5708.0038	708.1889	28.5000	71.2811			78.6196	-0.020000
F-7	42+57.5744	28.5000	5707.9055	708.0631	28.5000	84.3844			91.7228	-0.020000
F-8	42+70.6776	28.5000	5707.8072	707.9221	28.5000	97.4876			104.8261	-0.020000
F-9	42+83.7809	28.5000	5707.7089	707.7698	28.5000	110.5909			117.9294	-0.020000
BK BRG P2	42+94.8189	28.5000	5707.6262	707.6360	28.5000	121.6289	29.4296	14 26 22.00	128.9674	-0.020000
CL PIER 2	42+95.8515	28.5000	5707.6184	707.6234	28.5000	122.6615	29.4296	14 26 22.00	130.0000	-0.020000
AH BRG P2	42+96.8841	28.5000	5707.6107	707.6107	28.5000	123.6941	29.4296	14 26 22.00	131.0326	-0.020000
F-1	43+09.9358	28.5000	5707.5128	707.5736	28.5000	136.7458			144.0842	-0.020000
F-2	43+22.9874	28.5000	5707.4149	707.5298	28.5000	149.7974			157.1359	-0.020000
F-3	43+36.0390	28.5000	5707.3170	707.4747	28.5000	162.8490			170.1875	-0.020000
F-4	43+49.0907	28.5000	5707.2191	707.4043	28.5000	175.9007			183.2391	-0.020000
F-5	43+62.1423	28.5000	5707.1212	707.3158	28.5000	188.9523			196.2908	-0.020000
F-6	43+75.1939	28.5000	5707.0233	707.2085	28.5000	202.0039			209.3424	-0.020000
F-7	43+88.2456	28.5000	5706.9255	707.0831	28.5000	215.0556			222.3940	-0.020000
F-8	44+01.2972	28.5000	5706.8276	706.9425	28.5000	228.1072			235.4457	-0.020000
F-9	44+14.3488	28.5000	5706.7297	706.7905	28.5000	241.1588			248.4973	-0.020000
CL ABUT 3	44+25.8515	28.5000	5706.6434	706.6509	28.5000	252.6615	29.4296	14 26 22.00	260.0000	-0.020000
BF ABUT 3	44+27.4005	28.5000	5706.6318	706.6318	28.5000	254.2105	29.4296	14 26 22.00	261.5489	-0.020000

RIGHT GUTTER — PARALLEL TO HORIZONTAL CONTROL — AT FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
BF ABUT 1	41+65.9763	22.0000	5708.7225		22.0000	-7.2137	22.7176	14 26 22.00	-1.5489	-0.020000
CL ABUT 1	41+67.5252	22.0000	5708.7109	708.7109	22.0000	-5.6648	22.7176	14 26 22.00	0.0000	-0.020000
F-1	41+80.6285	22.0000	5708.6126	708.6734	22.0000	7.4385			13.1033	-0.020000
F-2	41+93.7317	22.0000	5708.5143	708.6292	22.0000	20.5417			26.2065	-0.020000
F-3	42+06.8350	22.0000	5708.4160	708.5737	22.0000	33.6450			39.3098	-0.020000
F-4	42+19.9383	22.0000	5708.3178	708.5029	22.0000	46.7483			52.4130	-0.020000
F-5	42+33.0415	22.0000	5708.2195	708.4141	22.0000	59.8515			65.5163	-0.020000
F-6	42+46.1448	22.0000	5708.1212	708.3063	22.0000	72.9548			78.6196	-0.020000
F-7	42+59.2480	22.0000	5708.0229	708.1806	22.0000	86.0580			91.7228	-0.020000
F-8	42+72.3513	22.0000	5707.9247	708.0396	22.0000	99.1613			104.8261	-0.020000
F-9	42+85.4546	22.0000	5707.8264	707.8872	22.0000	112.2646			117.9294	-0.020000
BK BRG P2	42+96.4926	22.0000	5707.7436	707.7535	22.0000	123.3026	22.7176	14 26 22.00	128.9674	-0.020000
CL PIER 2	42+97.5252	22.0000	5707.7359	707.7408	22.0000	124.3352	22.7176	14 26 22.00	130.0000	-0.020000
AH BRG P2	42+98.5578	22.0000	5707.7281	707.7281	22.0000	125.3678	22.7176	14 26 22.00	131.0326	-0.020000
F-1	43+11.6095	22.0000	5707.6302	707.6911	22.0000	138.4195			144.0842	-0.020000
F-2	43+24.6611	22.0000	5707.5323	707.6472	22.0000	151.4711			157.1359	-0.020000
F-3	43+37.7127	22.0000	5707.4345	707.5921	22.0000	164.5227			170.1875	-0.020000
F-4	43+50.7644	22.0000	5707.3366	707.5217	22.0000	177.5744			183.2391	-0.020000
F-5	43+63.8160	22.0000	5707.2387	707.4333	22.0000	190.6260			196.2908	-0.020000
F-6	43+76.8676	22.0000	5707.1408	707.3259	22.0000	203.6776			209.3424	-0.020000
F-7	43+89.9192	22.0000	5707.0429	707.2006	22.0000	216.7292			222.3940	-0.020000
F-8	44+02.9709	22.0000	5706.9450	707.0599	22.0000	229.7809			235.4457	-0.020000
F-9	44+16.0225	22.0000	5706.8471	706.9080	22.0000	242.8325			248.4973	-0.020000
CL ABUT 3	44+27.5252	22.0000	5706.7609	706.7683	22.0000	254.3352	22.7176	14 26 22.00	260.0000	-0.020000
BF ABUT 3	44+29.0741	22.0000	5706.7492	706.7492	22.0000	255.8841	22.7176	14 26 22.00	261.5489	-0.020000

