

PUBLIC IMPROVEMENT CONSTRUCTION PLANS

DAWSON TRAILS BLVD (NORTH)

LOCATED IN SECTION 15, TOWNSHIP 8 SOUTH, RANGE 67 WEST, THE SOUTHEAST $\frac{1}{4}$ CORNER OF SECTION 10, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE 6TH PRINCIPAL MERIDIAN, TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO.
TOWN OF CASTLE ROCK PROJECT NO. CD23-0020

3rd Drainage and
Floodplain Review
David Van Dellen
720.733.2474
dvandellen@crgov.com
7/21/25

Please note, when a comment is labeled "TYP" this indicates the comment needs to be addressed on all sheets where a similar condition occurs.

CORE - Responses to comments from David Van Dellen provided in 4-Resp-D-CD23-0020 Civil Plans-Rev3

CONTACTS

OWNER/ DEVELOPER

ACM DAWSON TRAILS VIII JV LLC
4100 E. MISSISSIPPI AVE, STE. 500
GLENDALE, CO 80246
CONTACT: LAWRENCE JACOBSON
(303) 984-9800
LJACOBSON@WESTSIDEINV.COM

ENGINEER

CORE CONSULTANTS, INC.
3473 S. BROADWAY
ENGLEWOOD, CO 80113
(303) 703-4444
CONTACT: MICHAEL GOODHUE
MGOODHUE@LIVEYOURCORE.COM

SURVEYOR

CORE CONSULTANTS, INC.
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ENGLEWOOD CO 80113
CONTACT: JEFF ANTON
EMAIL: JANTON@LIVEYOURCORE.COM

PLANNER / ARCHITECT

NORRIS DESIGN
1101 BANNOCK ST.
DENVER, CO 80204
CONTACT: STACEY WEAKS
SWEAKS@NORRIS-DESIGN.COM

TOWN OF CASTLE ROCK

TOWN OF CASTLE ROCK
DEVELOPMENT SERVICES DEPARTMENT
100 WILCOX ST.
CASTLE ROCK, CO 80104
(720) 733-2200

UTILITY SERVICE PROVIDERS

WATER & SEWER

CASTLE ROCK WATER
175 KELLOGG COURT
CASTLE ROCK, CO 80104
PHONE: (720) 733-6000
FAX: (303) 688-0437

ELECTRIC

CORE ELECTRIC COOPERATIVE
5496 N US HIGHWAY 85
SEDALIA, CO 80135
CONTACT: JIM POTTER
PHONE: (720) 733-5612

GAS

BLACK HILLS ENERGY
1515 WYNKOOP ST., 5TH FLOOR
DENVER, CO 80202
PHONE (888) 890-5554

CABLE

COMCAST
118 WILCOX ST., UNIT B
CASTLE ROCK, CO 80104
PHONE (303) 930-2000

PHONE

CENTURY LINK
1801 CALIFORNIA ST.
DENVER, CO 80202
PHONE: (303) 296-2787

NOTES

- CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND DEPTH OF ALL UTILITY CROSSINGS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER OF ANY CONFLICTS OR DISCREPANCIES WHICH WOULD IMPACT THE CONSTRUCTION OF THE PROPOSED UTILITIES PRIOR TO THE START OF CONSTRUCTION. CD DOCUMENTS CANNOT BE APPROVED UNTIL WRITTEN AUTHORIZATION FROM ALL PROPERTY OWNERS IS RECEIVED AND EASEMENTS ARE FINALIZED. WILL NEED TO SUBMIT EASEMENT EXHIBITS FOR REVIEW FOR EACH EASEMENT TYPE AND PROPERTY OWNER (SAME EASEMENT CAN SPAN OVER PROPERTY OWNER IF PROPERTY OWNER IS THE SAME ON EACH LOT/TRACT).

TECHNICAL CODE VARIANCES

TOCR VARIANCE #TCV25-0011
TOCR TRANSPORTATION DESIGN CRITERIA MANUAL
SECTION 2.2.8
THIS VARIANCE IS TO REQUEST CHANGE TO A PORTION +/- 1,332-FEET OF DAWSON TRAILS BOULEVARD FROM A DESIGN SPEED OF 45 MPH (MAJOR ARTERIAL) TO 40 MPH (MINOR ARTERIAL) BETWEEN PLUM CREEK PARKWAY AND CASTLE MEADOWS DRIVE, SEE ATTACHED EXHIBITS. WITH THIS ADJUSTMENT, A REDUCED K-VALUE WILL BE USED FOR THE SAG CURVE AT THE INTERSECTION WITH PLUM CREEK PARKWAY, THUS REDUCING THE SEVERE SLOPE CUT REQUIRED TO ACCESS THE CASTLE MEADOWS SITE.
THIS VARIANCE IS NOT REQUESTING ANY CHANGES TO THE ROADWAY SECTION AT THIS LOCATION, IT WILL REMAIN A MAJOR ARTERIAL ROADWAY SECTION.

CONDITIONS OF APPROVAL: APPROVED

APPROVAL DATE: 05/08/2025

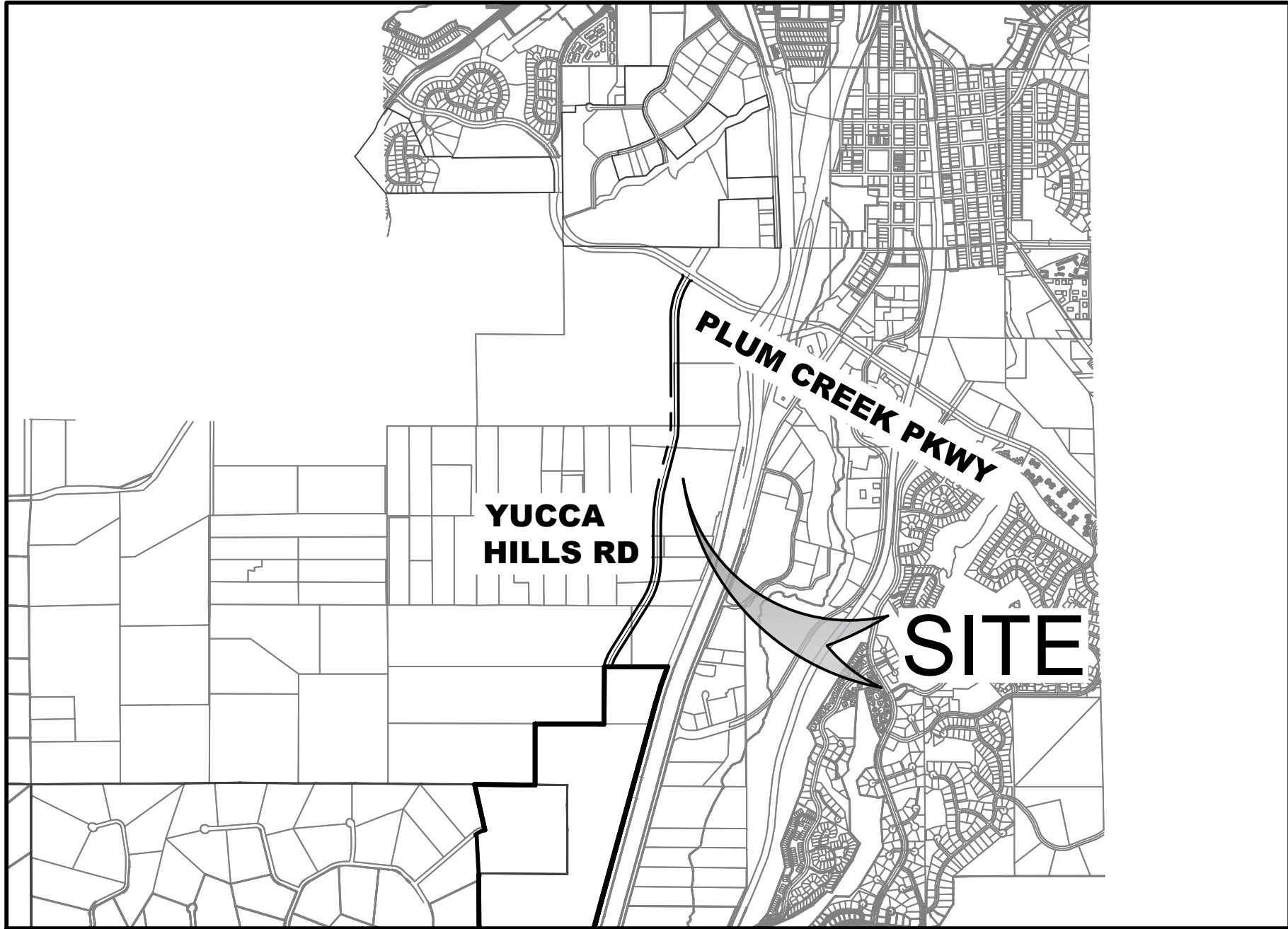
INDEMNIFICATION AND ADHERENCE TO STANDARDS STATEMENT

THESE PLANS HAVE BEEN REVIEWED BY THE TOWN OF CASTLE ROCK FOR CONCEPT ONLY. THE REVIEW DOES NOT IMPLY RESPONSIBILITY BY THE REVIEWING DEPARTMENT, THE TOWN ENGINEER, OR THE TOWN OF CASTLE ROCK FOR ACCURACY AND CORRECTNESS OF THE CALCULATIONS. FURTHERMORE, THE REVIEW DOES NOT IMPLY THAT QUANTITIES OF ITEMS ON THE PLANS ARE THE FINAL QUANTITIES REQUIRED. THE REVIEW SHALL NOT BE CONSTRUED FOR ANY REASON AS ACCEPTANCE OF FINANCIAL RESPONSIBILITY BY THE TOWN FOR ADDITIONAL QUANTITIES OF ITEMS SHOWN THAT MAY BE REQUIRED DURING THE CONSTRUCTION PHASE.

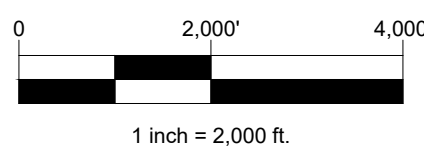
ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN OF CASTLE ROCK MUNICIPAL CODE, TECHNICAL MANUALS, AND/OR OTHER TOWN-APPROVED APPLICABLE STANDARDS.

FLOODZONE NOTE

THE SITE IS LOCATED WITHIN A ZONE X AND SHADED ZONE X FLOOD ZONE PER FEMA FIRM PANELS 08035C0282G AND 08035C0301G DATED MARCH 16, 2016 AND LOMR CASE NO. 16-08-0265P EFFECTIVE JUNE 24, 2016.



VICINITY MAP



DESIGN CHANGE NOTICE (DCN)		
No.	DATE	DESCRIPTION

FIELD CHANGE ORDER		
FCO No.	DATE	DESCRIPTION

Sheet List Table	
Sheet Number	Sheet Title
1	COVER
2	TOWN NOTES
3	GENERAL NOTES
4	ROAD SECTIONS
5	HORIZONTAL CONTROL PLAN (1 OF 2)
6	HORIZONTAL CONTROL PLAN (2 OF 2)
7	OVERALL PLAN (1 OF 2)
8	OVERALL PLAN (2 OF 2)
9	OVERALL GRADING PLAN
10	GRADING PLAN (1 OF 6)
11	GRADING PLAN (2 OF 6)
12	GRADING PLAN (3 OF 6)
13	GRADING PLAN (4 OF 6)
14	GRADING PLAN (5 OF 6)
15	GRADING PLAN (6 OF 6)
16	ROADWAY P&P (1 OF 6)
17	ROADWAY P&P (2 OF 6)
18	ROADWAY P&P (3 OF 6)
19	ROADWAY P&P (4 OF 6)
20	ROADWAY P&P (5 OF 6)
21	ROADWAY P&P (6 OF 6)
22	INTERSECTION
23	INTERSECTION-01 SW
24	INTERSECTION-01 SE
25	STORM P&P (1 OF 7)
26	STORM P&P (2 OF 7)
27	STORM P&P (3 OF 7)
28	STORM P&P (4 OF 7)
29	STORM P&P (5 OF 7)
30	STORM P&P (6 OF 7)
31	STORM P&P (7 OF 7)
32	POND DETAILS - POND A1
33	POND DETAILS - POND A2
34	POND DETAILS - POND A4
35	OUTLET STRUCTURE - POND A1
36	OUTLET STRUCTURE - POND A2
37	OUTLET STRUCTURE - POND A4
38	FOREBAY DETAILS
39	WATER P&P (1 OF 5)
40	WATER P&P (2 OF 5)
41	WATER P&P (3 OF 5)
42	WATER P&P (4 OF 5)
43	WATER P&P (5 OF 5)
44	SIGNAGE AND STRIPING PLAN (1 OF 6)
45	SIGNAGE AND STRIPING PLAN (2 OF 6)
46	SIGNAGE AND STRIPING PLAN (3 OF 6)
47	SIGNAGE AND STRIPING PLAN (4 OF 6)
48	SIGNAGE AND STRIPING PLAN (5 OF 6)
49	SIGNAGE AND STRIPING PLAN (6 OF 6)
50	FINAL SIGNAGE AND STRIPING PLAN (1 OF 6)
51	FINAL SIGNAGE AND STRIPING PLAN (2 OF 6)
52	FINAL SIGNAGE AND STRIPING PLAN (3 OF 6)
53	FINAL SIGNAGE AND STRIPING PLAN (4 OF 6)
54	FINAL SIGNAGE AND STRIPING PLAN (5 OF 6)
55	FINAL SIGNAGE AND STRIPING PLAN (6 OF 6)
56	WATER DETAILS (1 OF 3)
57	WATER DETAILS (2 OF 3)
58	WATER DETAILS (3 OF 3)
59	ROADWAY DETAILS (1 OF 2)
60	ROADWAY DETAILS (2 OF 2)
61	STORM DETAILS (1 OF 3)
62	STORM DETAILS (2 OF 3)
63	STORM DETAILS (3 OF 3)

DC - Has all ROW and easements been acquired across parcels within Douglas County Jurisdiction?

DC - Is the Town going to acquire the full East portions of the lots (Core, Nichols, Three Oaks and Burmeister)that are split by Dawson Trails Blvd.? If not how will those lot owners be able to utilize their property once it is divided by Dawson Trails Blvd.?

CORE - ROW and easements have not been acquired at this time across parcels within Douglas County Jurisdiction. Negotiation with land owners is in progress. Acquisition will need to be completed before final approval of construction documents.

CORE - The Town has not indicated they will acquire the full east portions of the lots. Lot owners will access their lots via Dawson Trails Blvd access drives, to be constructed by the lot owners. An "Access Plan" has been added to the Construction Document set, which indicates potential access locations to all lots, to indicate that reasonable access can be obtained by the lot owners.

BENCHMARK:

FOUND A #5 REBAR WITH RED PLASTIC CAP, STAMPED "PLS 22561". SAID BENCHMARK IS LOCATED AT THE INTERSECTION OF THE NORTH LINE OF A THE SOUTHEAST QUARTER OF SECTION 10, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE SIXTH P.M. AND THE WESTERLY RIGHT OF WAY LINE OF WEST PLUM CREEK PARKWAY. BENCHMARK ELEVATION = 6360.72 NAVD88 DATUM.

BASIS OF BEARING:

THE BEARINGS FOR THIS DESCRIPTION ARE BASED ON THE EAST LINE OF THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP 3 SOUTH, RANGE 63 WEST OF THE SIXTH P.M., BEING ASSUMED TO BEAR S 00°25'36" E, FROM THE NORTHEAST CORNER OF SAID SECTION 33, BEING MONUMENTED BY A REBAR WITH A 2-1/2 INCH ALUMINUM CAP STAMPED "PLS 25379", IN A RANGE BOX, TO THE EAST QUARTER CORNER OF SAID SECTION 33, BEING MONUMENTED BY A REBAR WITH A 3-1/4 INCH ALUMINUM CAP, STAMPED "PLS 26715", IN A RANGE BOX, WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO.

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY, AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

MICHAEL GOODHUE, P.E. DATE
STATE OF COLORADO # 48230

TOWN OF CASTLE ROCK APPROVAL

PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

Know what's below.
Call before you dig.



#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	06/29/23	JFF
2	2ND SUBMITTAL	10/09/23	JFF
3	3RD SUBMITTAL	06/25/25	MG

DAWSON TRAILS BLVD (NORTH)

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS

COVER



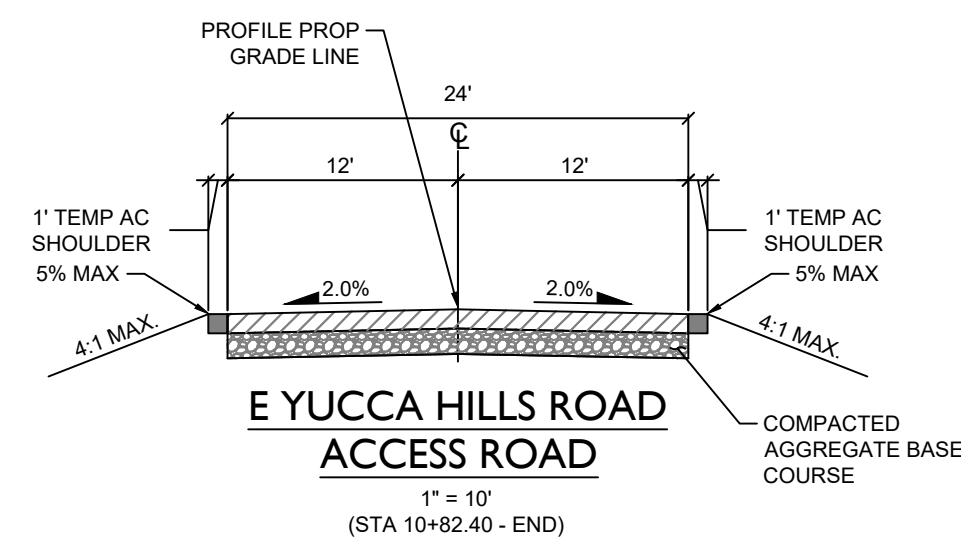
DESIGNED BY: MG
DRAWN BY: CT
CHECKED BY: MG

JOB NO.
20-224

SHEET
1 OF 63

DAWSON TRAILS BLVD
CONSTRUCTION DOCUMENTS
PROJECT NO. CD 23-0020

DEVELOPMENT SERVICES DATE

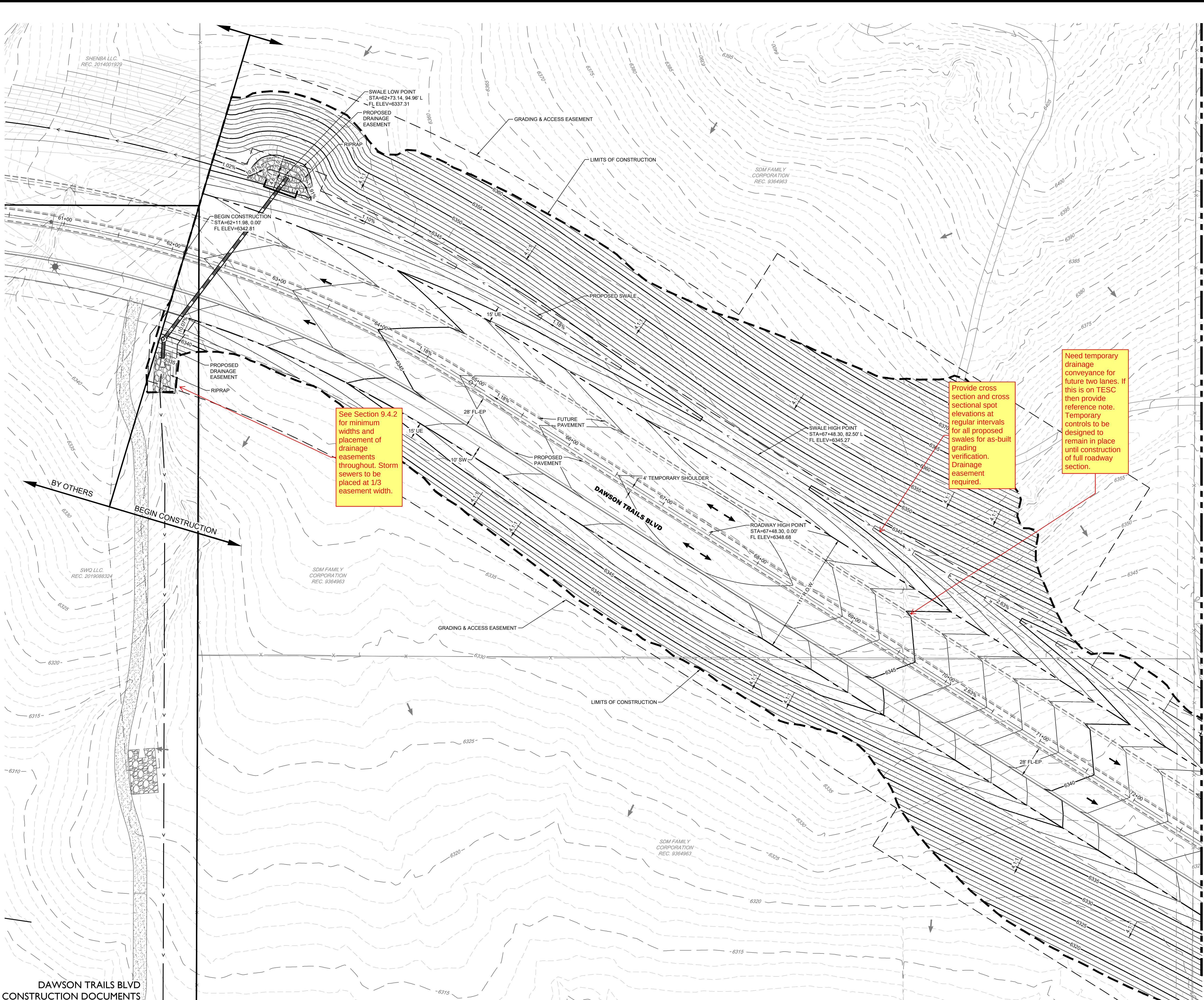


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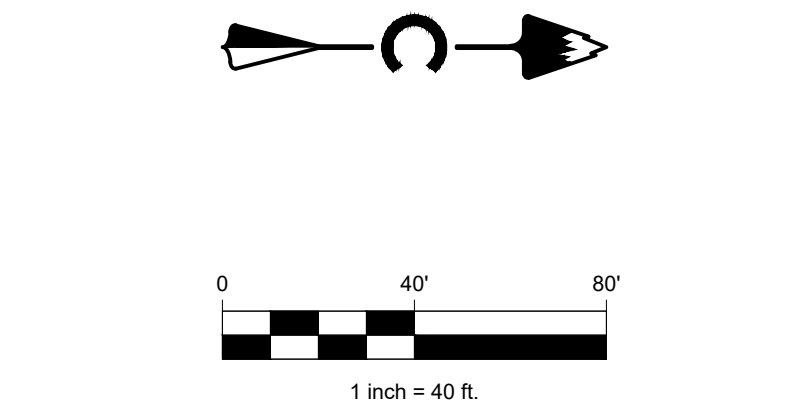
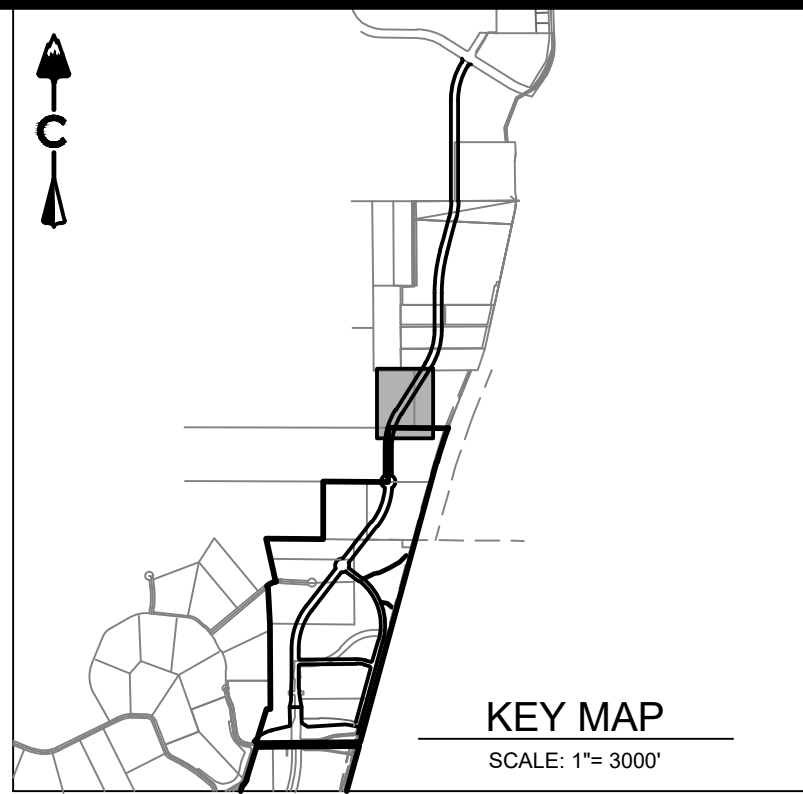
1. No On-Street Parking.
2. Additional Left turn lanes provided as determined necessary. Planting areas shall be adjusted to accommodate right turn lanes.
3. Curb and Gutter Type VC2 see Detail Plan No. CG-1.
4. Median - see Detail Plan No. CG-16, Section C-C.
5. Trees within 10' of travel lane requires Median Planter.
6. See the Town's Landscape & Irrigation Performance Standards and Criteria for additional information regarding trees and landscaping.
7. Add additional lanes as needed.

DEVELOPMENT SERVICES	DATE
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JOB NO.
20-224
SHEET
4 OF 63



DAWSON TRAILS BLVD
CONSTRUCTION DOCUMENTS
PROJECT NO. CD 23-0020



LEGEND			
	5280	PROPOSED MAJOR CONTOUR	
	5279	PROPOSED MINOR CONTOUR	
	5280	EXISTING MAJOR CONTOUR	
	5279	EXISTING MINOR CONTOUR	
		DIRECTIONAL FLOW ARROW	
		EMERGENCY OVERFLOW ROUTE	
	5150	SPOT ELEVATION	
	LOT TYPE - (A) TF= 5150.0	TOP OF FOUNDATION ELEVATION	
		EASEMENT	
		RIGHT OF WAY (R.O.W.)	
		CENTERLINE	
		PROJECT BOUNDARY	
		PROPOSED CURB & GUTTER	
		FUTURE CURB & GUTTER	
		RETAINING WALL	
		LIMITS OF CONSTRUCTION	
		100 YEAR FLOODPLAIN	
		WETLAND	
		BLOCK NUMBER	
		A LOT, B LOT, WALKOUT, TRANSITION	
	1	STORM MANHOLES	
	2	STORM INLETS	
	3	FES, FOREBAY, & TRICKLE CHANNEL	
	4	OUTLET STRUCTURE	
	5	PROPOSED STORM & STUB OUT	
	6	EXISTING STORM & STUB OUT	
	7	CRUSHER FINES	
	8	MAINTENANCE ACCESS	
	9	RIPRAP	
ABBREVIATIONS:			
BOTM	BOTTOM		
FLPN	FLOODPLAIN		
TF	TOP OF FOUNDATION		
HP	HIGH POINT		
LP	LOW POINT		
EP	EDGE OF PAVEMENT		

PROFESSIONAL ENGINEER CERTIFICATION

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MICHAEL GOODHUE, P.E. DATE
STATE OF COLORADO # 48230

TOWN OF CASTLE ROCK APPROVAL

PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

DEVELOPMENT SERVICES DATE

LAND DEVELOPMENT
ENERGY
PUBLIC INFRASTRUCTURE

CORE

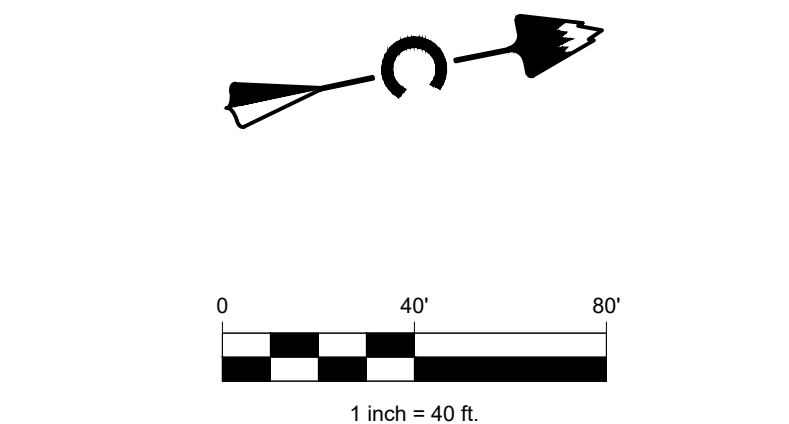
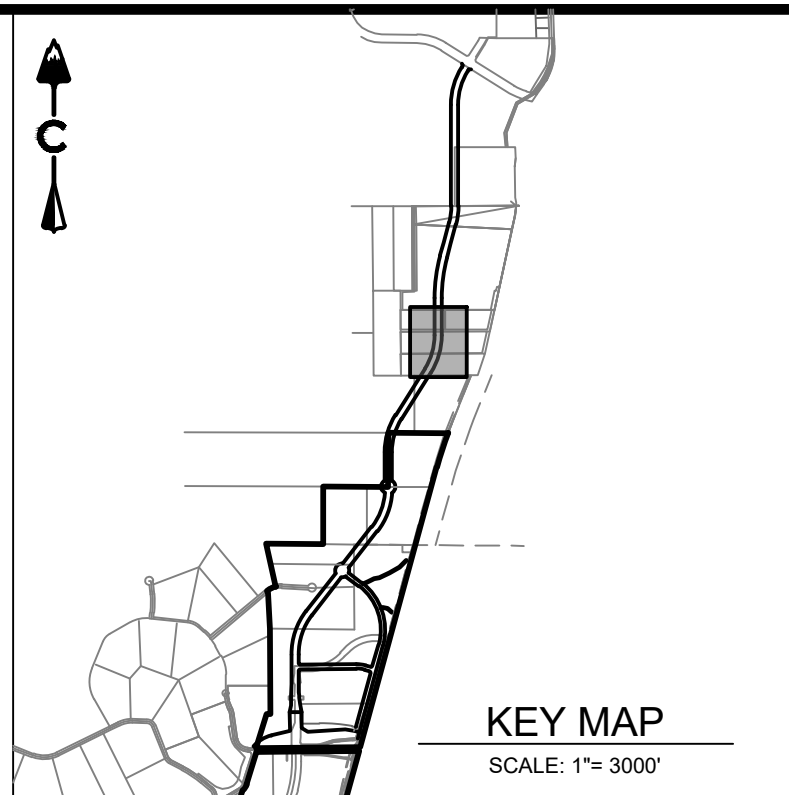
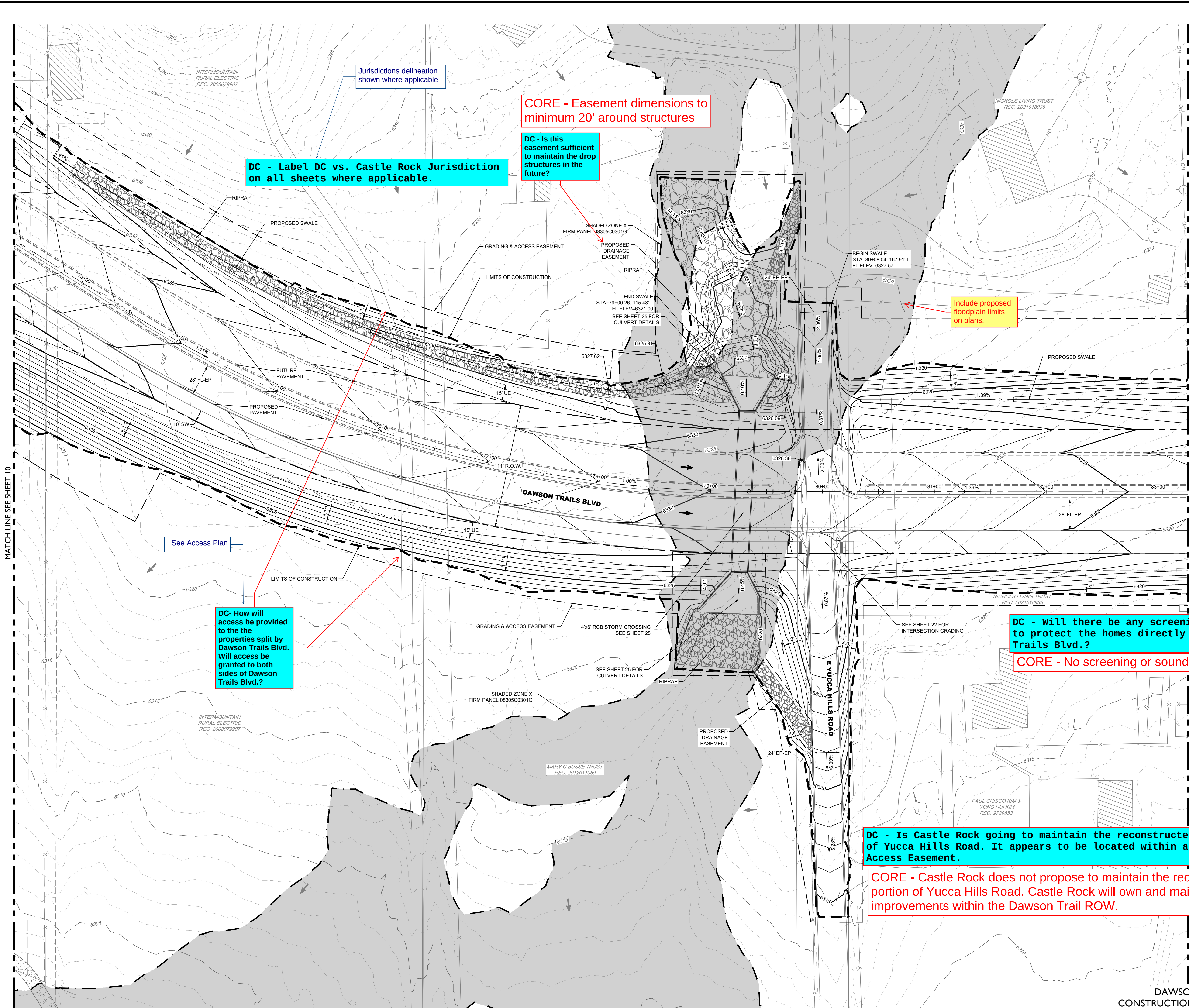
Know what's below.
Call before you dig.
811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	06/29/23	JFF
2	2ND SUBMITTAL	10/09/23	JFF
3	3RD SUBMITTAL	06/25/25	MG

DAWSON TRAILS BLVD (NORTH)
CASTLE ROCK, COLORADO
CONSTRUCTION DOCUMENTS
GRADING PLAN (1 OF 6)

DESIGNED BY: MG
DRAWN BY: CT
CHECKED BY: MG

JOB NO.
20-224
SHEET
10 OF 63



Know what's below. Call before you dig.		DATE	BY
		06/29/23	JFF
		10/09/23	JFF
		06/25/25	MG
#	REVISION DESCRIPTION		
1	1ST SUBMITTAL		
2	2ND SUBMITTAL		
3	3RD SUBMITTAL		

1	2	3	4
(A)	(B)	(W)	(T)