COLORADO LICENSED — Todd Daniel Blazer — 33594 — 12/3/2018 — PROFESSIONAL ENGINEER

AWARD SET

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Print Date:		Sheet Revisions	
File Name:		Date: / Comments / Init.	
Horiz. Scale:	Vert. Scale: As Noted		
Unit Information	Unit Leader Initials		

Loris — A DIVISION OF OTAK

LORSON RANCH — THE LANDHUIS COMPANY, 212 N. WASATCH, SUITE 901, COLORADO SPRINGS, CO 80903, PHONE: 719-635-3200

CORE ENGINEERING GROUP — 212 N. WAHSATCH AVE., SUITE 205, COLORADO SPRINGS, CO 80903, PH: 719.570.1100, FAX: 719.570.1106, CONTACT: RICHARD L. SCHINDLER, P.E., EMAIL: RichS@ceg1.com

As Constructed
No Revisions:
Revised:
Void:

LORSON BRIDGE
DECK ELEVATIONS
(SHEET 3)

Designer:	TDB	Structure Numbers	
Detailer:	JWJ		
Sheet Subset:		Subset Sheets:	

Project No./Code: –

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Sheet Number B26

RIGHT EDGE OF DECK			PARALLEL TO HORIZONTAL CONTROL						AT FINISHED GRADE	
BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
BF ABUT 1	41+63.5301	31.5000	5708.5508		31.5000	-9.6599	32.5275	14 26 22.00	-1.5489	-0.020000
CL ABUT 1	41+65.0791	31.5000	5708.5392	708.5392	31.5000	-8.1109	32.5275	14 26 22.00	0.0000	-0.020000
F-1	41+78.1823	31.5000	5708.4409	708.5018	31.5000	4.9923			13.1033	-0.020000
F-2	41+91.2856	31.5000	5708.3427	708.4575	31.5000	18.0956			26.2065	-0.020000
F-3	42+04.3888	31.5000	5708.2444	708.4020	31.5000	31.1988			39.3098	-0.020000
F-4	42+17.4921	31.5000	5708.1461	708.3312	31.5000	44.3021			52.4130	-0.020000
F-5	42+30.5954	31.5000	5708.0478	708.2425	31.5000	57.4054			65.5163	-0.020000
F-6	42+43.6986	31.5000	5707.9496	708.1347	31.5000	70.5086			78.6196	-0.020000
F-7	42+56.8019	31.5000	5707.8513	708.0089	31.5000	83.6119			91.7228	-0.020000
F-8	42+69.9052	31.5000	5707.7530	707.8679	31.5000	96.7152			104.8261	-0.020000
F-9	42+83.0084	31.5000	5707.6547	707.7156	31.5000	109.8184			117.9294	-0.020000
BK BRG P2	42+94.0464	31.5000	5707.5720	707.5818	31.5000	120.8564	32.5275	14 26 22.00	128.9674	-0.020000
CL PIER 2	42+95.0791	31.5000	5707.5642	707.5692	31.5000	121.8891	32.5275	14 26 22.00	130.0000	-0.020000
AH BRG P2	42+96.1117	31.5000	5707.5565	707.5565	31.5000	122.9217	32.5275	14 26 22.00	131.0326	-0.020000
F-1	43+09.1633	31.5000	5707.4586	707.5194	31.5000	135.9733			144.0842	-0.020000
F-2	43+22.2149	31.5000	5707.3607	707.4756	31.5000	149.0249			157.1359	-0.020000
F-3	43+35.2666	31.5000	5707.2628	707.4205	31.5000	162.0766			170.1875	-0.020000
F-4	43+48.3182	31.5000	5707.1649	707.3500	31.5000	175.1282			183.2391	-0.020000
F-5	43+61.3698	31.5000	5707.0670	707.2616	31.5000	188.1798			196.2908	-0.020000
F-6	43+74.4215	31.5000	5706.9691	707.1543	31.5000	201.2315			209.3424	-0.020000
F-7	43+87.4731	31.5000	5706.8713	707.0289	31.5000	214.2831			222.3940	-0.020000
F-8	44+00.5247	31.5000	5706.7734	706.8883	31.5000	227.3347			235.4457	-0.020000
F-9	44+13.5764	31.5000	5706.6755	706.7363	31.5000	240.3864			248.4973	-0.020000
CL ABUT 3	44+25.0791	31.5000	5706.5892	706.5966	31.5000	251.8891	32.5275	14 26 22.00	260.0000	-0.020000
BF ABUT 3	44+26.6280	31.5000	5706.5776	706.5776	31.5000	253.4380	32.5275	14 26 22.00	261.5489	-0.020000

COLORADO LICENSED
Todd B. Daniel
33594
4/3/2018
PROFESSIONAL ENGINEER

AWARD SET

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Print Date:		Sheet Revisions			Loris A DIVISION OF OTAK	LORSON RANCH THE LANDHUIS COMPANY 212 N. WASATCH, SUITE 301 COLORADO SPRINGS, CO 80903 PHONE: 719-635-3200	CORE ENGINEERING GROUP 212 N. WAHSATCH AVE., SUITE 206 COLORADO SPRINGS, CO 80903 Ph: 719.570.1100 FAX: 719.570.1106 CONTACT: RICHARD L. SCHINDLER, P.E. EMAIL: Rich@cegi.com	As Constructed	LORSON BRIDGE DECK ELEVATIONS (SHEET 4)	Project No./Code
File Name:		Date:	Comments	Init.				No Revisions:		–
Horiz. Scale:	Vert. Scale: As Noted							Revised:	Designer: TDB / Structure Numbers	–
Unit Information	Unit Leader Initials							Void:	Detailer: JWJ	Sheet Number B27
									Sheet Subset: / Subset Sheets:	