HP	HP	MIN
LP	LP	FOUNDATION
EP	EP	EDGE OF PAVEMENT

PROFESSIONAL ENGINEER CERTIFICATION

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DEVELOPMENT SERVICES DATE

CORE CONSULTANTS, INC.
3473 S. ROADWAY
DENVER, CO 80113
303.703.4444
LIVEYOURCORE.COM

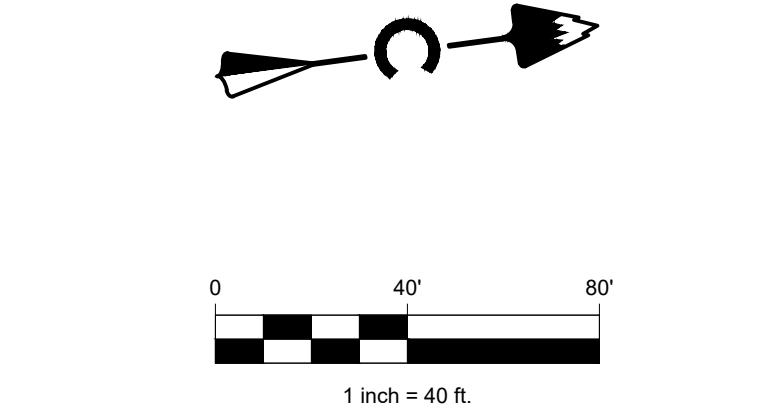
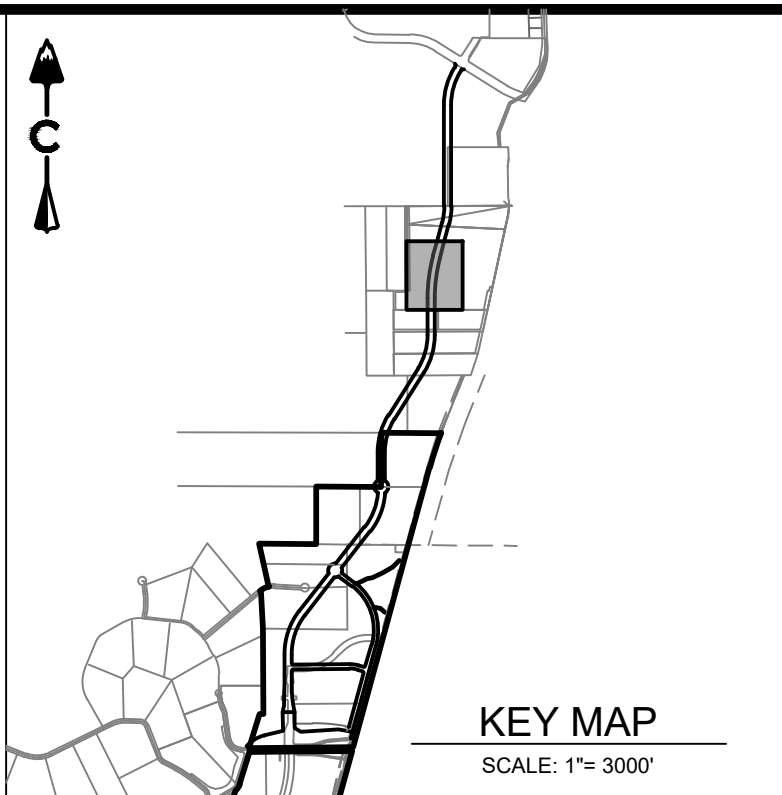
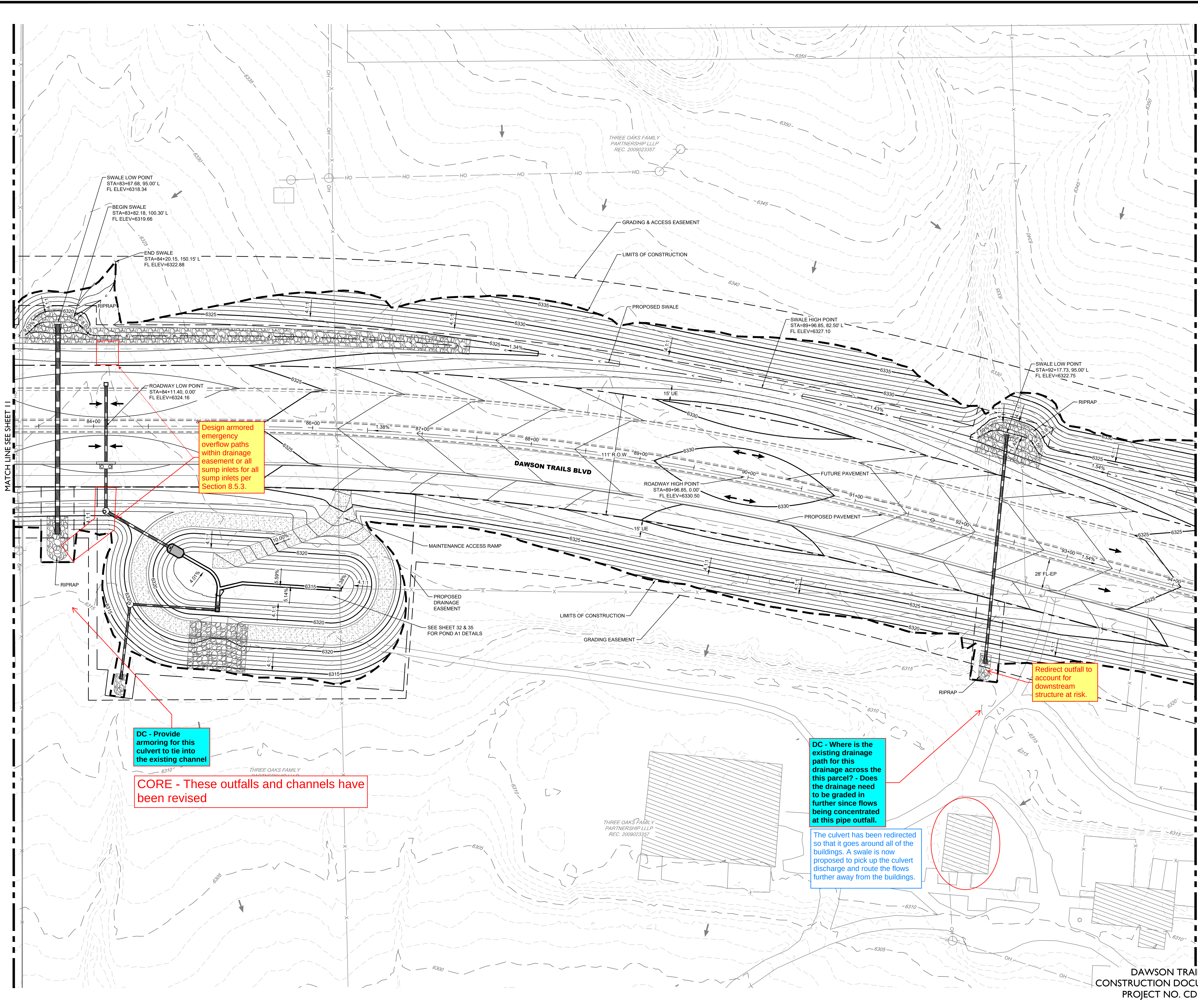
CORE

Know what's below. Call before you dig.

811

DAWSON TRAILS BLVD (NORTH)	
CASTLE ROCK, COLORADO	
CONSTRUCTION DOCUMENTS	
GRADING PLAN (2 OF 6)	

DESIGNED BY: MG	JOB NO. 20-224
DRAWN BY: CT	SHEET 11 OF 63
CHECKED BY: MG	



LEGEND	
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	DIRECTIONAL FLOW ARROW
	EMERGENCY OVERFLOW ROUTE
	SPOT ELEVATION
	TOP OF FOUNDATION ELEVATION
	EASEMENT
	RIGHT OF WAY (R.O.W.)
	CENTERLINE
	PROJECT BOUNDARY
	PROPOSED CURB & GUTTER
	FUTURE CURB & GUTTER
	RETAINING WALL
	LIMITS OF CONSTRUCTION
	100 YEAR FLOODPLAIN
	WETLAND
	BLOCK NUMBER
	A LOT, B LOT, WALKOUT, TRANSITION
	STORM MANHOLES
	STORM INLETS
	FES, FOREBAY, & TRICKLE CHANNEL
	OUTLET STRUCTURE
	PROPOSED STORM & STUB OUT
	EXISTING STORM & STUB OUT
	CRUSHER FINES
	MAINTENANCE ACCESS
	RIPRAP
ABBREVIATIONS:	
	BOTM FLPN
	HP
	LP
	EP

PROFESSIONAL ENGINEER CERTIFICATION

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STATE OF COLORADO # 48230

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DESIGNED BY: MG

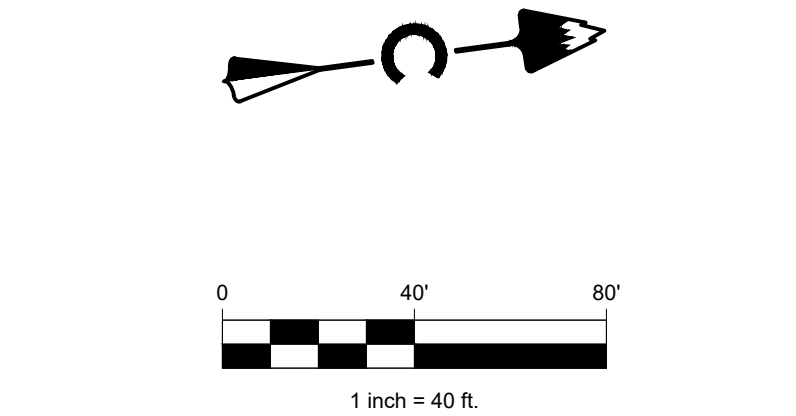
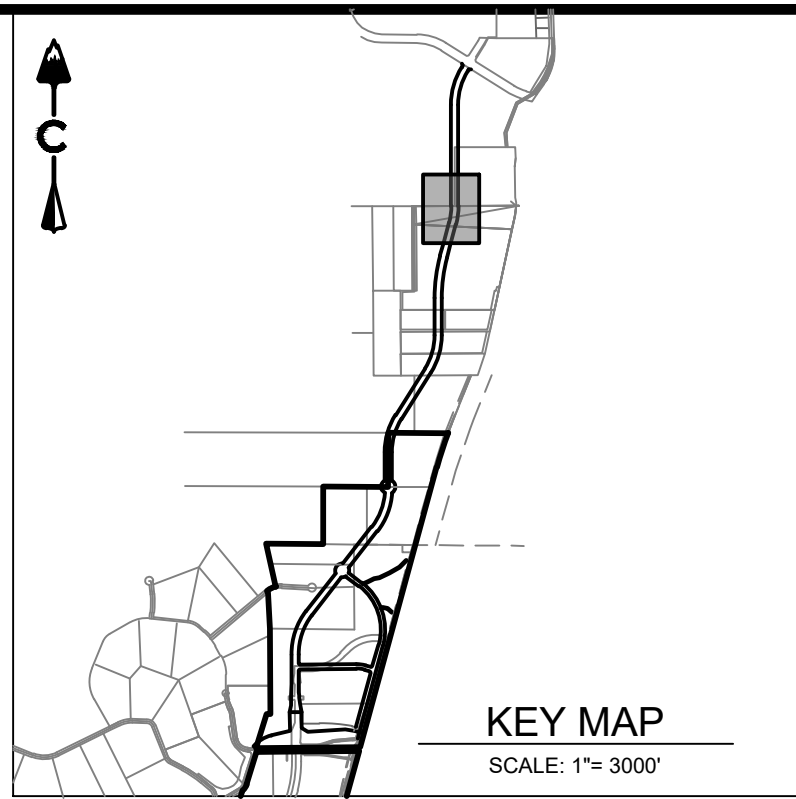
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CHECKED BY: MG

JOB NO. 20-224

SHEET 12 OF 63

DEVELOPMENT SERVICES DATE



LEGEND		
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	5279	PROPOSED MINOR CONTOUR
	5280	EXISTING MAJOR CONTOUR
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	5150	SPOT ELEVATION
		LOT TYPE
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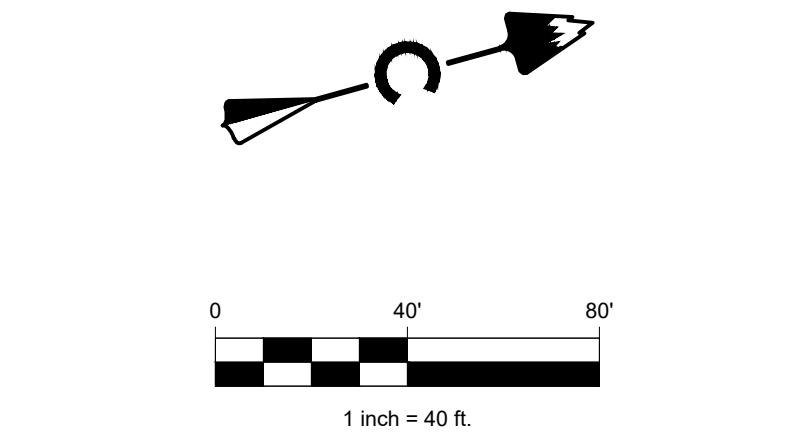
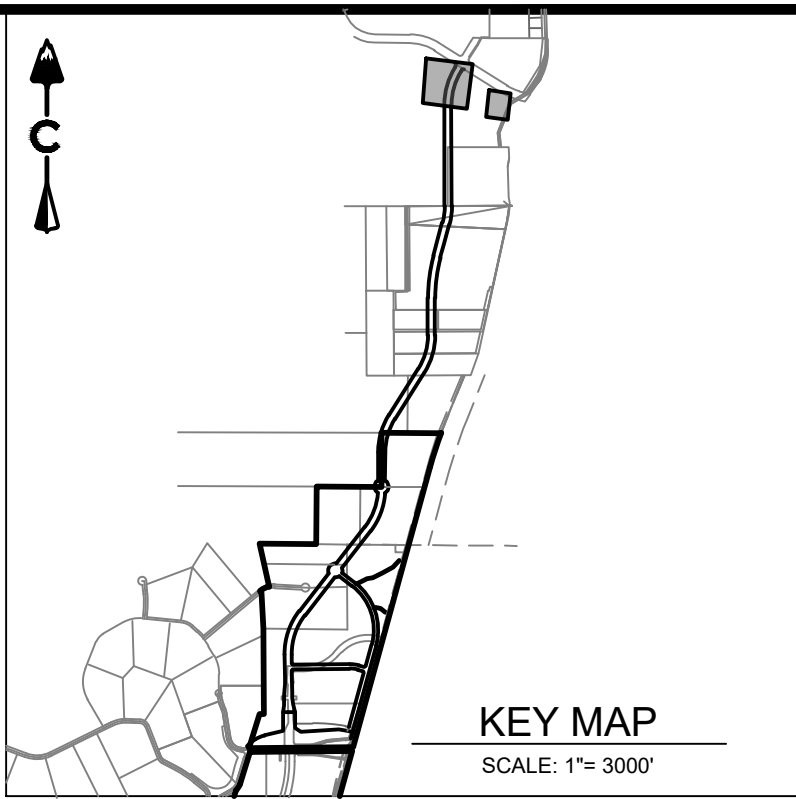
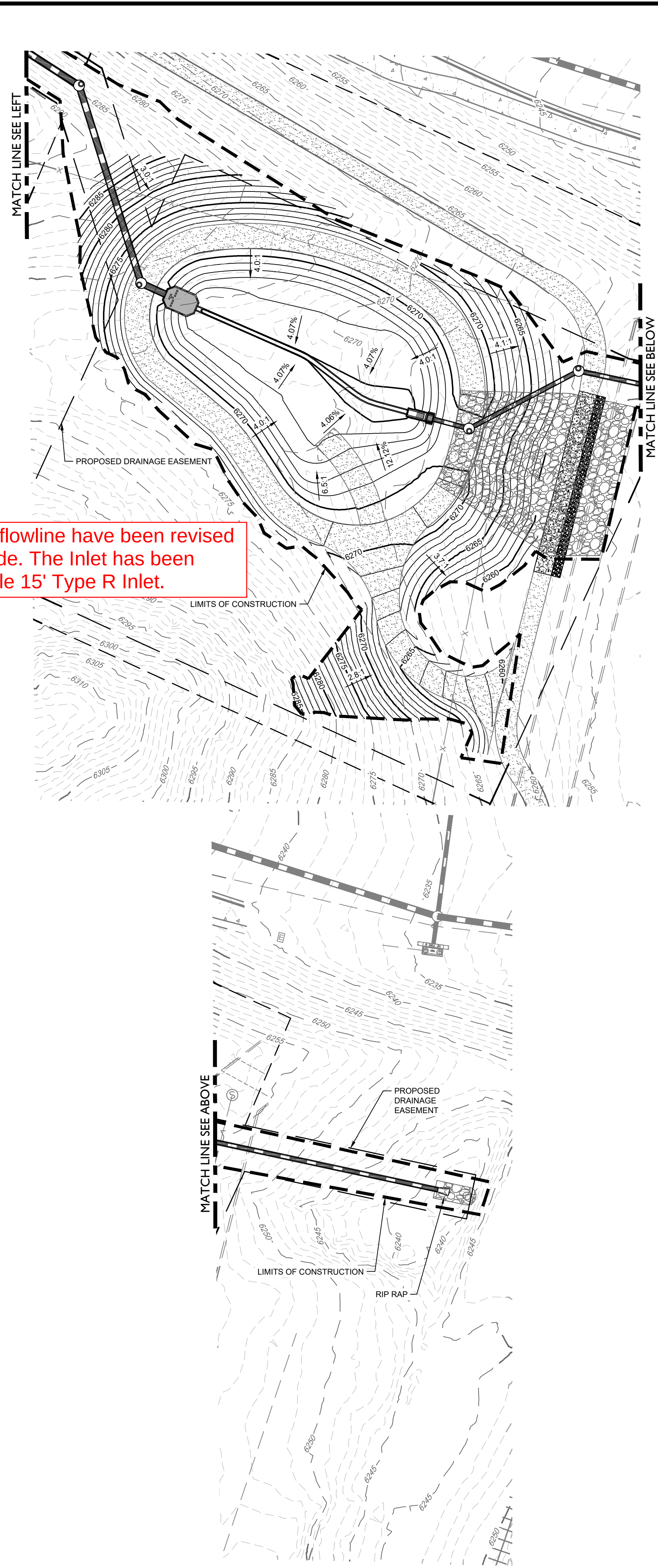
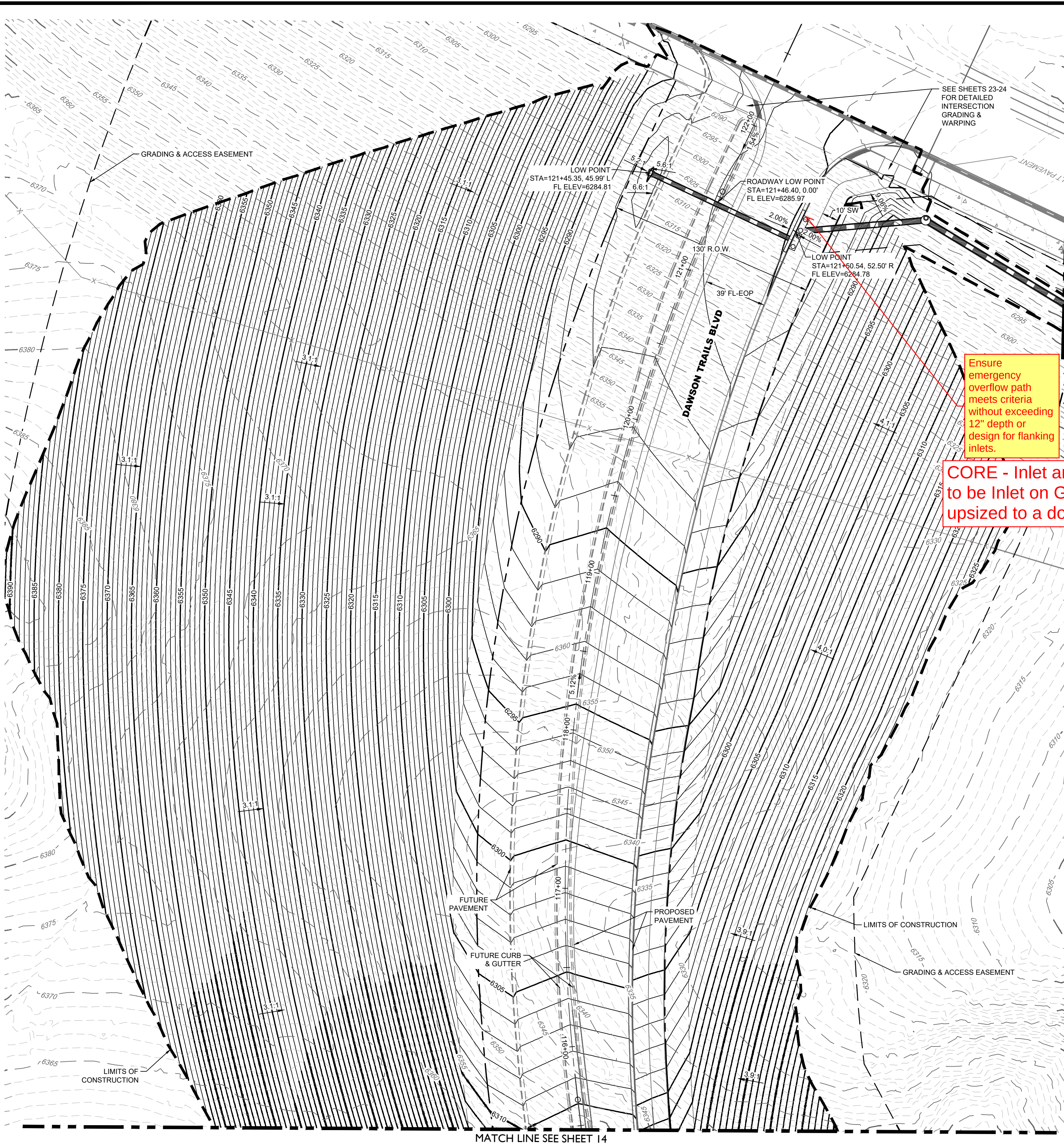
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JOB NO. 20-224	
SHEET 13 OF 63	
DEVELOPMENT SERVICES	DATE

DAWSON TRAILS BLVD
CONSTRUCTION DOCUMENTS
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DAWSON TRAILS BLVD (NORTH)
CASTLE ROCK, COLORADO
CONSTRUCTION DOCUMENTS
GRADING PLAN (4 OF 6)

DESIGNED BY: MG
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SHEET
13 OF 63

CORE CONSULTANTS, INC.
3473 S. BROADWAY
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LAND DEVELOPMENT
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LEGEND		
	5280	PROPOSED MAJOR CONTOUR
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		PROPOSED CURB & GUTTER
		FUTURE CURB & GUTTER
		RETAINING WALL
		LIMITS OF CONSTRUCTION
		100 YEAR FLOODPLAIN
		WETLAND
		BLOCK NUMBER
		A LOT, B LOT, WALKOUT, TRANSITION
		STORM MANHOLES
		STORM INLETS
		FES, FOREBAY, & TRICKLE CHANNEL
		OUTLET STRUCTURE
		PROPOSED STORM & STUB OUT
		EXISTING STORM & STUB OUT
		CRUSHER FINES
		MAINTENANCE ACCESS
		RIPRAP
ABBREVIATIONS:		
BOTM		BOTTOM
FLPN		FLOODPLAIN
TF		TOP OF FOUNDATION
HP		HIGH POINT
LP		LOW POINT
EP		EDGE OF PAVEMENT

PROFESSIONAL ENGINEER CERTIFICATION

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MICHAEL GOODHUE, P.E. DATE
STATE OF COLORADO # 48230

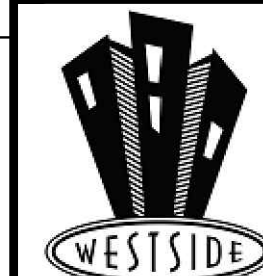
TOWN OF CASTLE ROCK APPROVAL

PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

DAWSON TRAILS BLVD
CONSTRUCTION DOCUMENTS
PROJECT NO. CD 23-0020

DEVELOPMENT SERVICES DATE

DAWSON TRAILS BLVD (NORTH)
CASTLE ROCK, COLORADO
CONSTRUCTION DOCUMENTS
GRADING PLAN (6 OF 6)



DESIGNED BY: MG
DRAWN BY: CT
CHECKED BY: MG

JOB NO.
20-224
SHEET
15 OF 63

CORE CONSULTANTS, INC.
3473 S. BROADWAY
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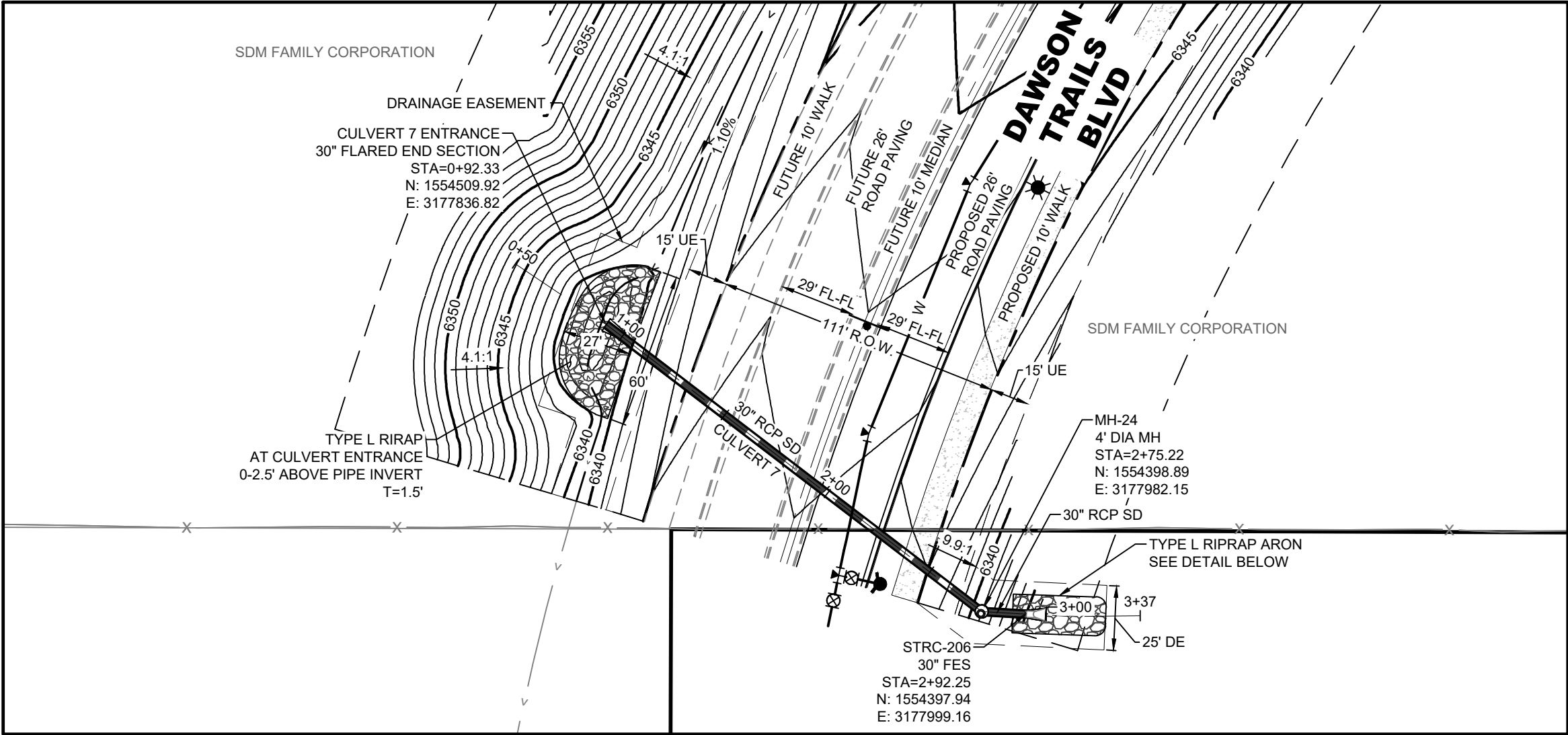
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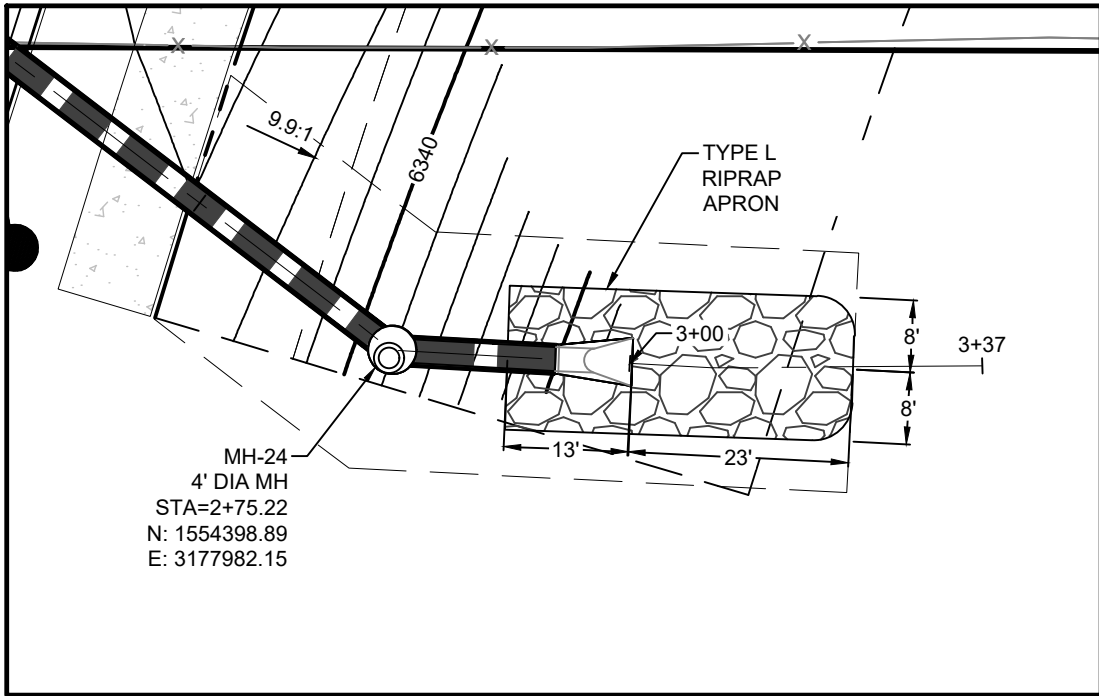
#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	06/29/23	JFF
2	2ND SUBMITTAL	10/09/23	JFF
3	3RD SUBMITTAL	06/25/25	MG

CULVERT 7

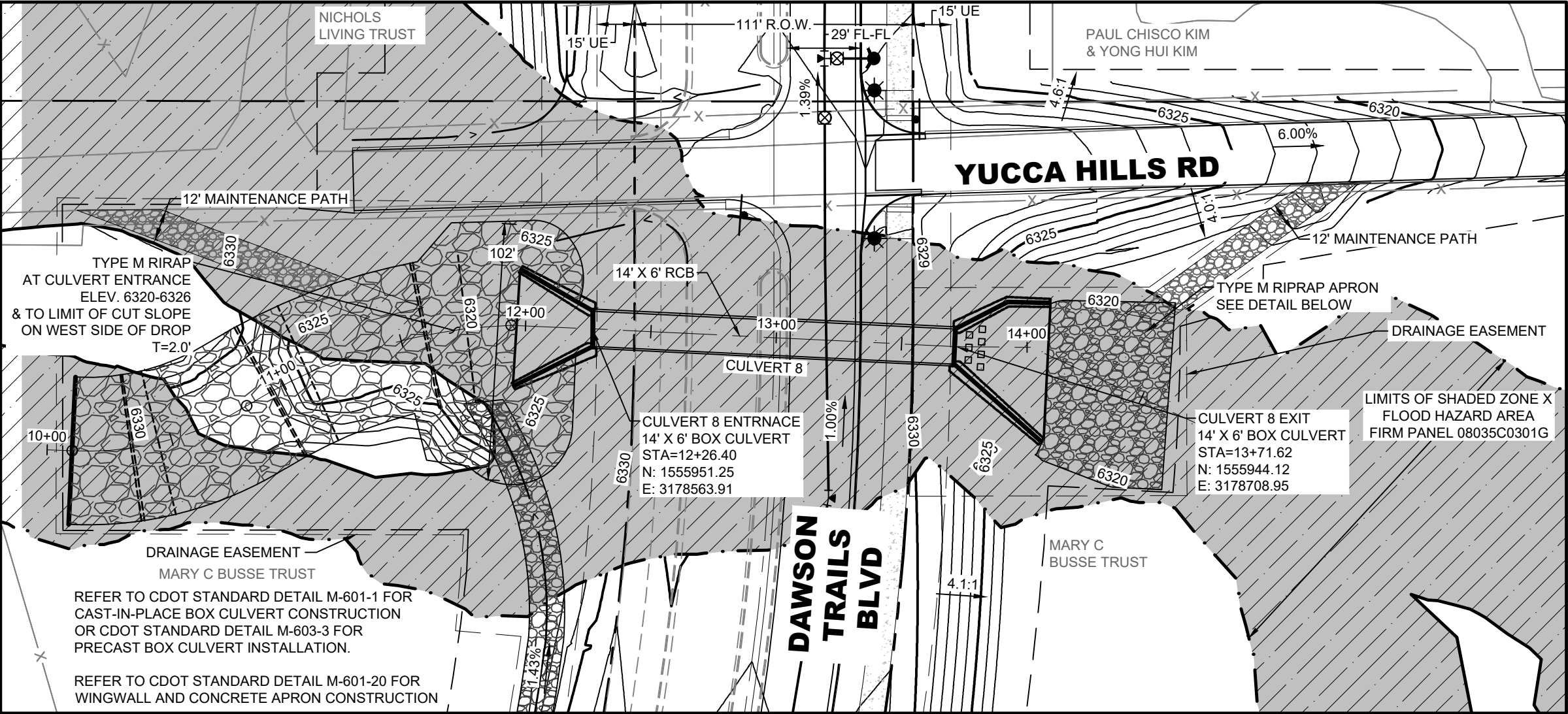


CULVERT 7 OUTLET

SCALE: 1" = 20'

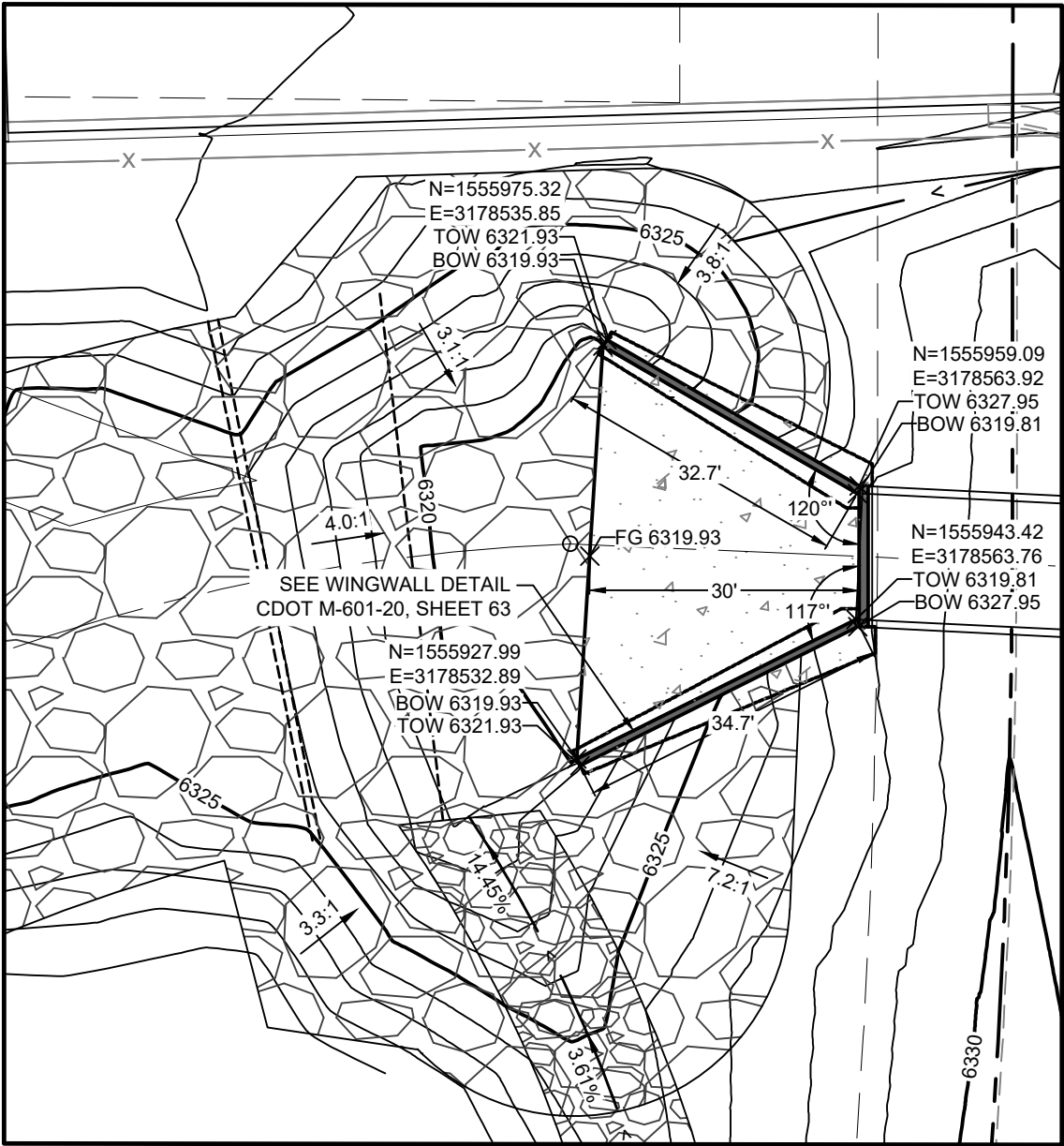


CULVERT 8 (14' X 6' BOX)



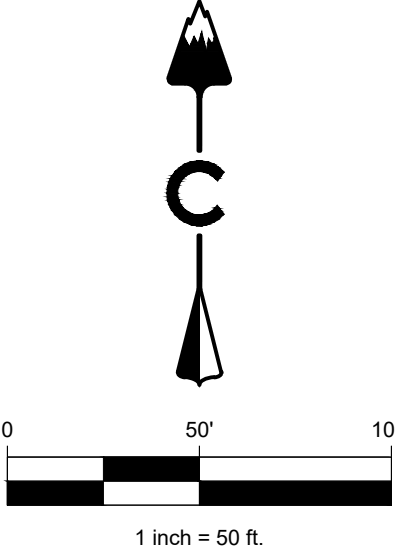
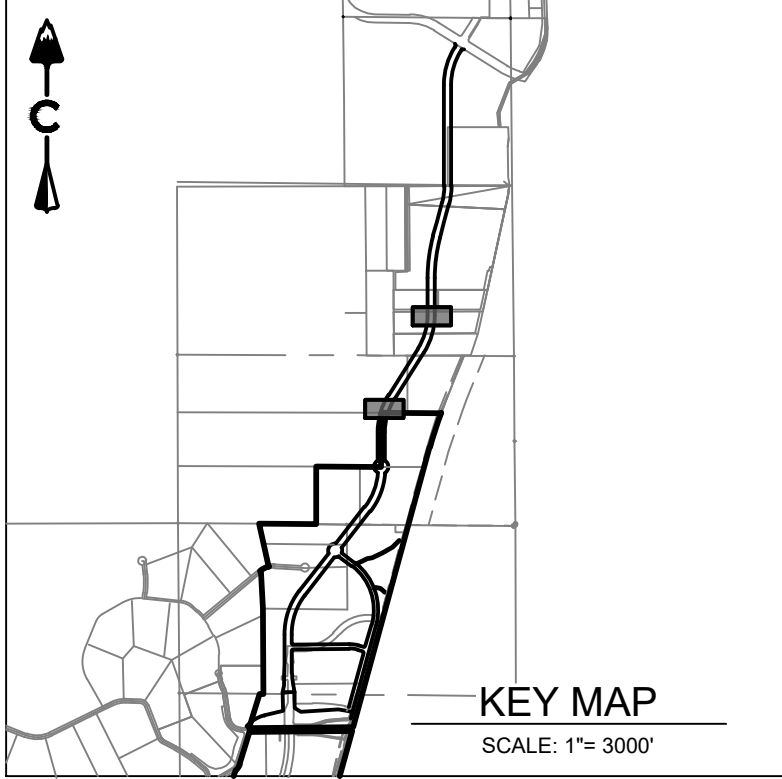
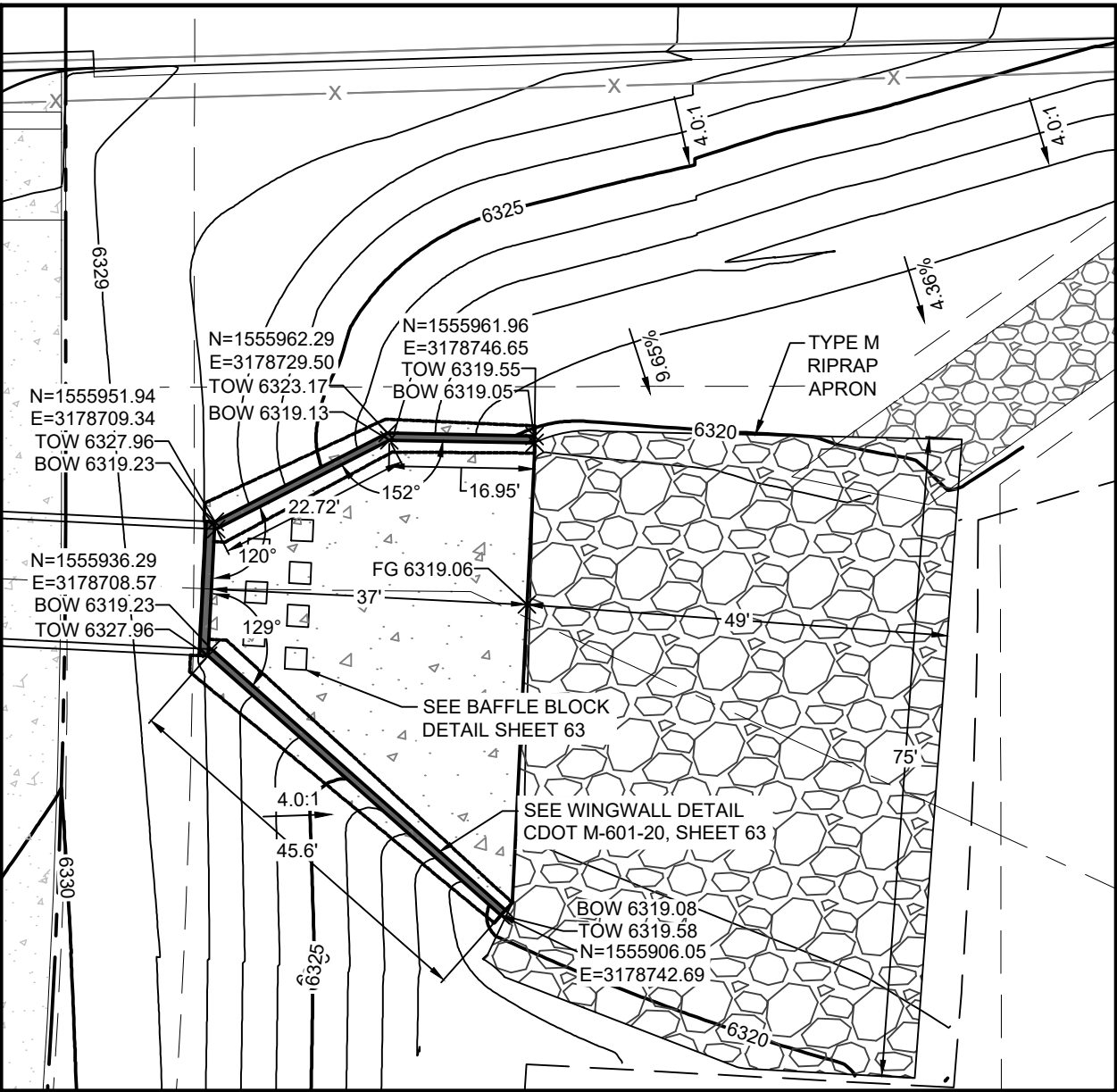
CULVERT 8 INLET

SCALE: 1" = 20'



CULVERT 8 OUTLET

SCALE: 1" = 20'

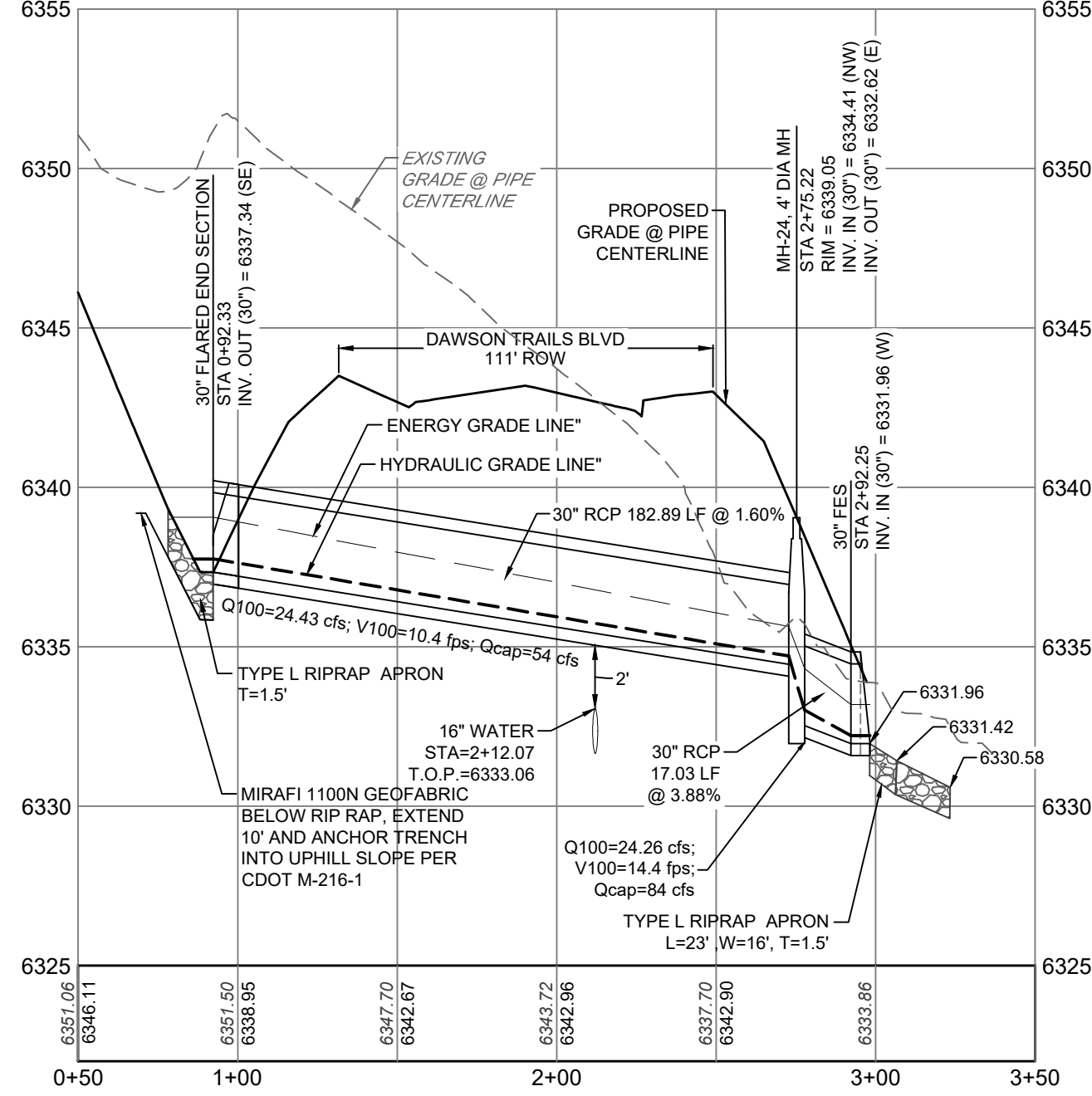


LEGEND

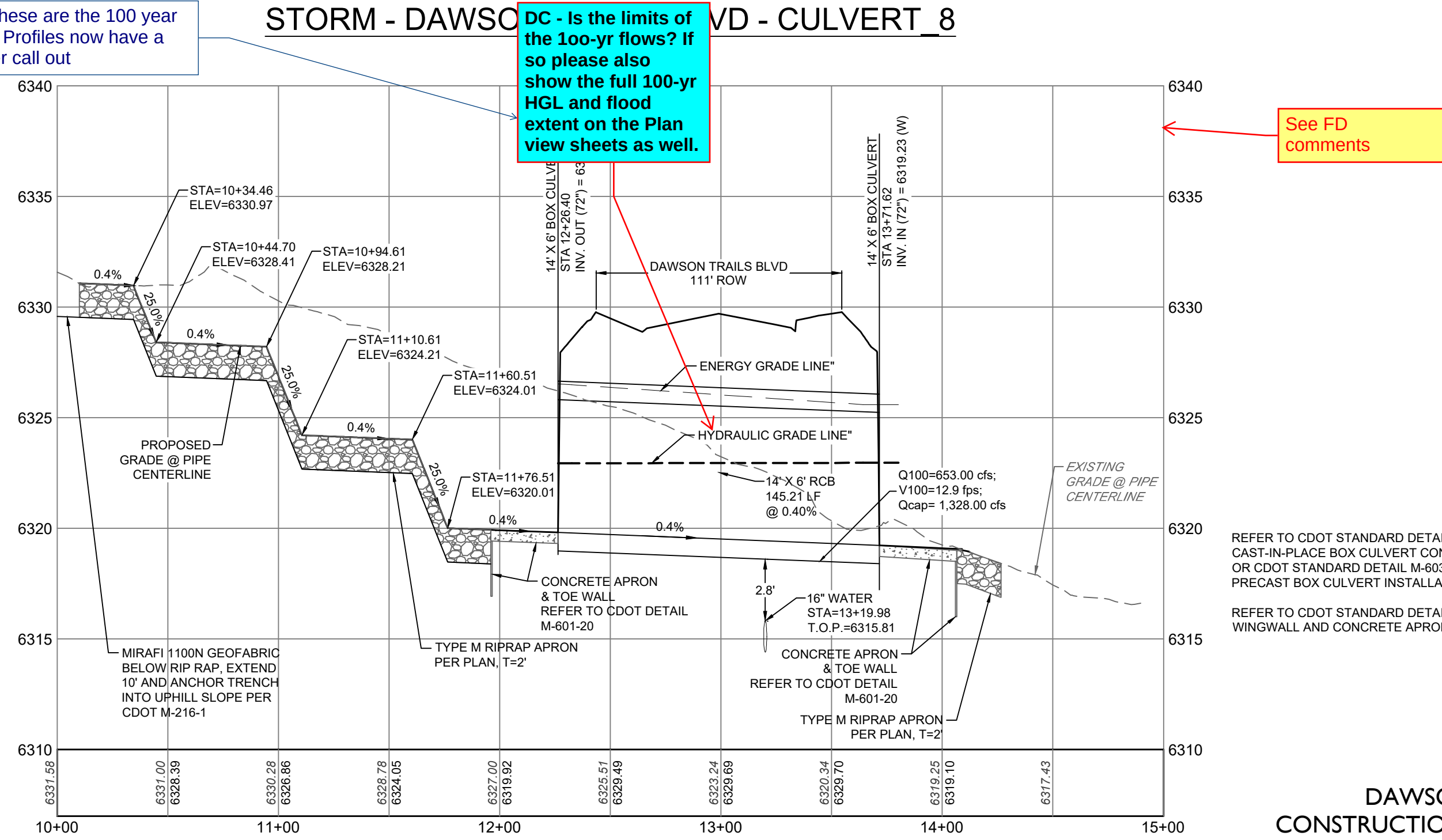
- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- PROJECT BOUNDARY
- PROPOSED CURB & GUTTER
- PROPOSED SANITARY & STUB OUT
- EXISTING SANITARY & STUB OUT
- SANITARY SERVICE
- WATER SERVICE
- PROPOSED WATER & STUB OUT
- EXISTING WATER & STUB OUT
- PROPOSED STORM & STUB OUT
- EXISTING STORM & STUB OUT
- FUTURE STORM & STUB OUT
- STORM MAJOR HGL
- STORM MINOR HGL
- STORM UNDERDRAIN
- STORM MANHOLES
- STORM INLETS
- FES, FOREBAY, & TRICKLE CHANNEL
- OUTLET STRUCTURE
- CRUSHER FINES
- MAINTENANCE ACCESS
- RIPRAP
- BLOCK NUMBER
- 100 YEAR FLOODPLAIN
- WETLAND
- SHADED ZONE X FLOOD AREA

NOTES:
1. CLASS V RCP SHALL BE USED FOR DEPTHS OF BURY EXCEEDING 17'.

STORM - DAWSON TRAILS BLVD - CULVERT 7 (0+50-3+50)



STORM - DAWSON TRAILS BLVD - CULVERT 8



PROFESSIONAL ENGINEER CERTIFICATION

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MICHAEL GOODHUE, P.E. DATE
STATE OF COLORADO # 48230

TOWN OF CASTLE ROCK APPROVAL

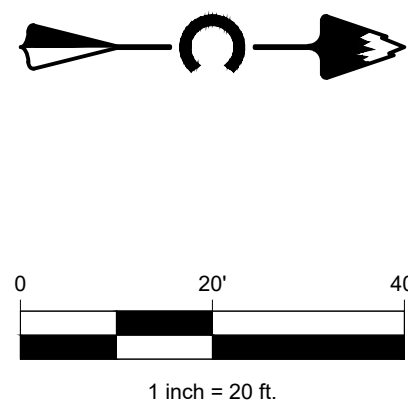
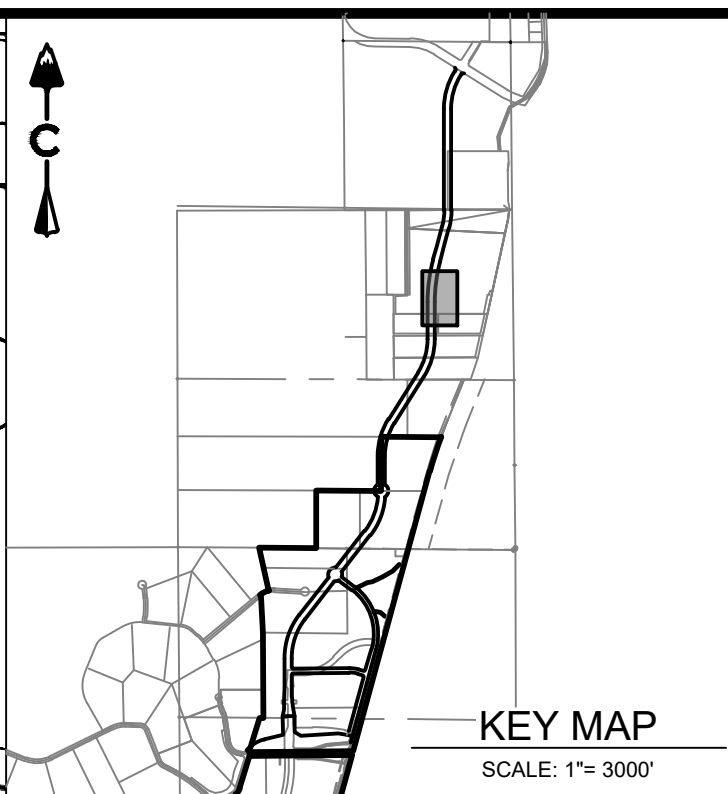
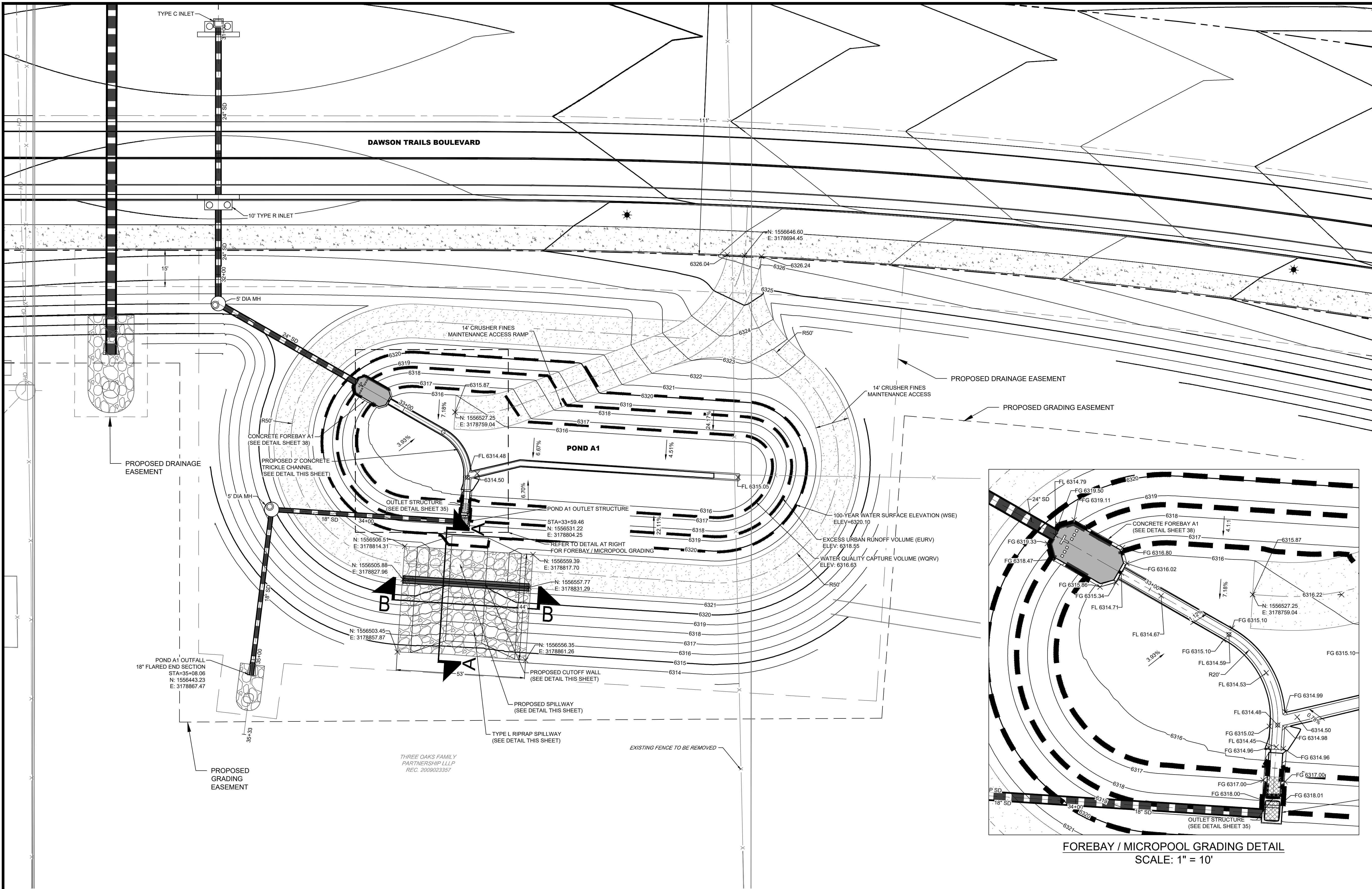
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

DAWSON TRAILS BLVD (NORTH)
CASTLE ROCK, COLORADO
CONSTRUCTION DOCUMENTS
STORM P&P (1 OF 7)



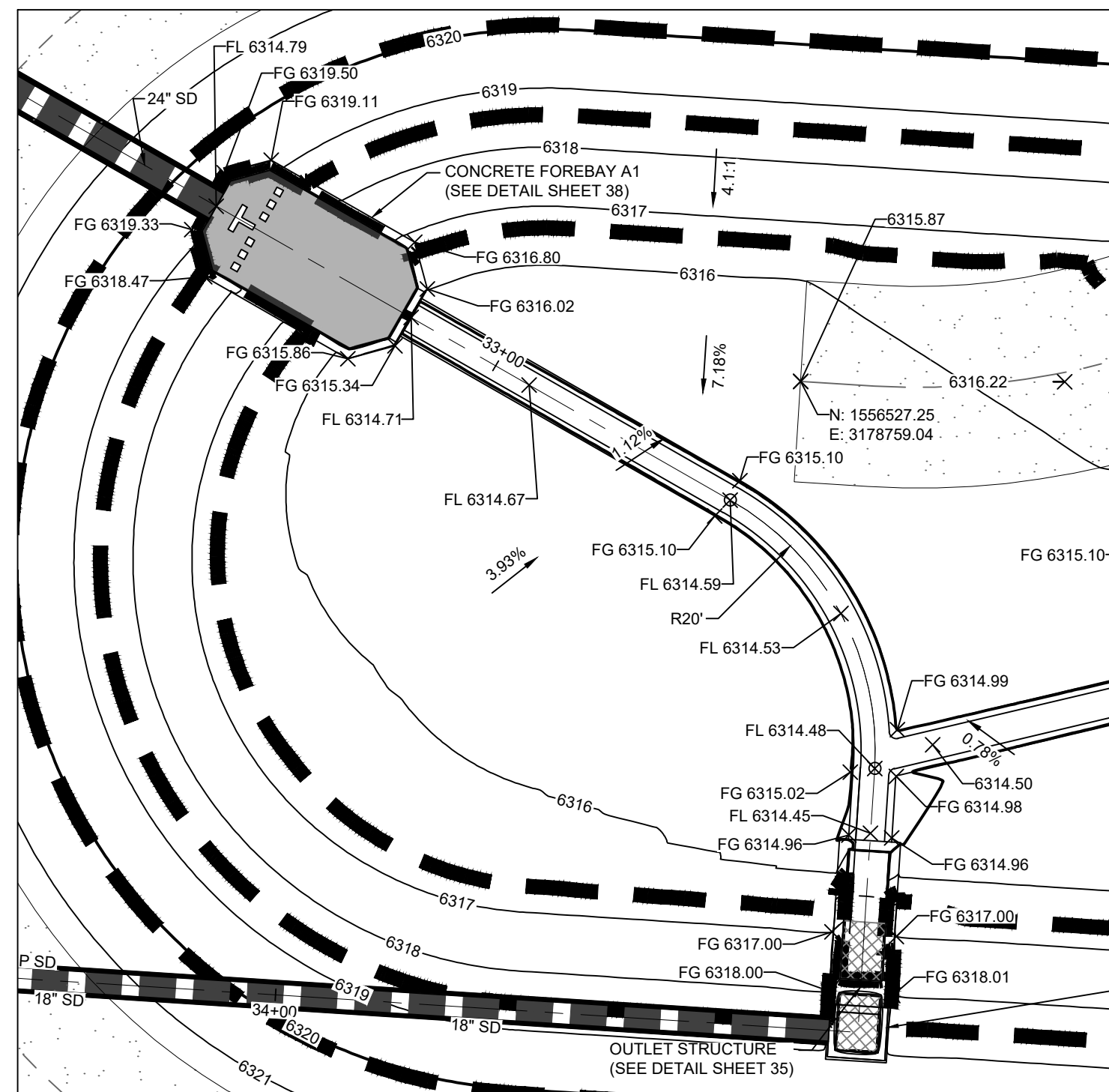
DESIGNED BY: MG
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CHECKED BY: MG

JOB NO.
20-224
SHEET
25 OF 63



LEGEND

---	EASEMENT
---	RIGHT OF WAY (R.O.W.)
---	CENTERLINE
---	PROJECT BOUNDARY
---	PROPOSED CURB & GUTTER
---	PROPOSED MAJOR CONTOUR
---	PROPOSED MINOR CONTOUR
---	EXISTING MAJOR CONTOUR
---	EXISTING MINOR CONTOUR
---	DIRECTIONAL FLOW ARROW
---	SPOT ELEVATION
---	PROPOSED STORM & STUB OUT
---	EXISTING STORM & STUB OUT
---	FUTURE STORM & STUB OUT
---	STORM MAJOR HGL
---	STORM MINOR HGL
---	STORM UNDERDRAIN
---	STORM MANHOLES
---	STORM INLETS
---	FES, FOREBAY, & TRICKLE CHANNEL
---	OUTLET STRUCTURE
---	CRUSHER FINES MAINTENANCE ACCESS
---	RIPRAP
---	BLOCK NUMBER
---	100 YEAR FLOODPLAIN
---	WETLAND
---	SHADED ZONE X FLOOD AREA

FOREBAY / MICROPOOL GRADING DETAIL
SCALE: 1" = 10'

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DAWSON TRAILS BLVD (NORTH)

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS

POND DETAILS - POND A1



DESIGNED BY: MG
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JOB NO.
20-224

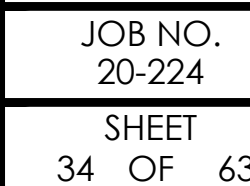
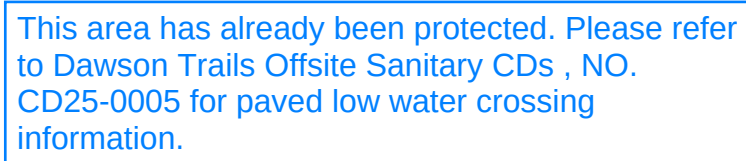
SHEET
32 OF 63

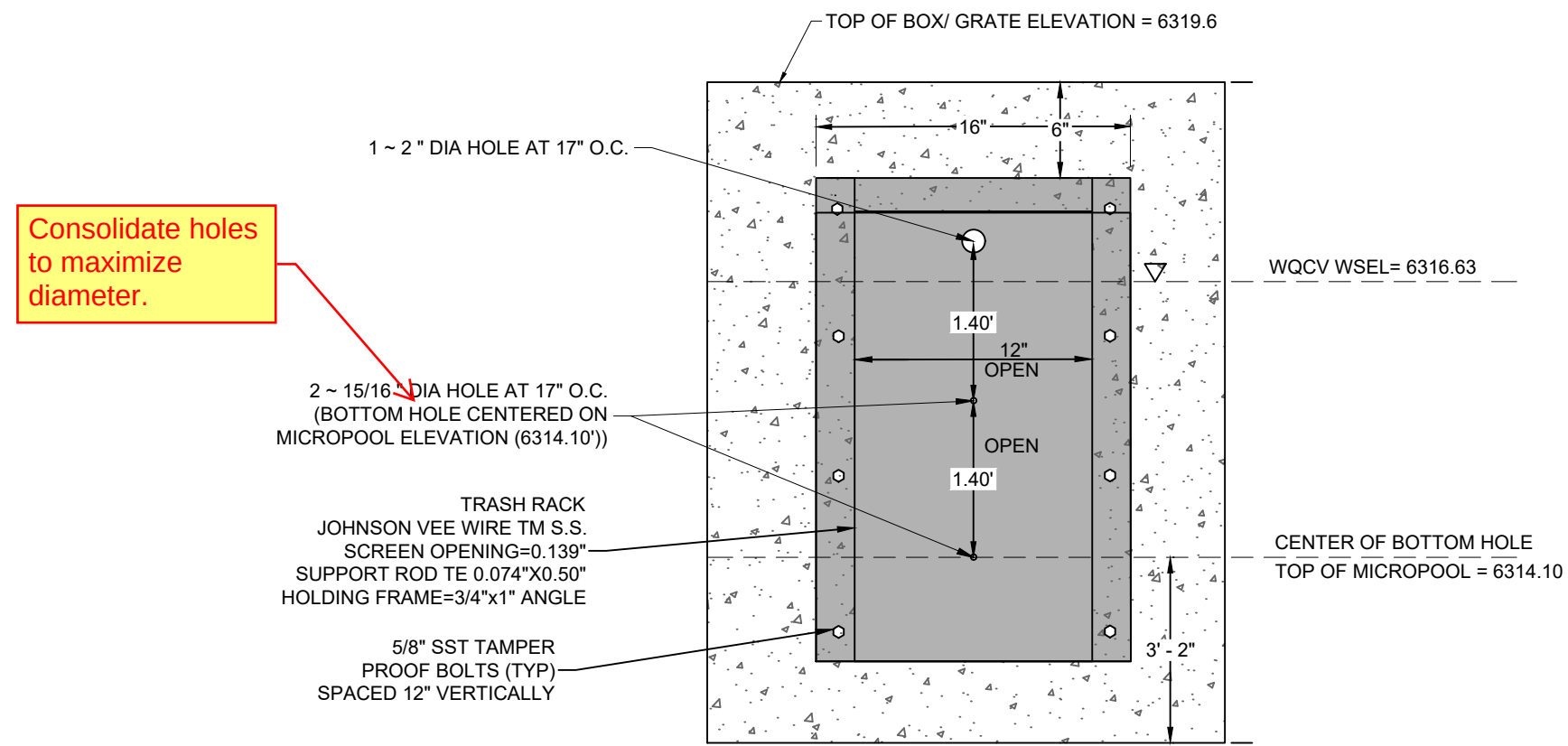
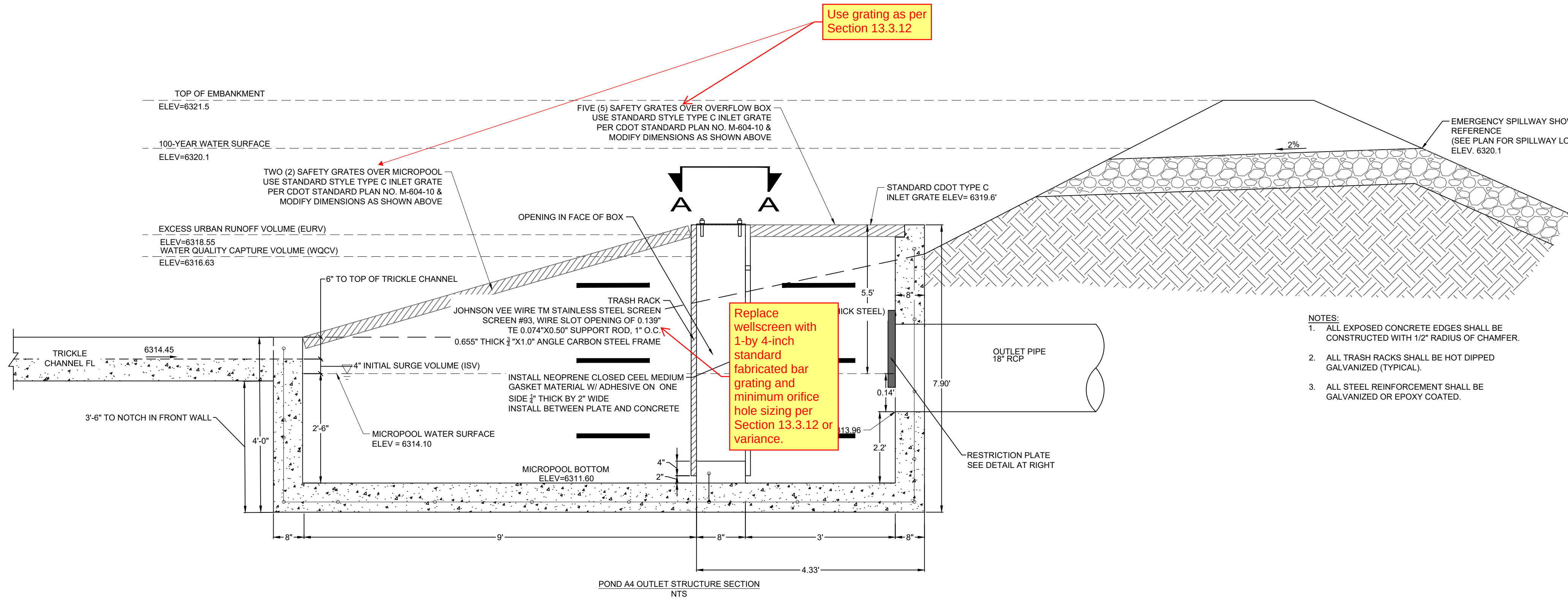
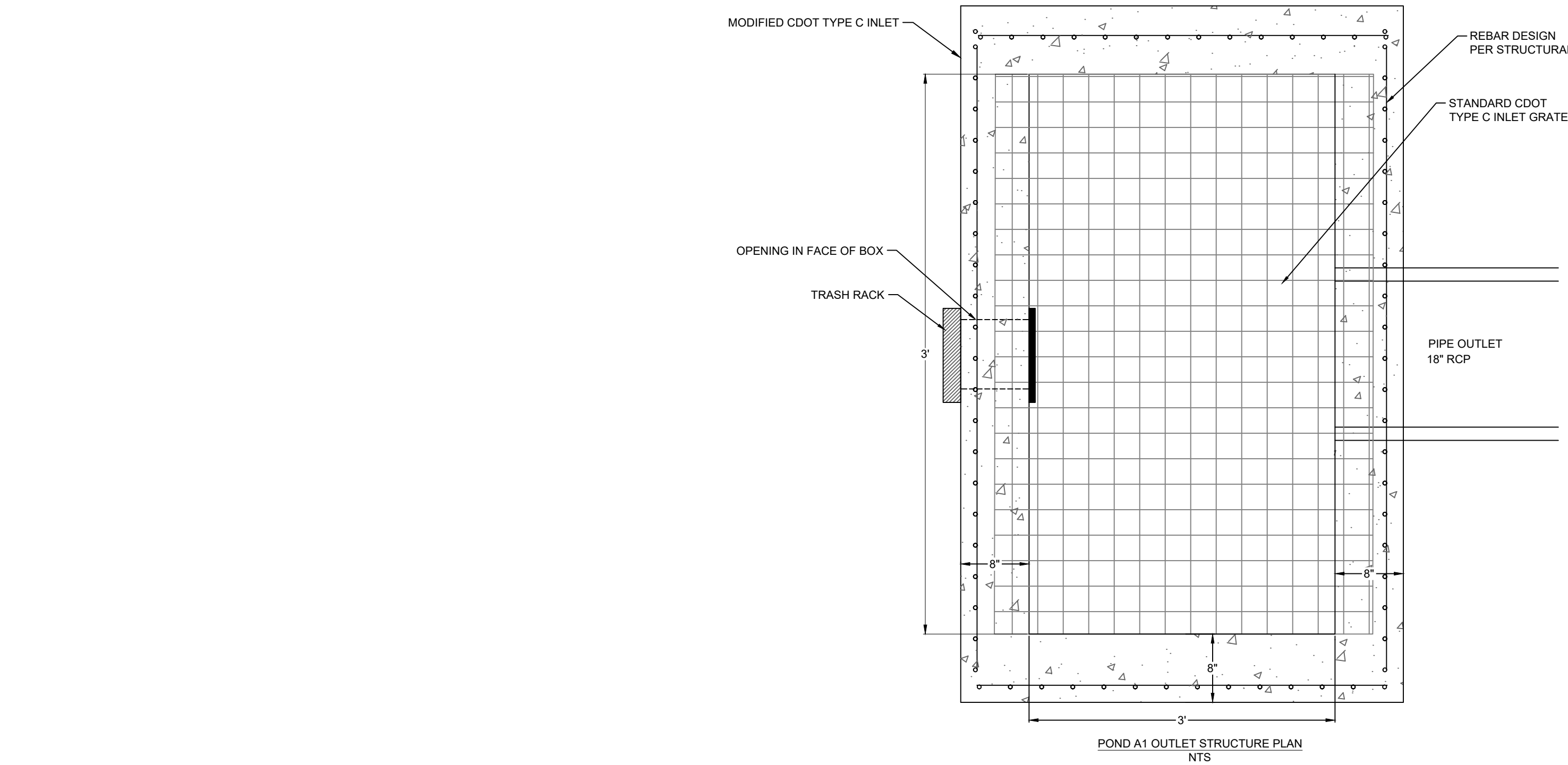
EMERGENCY SPILLWAY SECTION A-A
NTSCONCRETE CREST WALL SECTION B-B
NTSTRICKLE CHANNEL TYPICAL SECTION
NTSMAINTENANCE ACCESS TYPICAL SECTION
NTS

DAWSON TRAILS BLVD
CONSTRUCTION DOCUMENTS
PROJECT NO. CD 23-0020

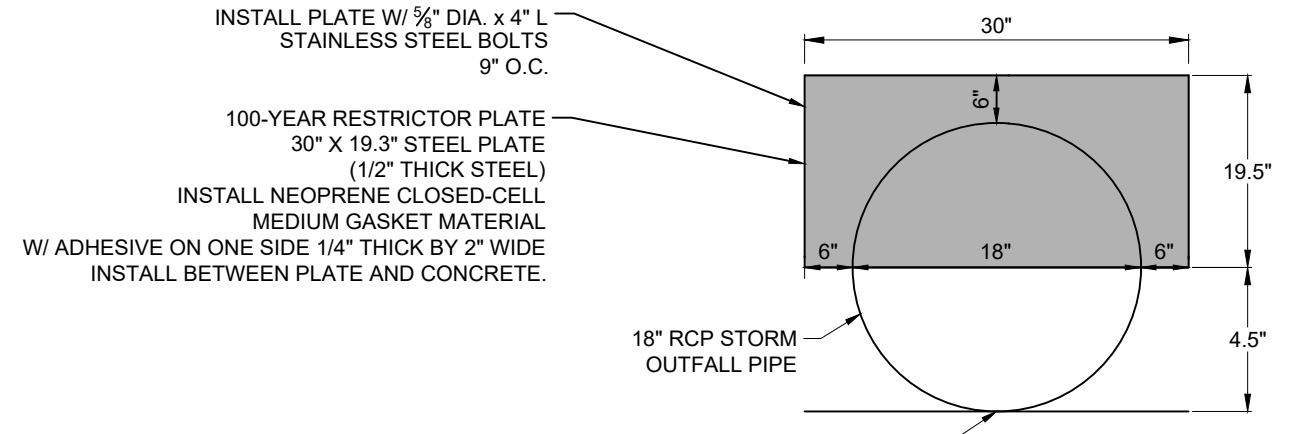
DEVELOPMENT SERVICES

DATE

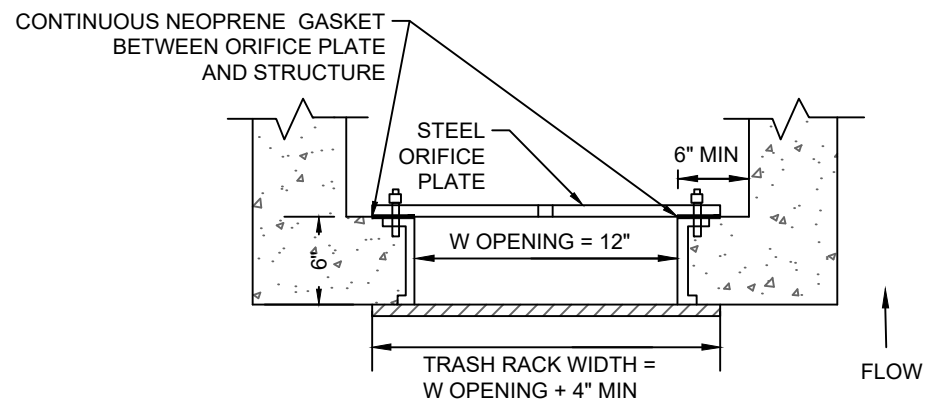




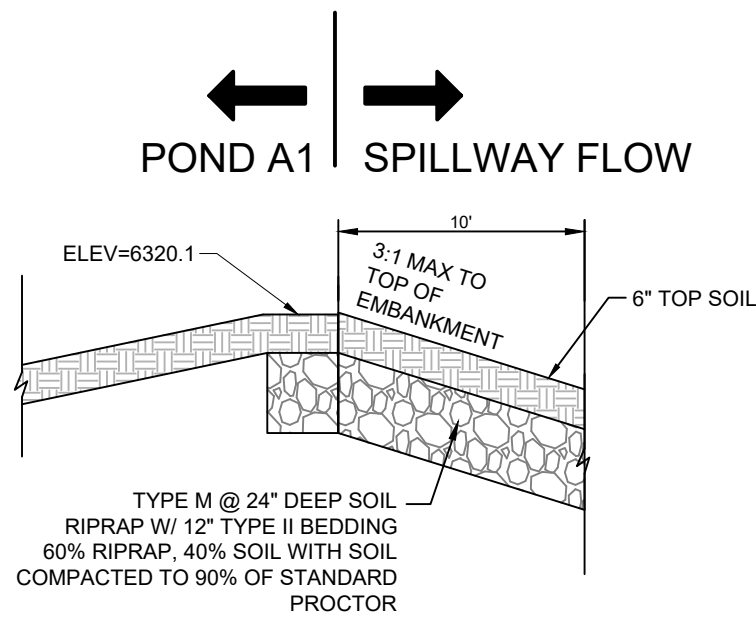
ORIFICE PLATE - ELEVATION NTS



OUTLET STRUCTURE ORIFICE PLATE NTS



TRASH RACK/ORIFICE PLATE SECTION A-A NTS



SPILLWAY SECTION NTS

- NOTES:
1. ALL EXPOSED CONCRETE EDGES SHALL BE CONSTRUCTED WITH 1/2" RADIUS OF CHAMFER.
 2. ALL TRASH RACKS SHALL BE HOT DIPPED GALVANIZED (TYPICAL).
 3. ALL STEEL REINFORCEMENT SHALL BE GALVANIZED OR EPOXY COATED.

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CONSTRUCTION DOCUMENTS
PROJECT NO. CD 23-0020

DEVELOPMENT SERVICES DATE

DAWSON TRAILS BLVD (NORTH)

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS

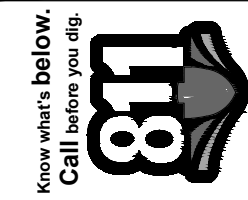
OUTLET STRUCTURE - POND A1



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JOB NO.
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35 OF 63



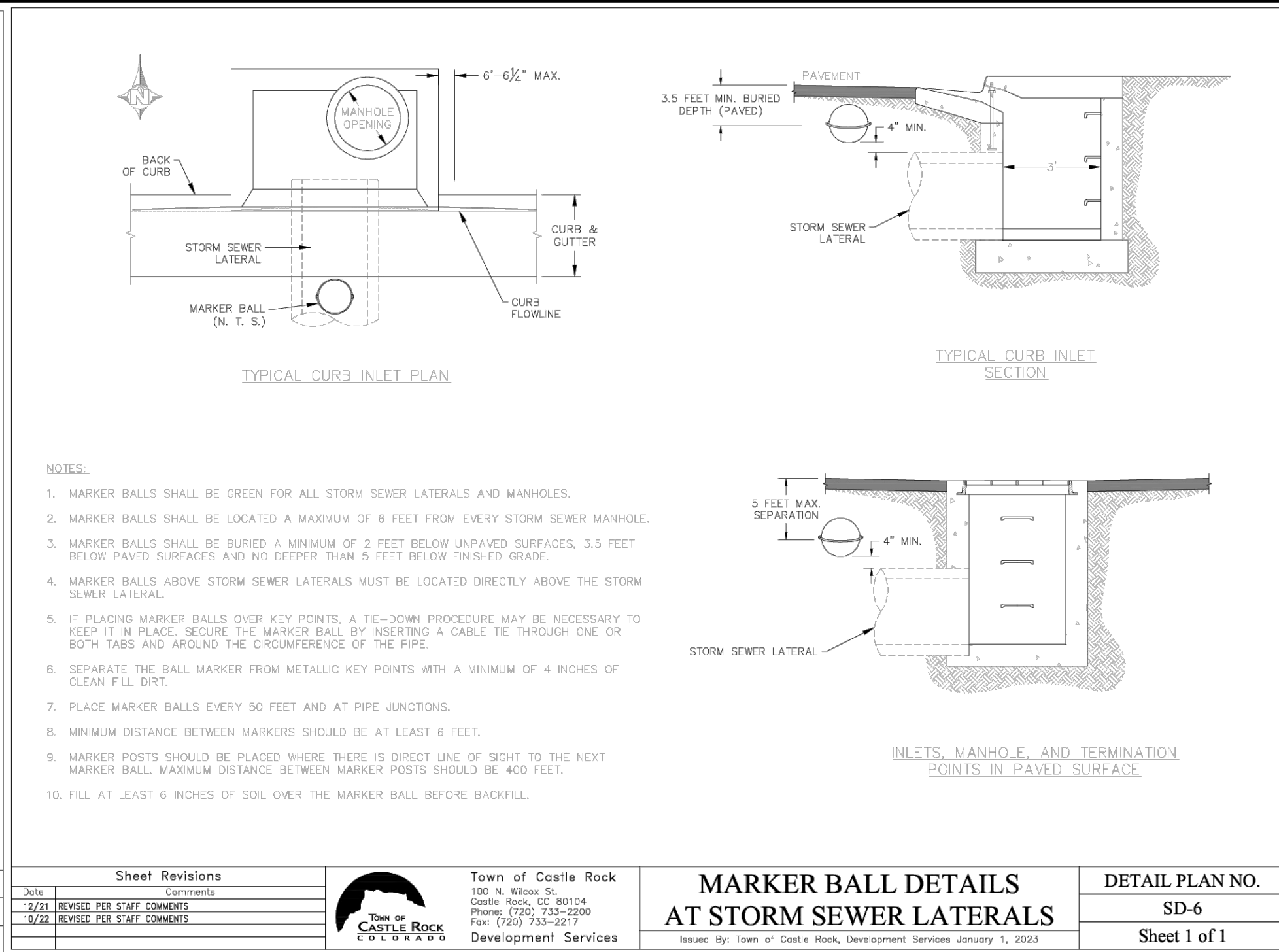
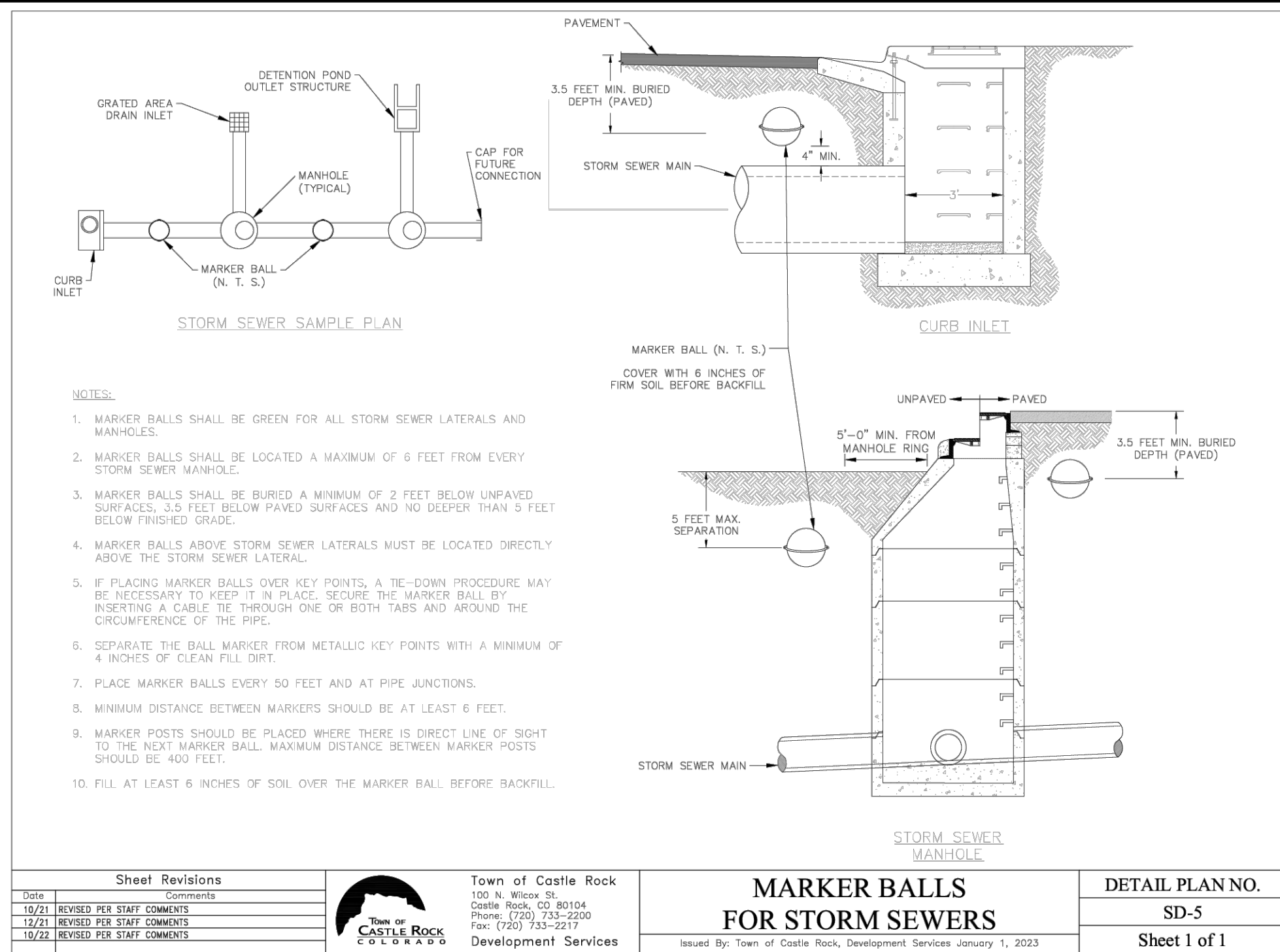
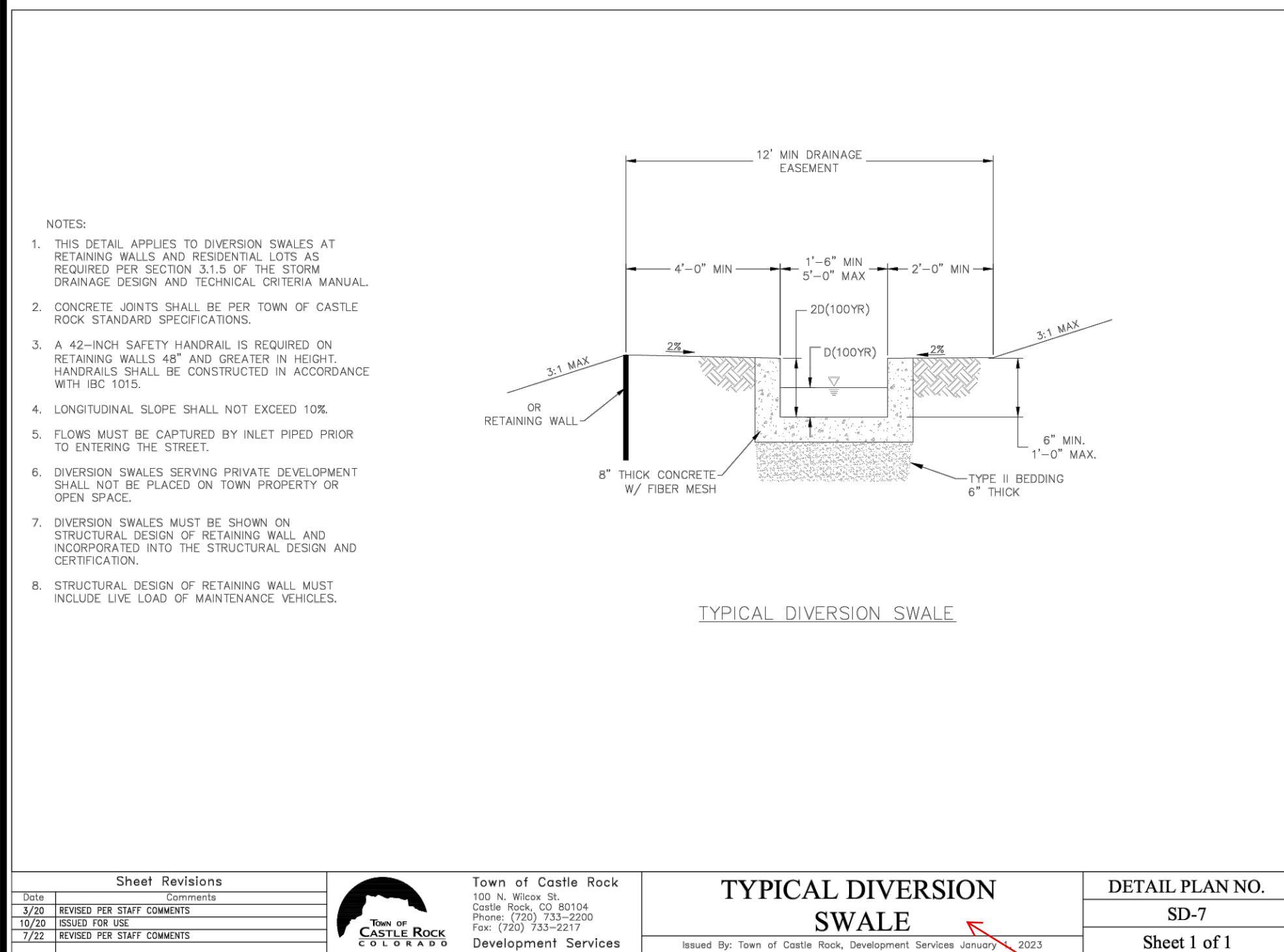
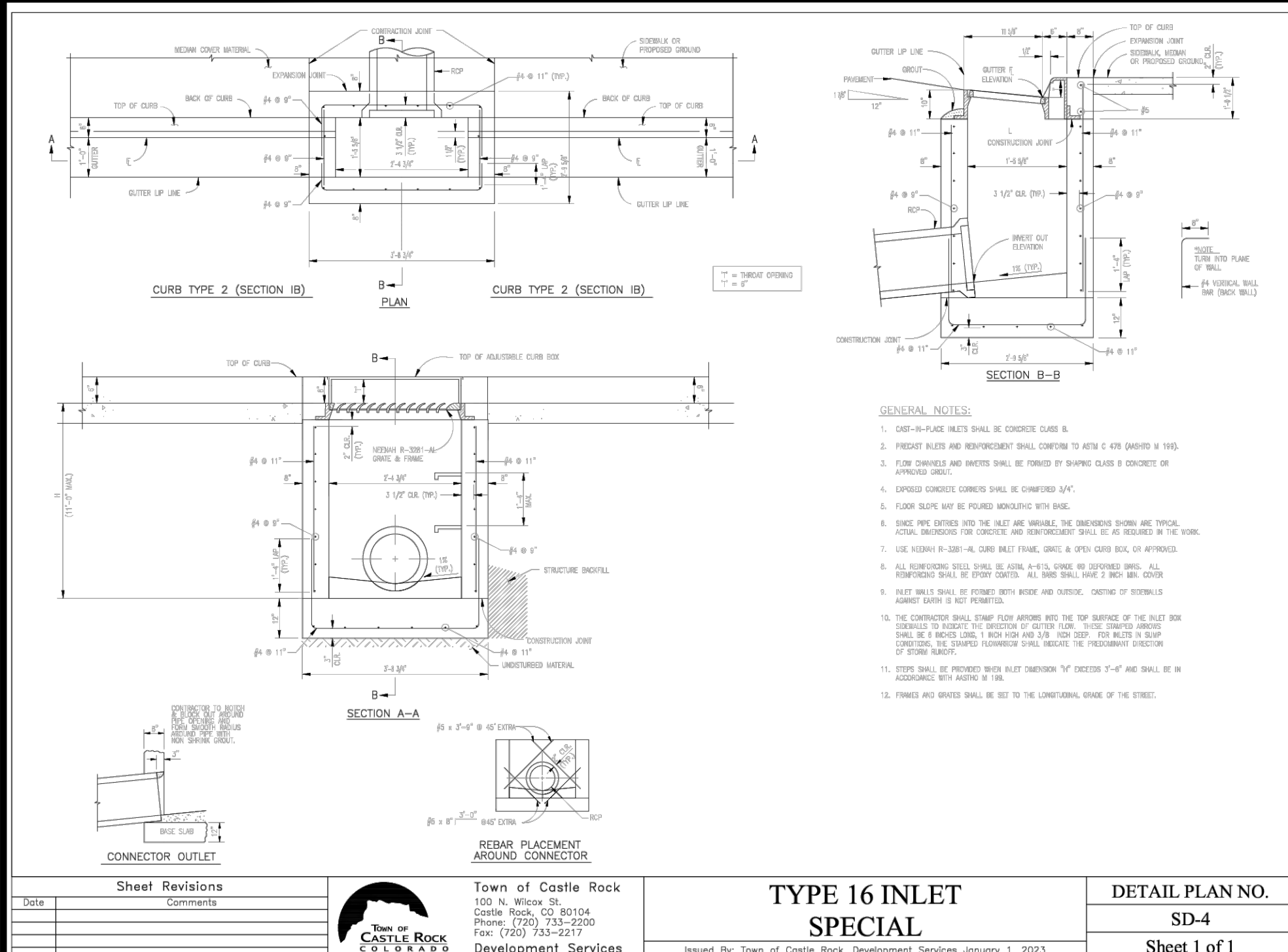
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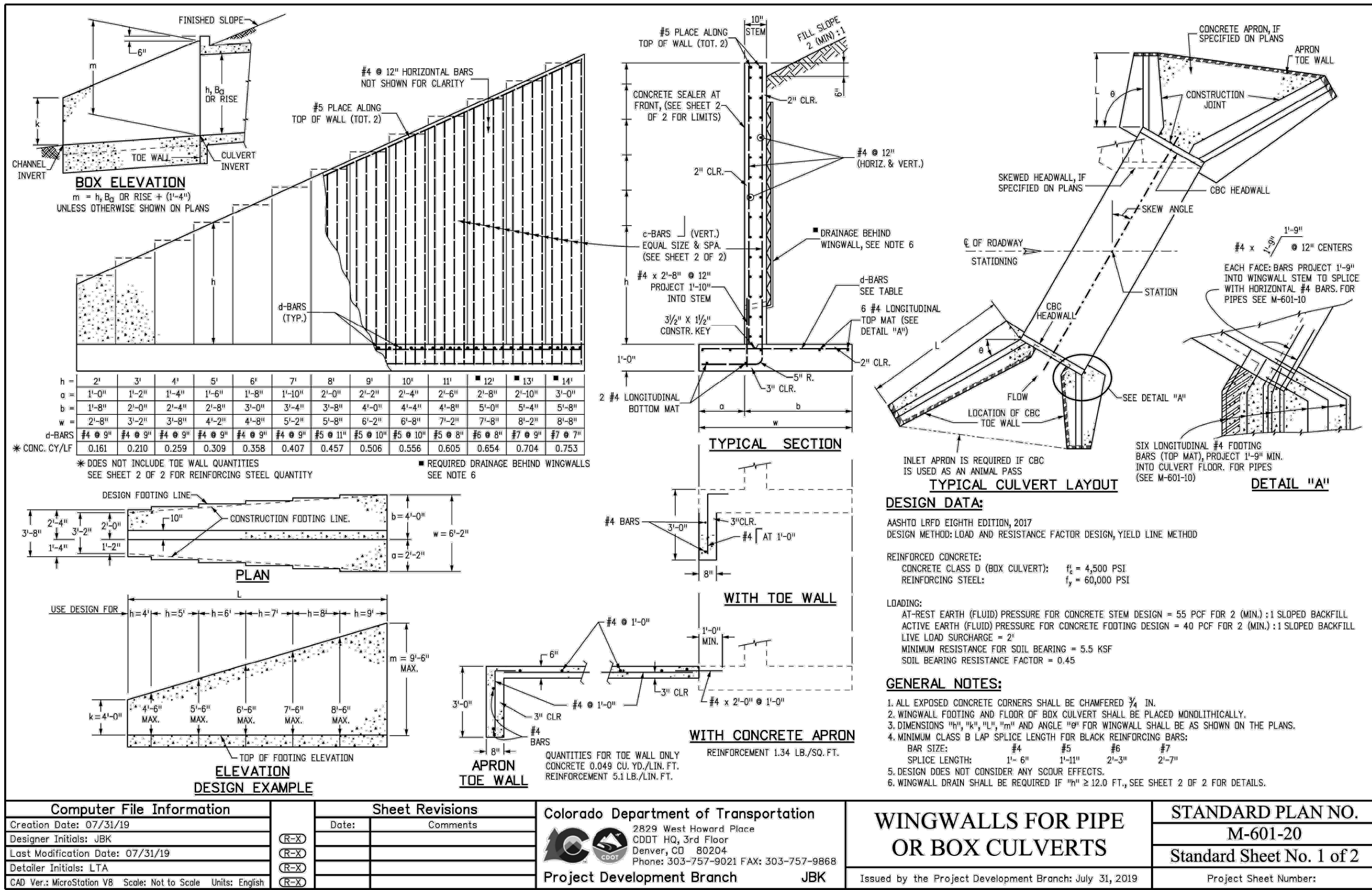
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1	1ST SUBMITTAL	06/29/23	JFF
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3	3RD SUBMITTAL	06/25/25	MG

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LAND DEVELOPMENT
ENERGY
PUBLIC INFRASTRUCTURE





c-BARS AND REINFORCING STEEL QUANTITY (EXCLUDE TOE WALL)		* REINFORCING STEEL QUANTITY INCLUDES STEM AND FOOTING QUANTITIES, BUT DOES NOT INCLUDE TOE WALL QUANTITIES.	
L (MULTIPLE OF M)	≤ (1.0 x m)	≤ (1.25 x m)	≤ (1.5 x m)
m (FT)	k (FT)	* REINFORCING STEEL QUANTITY (LB./L.F.)	* REINFORCING STEEL QUANTITY (LB./L.F.)
14	4	#4 @ 10" 53.60	#4 @ 10" 57.95
	5	#4 @ 10" 55.86	#4 @ 10" 60.46
	6	#4 @ 10" 58.12	#4 @ 10" 63.00
	7	#4 @ 10" 60.38	#4 @ 10" 65.54
	8	#4 @ 10" 62.64	#4 @ 10" 68.08
13	4	#4 @ 10" 50.51	#4 @ 10" 49.25
	5	#4 @ 10" 52.66	#4 @ 10" 51.37
	6	#4 @ 10" 54.82	#4 @ 10" 53.49
	7	#4 @ 10" 56.97	#4 @ 10" 55.61
	8	#4 @ 10" 59.13	#4 @ 10" 57.73
12	4	#4 @ 10" 47.84	#4 @ 10" 46.53
	5	#4 @ 10" 49.99	#4 @ 10" 48.68
	6	#4 @ 10" 52.14	#4 @ 10" 50.83
	7	#4 @ 10" 54.29	#4 @ 10" 52.98
	8	#4 @ 10" 56.44	#4 @ 10" 55.13
11	4	#4 @ 10" 45.14	#4 @ 10" 43.84
	5	#4 @ 10" 47.29	#4 @ 10" 45.99
	6	#4 @ 10" 49.44	#4 @ 10" 48.14
	7	#4 @ 10" 51.59	#4 @ 10" 50.29
	8	#4 @ 10" 53.74	#4 @ 10" 52.44
10	4	#4 @ 10" 42.84	#4 @ 10" 41.54
	5	#4 @ 10" 44.99	#4 @ 10" 43.69
	6	#4 @ 10" 47.14	#4 @ 10" 45.84
	7	#4 @ 10" 49.29	#4 @ 10" 47.99
	8	#4 @ 10" 51.44	#4 @ 10" 50.14
9	4	#4 @ 10" 40.14	#4 @ 10" 38.84
	5	#4 @ 10" 42.29	#4 @ 10" 40.99
	6	#4 @ 10" 44.44	#4 @ 10" 43.14
	7	#4 @ 10" 46.59	#4 @ 10" 45.29
	8	#4 @ 10" 48.74	#4 @ 10" 47.44
8	4	#4 @ 10" 37.84	#4 @ 10" 36.54
	5	#4 @ 10" 39.99	#4 @ 10" 38.69
	6	#4 @ 10" 42.14	#4 @ 10" 40.84
	7	#4 @ 10" 44.29	#4 @ 10" 42.99
	8	#4 @ 10" 46.44	#4 @ 10" 45.14
7	4	#4 @ 10" 35.14	#4 @ 10" 33.84
	5	#4 @ 10" 37.29	#4 @ 10" 35.99
	6	#4 @ 10" 39.44	#4 @ 10" 38.14
	7	#4 @ 10" 41.59	#4 @ 10" 40.29
	8	#4 @ 10" 43.74	#4 @ 10" 42.44

EXAMPLE:
SELECT THE c-BARS SIZE, SPACING AND STEEL QUANTITY FOR A 25.0 FEET LONG WINGWALL WITH m = 11.8 FT. AND k = 6.3 FT.

SOLUTION:
1. DETERMINE WINGWALL LENGTH IN MULTIPLE OF m:
 $L / m = 25.0 / 11.8 = 2.12$
 $L = (2.12 \times m)$, USE $L \leq (2.25 \times m)$
2. ROUND TO NEAREST WHOLE NUMBER FOR m AND k:
 $m = 11.8 \text{ FT.}$, USE $m = 12.0 \text{ FT.}$
 $k = 6.3 \text{ FT.}$, USE $k = 6.0 \text{ FT.}$
3. DETERMINE c-BARS BY USING THE TABLE:
 $L \leq (2.25 \times m)$
 $k \leq 12$
c-BARS #6 @ 10"
REIN. STEEL = 60.60 LB / LF
4. DETERMINE REINFORCING STEEL QUANTITY OF WHOLE WINGWALL:
REINFORCING STEEL QUANTITY = 23.0 x 60.60 = 1,395 LB.

APPLY CONCRETE SEALER

LIMITS OF CONCRETE SEALER AND WINGWALL DRAIN DETAILS

NOTES: 1. THE GEOTEXTILE SHALL BE SECURED TO THE WALL TO PREVENT MOVEMENT DURING BACKFILLING.
2. COST OF GEOTEXTILE DRAIN AND CONCRETE SEALER SHALL BE INCLUDED IN THE WORK.

Computer File Information
Creation Date: 07/31/19
Designer Initials: JBK
Last Modification Date: 07/31/19
Detailer Initials: LTA
CAD Ver: MicroStation V8 Scale: Not to Scale Units: English

Sheet Revisions

Colorado Department of Transportation
2899 West Howard Place
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Phone: 303-757-9021 FAX: 303-757-9868
Project Development Branch JBK

WINGWALLS FOR PIPE OR BOX CULVERTS

STANDARD PLAN NO. M-601-20
Standard Sheet No. 2 of 2

Issued by the Project Development Branch: July 31, 2019 Project Sheet Number:

