

THE VILLAGE AT DISCOVERY PARK COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

SECTION 30, TOWNSHIP 48 NORTH, RANGE 31 WEST

CITY OF LEE'S SUMMIT
JACKSON COUNTY, MISSOURI

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri
11/07/2023

PROJECT TEAM CONTACT LIST	
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LEGEND

▲CTL	SURVEY CONTROL POINT	⊠	TRAFFIC SIGNAL BOX
▲TBM	SURVEY BENCHMARK	⊙	TRAFFIC SIGNAL MANHOLE
▲TBM	SURVEY TEMPORARY BENCHMARK	⊙	TRAFFIC SIGNAL POLE W/ ARM
⊠	GAS METER	⊙	TRAFFIC SIGNAL POLE
⊠	GAS RISER	⊠	TRAFFIC SIGNAL CONTROL BOX
⊙	GAS MANHOLE	⊠	TRAFFIC SIGNAL PEDESTAL
⊙	GAS REGULATOR	⊙	ELECTRIC MANHOLE
⊠	TELEVISION PEDESTAL	⊠	ELECTRIC METER
⊠	FIBER BOX	⊠	ELECTRIC RISER
⊠	FIBER PEDESTAL	⊠	ELECTRIC BOX
⊠	CABLE BOX	⊠	ELECTRIC CABINET
⊠	CABLE VAULT	⊠	ELECTRIC JUNCTION BOX
⊠	TELEPHONE PEDESTAL	⊙SPH	SPRINKLER HEAD
⊠	STORM MANHOLE	⊙SCV	SPRINKLER CONTROL VALVE
⊠	STORM GRATE	⊙	WATER METER PIT
⊠	SANITARY MANHOLE	⊙	FIRE HYDRANT
⊙YL	YARD LIGHT	⊙	WATER METER
⊙LTP	LIGHT POLE	⊙WV	WATER VALVE
⊙	POWER POLE	⊙FP	FLAG POLE
⊙LPPP	POWER POLE W/ LIGHT	⊙	SIGN
⊙	GUY WIRE	⊙	BOLLARD
⊙	STUMP	⊙	WOOD POST
⊙	BUSH	⊙	STEEL POST
⊙	EVERGREEN TREE	⊙COL	COLUMN
⊙	DECIDUOUS TREE	⊙	BORE HOLE

---	SECTION LINE	▨	CONCRETE MEDIAN STRIP
---	PROPERTY LINE	▨	FULL DEPTH CONCRETE
---	CENTER LINE		
---	PROPOSED ROW LINE		
---	EXISTING ROW LINE		
---	UTILITY EASEMENT		
---	EXISTING CONTOUR		
---	EXISTING CONTOUR		
---	PROPOSED MINOR CONTOUR		
---	PROPOSED MAJOR CONTOUR		
---	EXISTING TELEPHONE LINE		
---	EXISTING SANITARY LINE		
---	EXISTING STORM LINE		
---	EXISTING GAS LINE		
---	EXISTING WATER LINE		
---	EXISTING CHAIN LINK FENCE		
---	EXISTING OVERHEAD ELECTRIC		
---	EXISTING PIPE LINE		
---	GRADING LIMITS		
---	TEMPORARY CONSTRUCTION EASEMENT		
---	PROPOSED UTILITY OVERHEAD EASEMENT		
---	PROPOSED SIDEWALK EASEMENT		
---	PROPOSED PERMANENT DRAINAGE EASEMENT		
---	PROPOSED CHAIN LINK FENCE		
---	PROPOSED WOOD PRIVACY FENCE		
---	EXISTING TREELINE		
---	ASPHALT		
---	CONCRETE SIDEWALK		

ABBREVIATION TABLE

M.G.	MATCH GRADE
BOC	BACK OF CURB
EOP	EDGE OF PAVEMENT
R/W	RIGHT-OF-WAY
D/E	DRAINAGE EASEMENT
S/E	SANITARY EASEMENT
S/W	SIDEWALK
T.C.E.	TEMPORARY CONSTRUCTION EASEMENT
U.O.H.E.	UTILITY OVERHEAD EASEMENT
P.D.E.	PERMANENT DRAINAGE EASEMENT
P.S.E.	PERMANENT SIDEWALK EASEMENT
P.U.E.	PERMANENT UTILITY EASEMENT
PROP.	PROPOSED
EXIST.	EXISTING
TYP.	TYPICAL
CONST.	CONSTRUCT
TBM	TEMPORARY BENCHMARK
C.P.	CONTROL POINT
D.N.D.	DO NOT DISTURB
U.I.P.	USE IN PLACE
ADJ.	ADJUST
EL.	ELEVATION
ESMT.	EASEMENT
BK.CB.	BACK OF CURB
BK.SWK.	BACK OF SIDEWALK

DESIGN DESIGNATION

COLBERN ROAD
DESIGN SPEED = 45 MPH
POSTED SPEED = 45 MPH
DOUGLAS STREET
DESIGN SPEED = 45 MPH
POSTED SPEED = 45 MPH

LOCATION MAP

STREET CLASSIFICATION
COLBERN ROAD = MAJOR ARTERIAL
DOUGLAS STREET = MAJOR ARTERIAL

LENGTH OF PROJECT

COLBERN ROAD
BEGINNING OF PROJECT = 90+10.77
END OF PROJECT = 102+67.49
PROJECT LENGTH = 1256.72 FT. (0.24 MI.)
DOUGLAS STREET
BEGINNING OF PROJECT = 200+00.00
END OF PROJECT = 213+52.96
PROJECT LENGTH = 1352.96 FT. (0.26 MI.)

UTILITY EMERGENCY CONTACTS DURING CONSTRUCTION

AT&T - DISTRIBUTION TIM BUSHART 816-803-2608	LUMEN TECHNOLOGIES SANDRA MUNOZ-CABUYA 913-748-2602
SPIRE PEGGY BURNS-YOCUM 816-969-2218	LEE'S SUMMIT WATER UTILITY JOSH ROACH 816-969-1940
	EVERGY BRANDON TIESING 816-245-3659



1-800-DIG-RITE or 811
www.mo1call.com

THE EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NOT INCLUDE ALL LINES PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL "1-800-DIG-RITE", AND COORDINATE FIELD LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING GRADING ACTIVITIES. !!STOP!! CALL BEFORE YOU DIG!!

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PREPARED & SUBMITTED BY:

OLSSON
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

James P. Gallagher

JAMES P. GALLAGHER, P.E.

I CERTIFY THESE PLANS WERE PREPARED BY ME OR UNDER MY IMMEDIATE PERSONAL SUPERVISION.

REVIEWED BY:

CITY OF LEE'S SUMMIT, MISSOURI

10/24/2023

DATE

DATE

PL2023143
PRSUBD20232726



REVISIONS DESCRIPTION

DATE

REV. NO.

1

10/18/2023

CITY COMMENTS ON 10/05/2023

REVISIONS

2023

TITLE SHEET

THE VILLAGE AT DISCOVERY PARK

COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

drawn by: BJW

checked by: KLW

approved by: JFG

QA/QC by: JJW

project no.: 021-04643

drawing no.: TTTL01_D02104643

date: 7/14/2023

SHEET

1 OF 86

www.olsson.com

TEL 816.361.1177

1301 Burlington Street

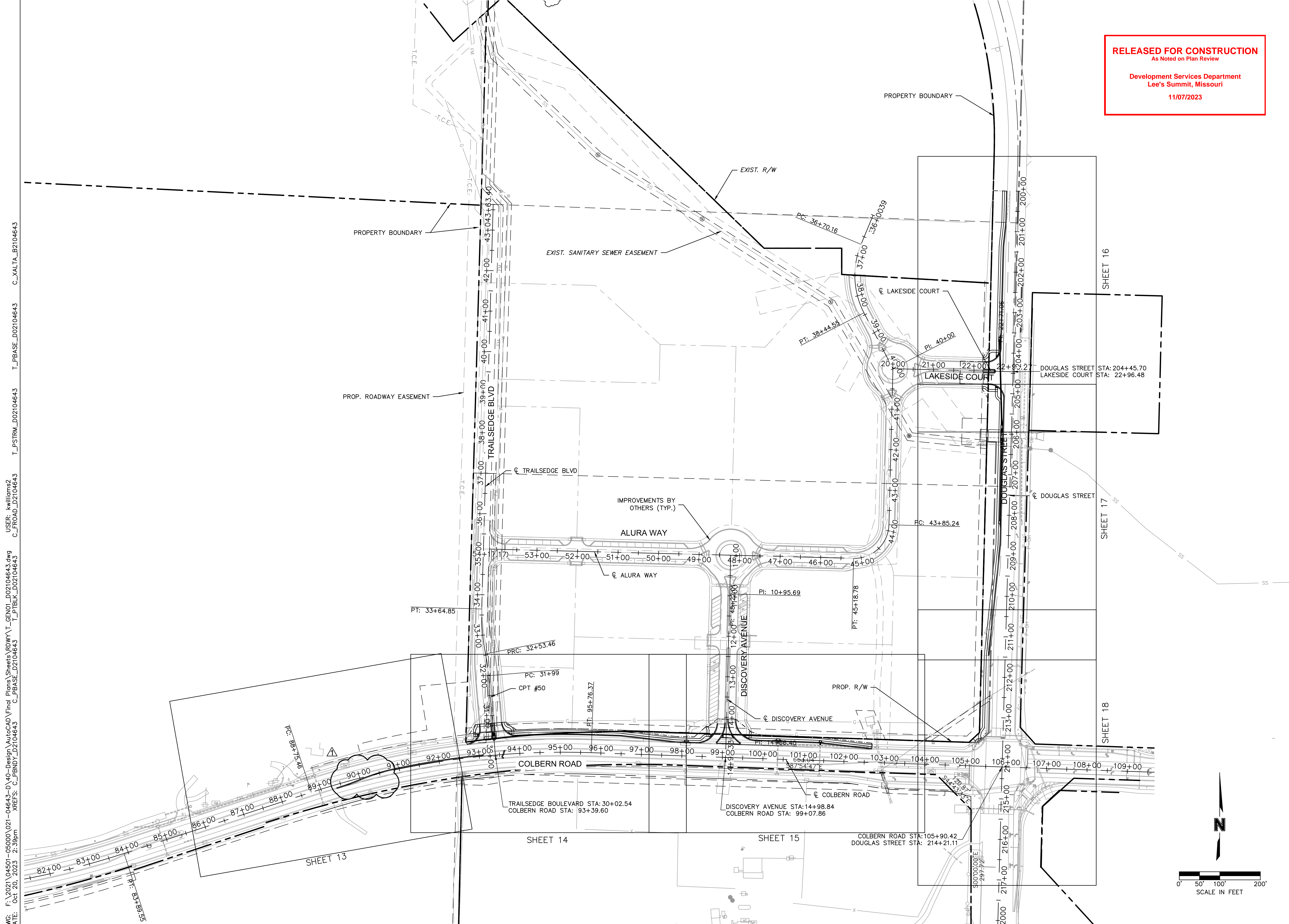
Missouri Certificate of Authority #001592

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USER: kwilliams2

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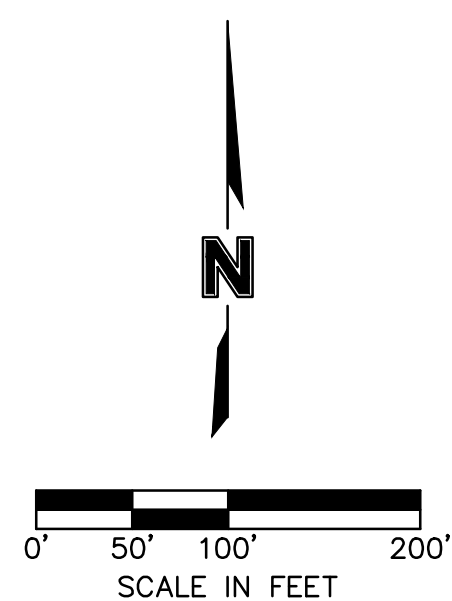


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 TEL 816.361.1177 www.olson.com

REV. NO.	DATE	REVISIONS DESCRIPTION
1	10/18/2023	CITY COMMENTS ON 10/05/2023

GENERAL LAYOUT
THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI
 2023
 REVISIONS

drawn by: BLW
 checked by: KLW
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: GEN01_D02104643
 date: 11/14/2023

DWG: F:\2021\04501-05000\021-04643-0\40-Design\AutoCAD\Final Plans\Sheets\RDWP\T_LAY01_D02104643.dwg
 DATE: Sep 28, 2023 4:06pm XREFS: C_XALTA_B2104643 T_PTBK_D02104643 USER: kwilliams2

Olsson Control Information:
 Control Point #50
 1/2" imbedded cap on the north side of NW Colbern Road. It is in the 1st field entrance west of NE Douglas Street.
 Project Coordinates
 N - 1012389.819
 E - 2822108.784
 Leveled Elev. = 990.810

Control Point #51
 Set 1/2" imbedded cap on the SW corner of Colbern Road and Main Street.
 Project Coordinates
 N - 1011606.604
 E - 2817819.852
 Leveled Elev. = 933.299

Control Point #52
 Set 1/2" imbedded cap on the south side of Main Street where Main Street turns east on the south side of I-470.
 N - 1009320.343
 E - 2818811.269
 Leveled Elev. = 930.892

Control Point #53
 Set 1/2" imbedded cap on the east side of Douglas Street just south of the I-470 interchange. In the NW corner of the parking lot to the old Outback.
 N - 1011007.340
 E - 2823445.284
 Leveled Elev. = 968.436

Control Point #54
 Set 1/2" imbedded cap on the south side of the NE Douglas Street where it bends back north. At the SE corner of The Cure Church Lee's Summit.
 N - 1014987.406
 E - 2823402.976
 Leveled Elev. = 930.478

Control Point #55
 Set 1/2" imbedded cap on the east side of Douglas at the driveway for house 2545.
 N - 1015699.81
 E - 2821686.038
 Leveled Elev. = 935.054

COLBERN ROAD								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
C1	PC=	79+41.74	1011913.6889	2820768.5448				
	PI=	81+66.59	1011934.3124	2820992.4440	447.81'	N78°19'22"E	12°49'44"	224.85'
	PT=	83+89.55	1012004.1358	2821206.1749				2000.00'
L1	83+89.55	1012004.1358	2821206.1749	485.90'	N71°54'30"E			
C2	PC=	88+75.46	1012155.0268	2821668.0554				
	PI=	92+29.54	1012264.9841	2822004.6372	700.91'	N81°56'54"E	20°04'47"	354.09'
	PT=	95+76.37	1012252.7006	2822358.5115				2000.00'
L2	95+76.37	1012252.7006	2822358.5115	1576.28'	S88°00'43"E			

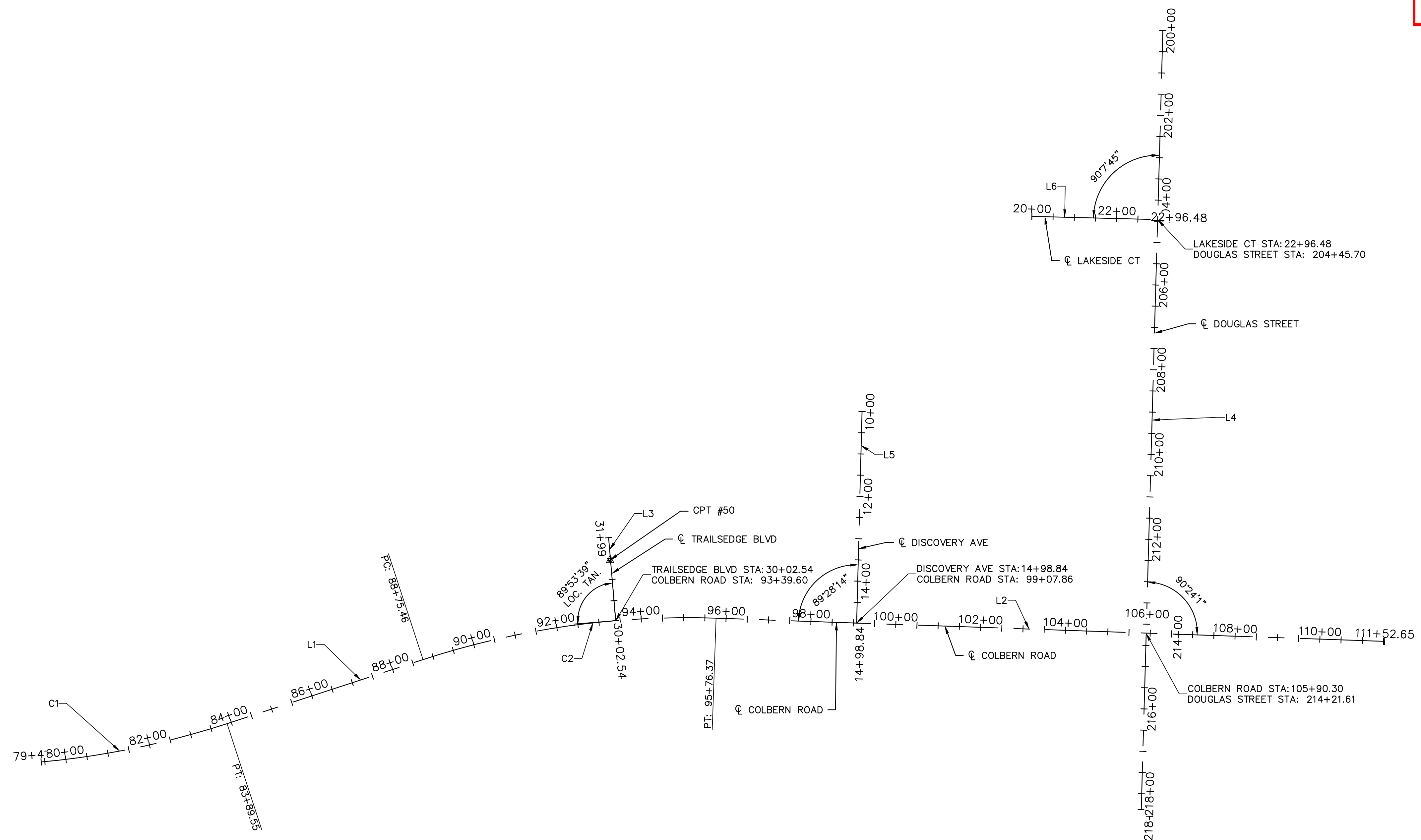
LAKESIDE CT								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L6	20+00.00	1013200.1060	2823102.5947	296.48'	S88°32'29"E			
	22+96.48	1013192.5593	2823398.9795					

DOUGLAS STREET								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L4	200+00.00	1013638.0866	2823411.3299					
	218+37.20	1011801.5907	2823360.4207	1837.20'	S1°35'16"W			

TRAILSEDGE BLVD								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L3	30+02.54	1012246.9048	2822121.9488	196.46'	N4°54'03"W			
	31+99.00	1012442.6423	2822105.1649					

DISCOVERY AVE								
NO.	STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L5	10+00.00	1012739.8841	2822702.5032					
	14+98.84	1012241.2008	2822689.8055	498.84'	S1°27'31"W			

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ALIGNMENT DATA & SURVEY CONTROL
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 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI
 2023

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 date: 7/14/2023

GENERAL NOTES:

- THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE PLANS (APPROVED BY THE CITY OF LEES SUMMIT, MO.) AND (1) COPY OF THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES.
 - APWA "TECHNICAL SPECIFICATIONS" LATEST EDITION ALONG WITH APWA "SPECIFICATIONS AND CRITERIA" SHALL GOVERN CONSTRUCTION OF THE PROJECT.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS, OTHERWISE COMPLYING WITH ALL APPLICABLE REGULATIONS GOVERNING THE WORK.
 - CONSTRUCTION OF THE IMPROVEMENTS SHOWN OR IMPLIED BY THIS SET OF DRAWINGS SHALL NOT BE INITIATED OR ANY PART THEREOF UNDERTAKEN UNTIL THE DIRECTOR OF PUBLIC WORKS OR HIS AGENT IS NOTIFIED OF SUCH INTENT AND ALL REQUIRED PERMITS, PROPERTY ACQUISITIONS, SECURITY AND OTHER CONTRACT BONDS, AND CONTRACT AGREEMENTS ARE RECEIVED AND APPROVED BY THE CITY.
 - CONTRACTOR SHALL NOT BE ALLOWED TO WORK WEEKENDS OR HOLIDAYS WITHOUT REQUESTING PRIOR APPROVAL FROM THE CITY THREE WORKING DAYS IN ADVANCE.
 - PRIOR TO ORDERING PRECAST STRUCTURES, SHOP DRAWINGS ARE TO BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL.
- ALL EXISTING UTILITIES INDICATED ON THE DRAWINGS ARE ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER; HOWEVER ALL UTILITIES ACTUALLY EXISTING MAY NOT BE SHOWN. UTILITIES DAMAGED THROUGH THE NEGLIGENCE OF THE CONTRACTOR TO OBTAIN THE EXACT LOCATION OF SAME SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THEIR EXPENSE. ONE-CALL/DIG RITE (1-800-344-7483 AND 1-800-DIG-RITE).
 - ALL PRIVATELY OWNED UTILITIES IN CONFLICT WITH THESE IMPROVEMENTS SHALL BE RELOCATED BY THE APPROPRIATE UTILITY COMPANIES. UTILITY RELOCATIONS WILL BE COMPLETED PRIOR TO THE START OF CONSTRUCTION, WHEN PRACTICABLE.
 - CONSTRUCTION STAKING IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL SET THOSE STAKES NECESSARY TO CONSTRUCT THIS PROJECT IN ACCORDANCE WITH THE PLANS.
 - CONTRACTOR SHALL REMOVE THOSE TREES NECESSARY TO ACCOMPLISH THE GRADING WORK SHOWN HEREON. ALL TREES AND BRUSH FROM THE WORK SHALL BE COMPLETELY REMOVED FROM THE SITE BY THE CONTRACTOR. BURNING WILL NOT BE ALLOWED ON THE PROJECT.
 - ALL BACKFILL SHALL BE PLACED AND COMPACTED TO THE REQUIRED DENSITY AS INDICATED IN THE SPECIFICATIONS.
 - ALL ROADWAY EXCAVATION IN ROCK (SHALE, SANDSTONE OR LIMESTONE) WILL BE UNDERCUT NO LESS THAN 6" INCHES FOR THE FULL WIDTH OF THE ROADWAY AND BACKFILLED WITH SUITABLE SOIL OR GRANULAR MATERIAL. THERE WILL BE NO DIRECT PAYMENT FOR ROCK EXCAVATION. PAYMENT FOR ALL MATERIAL WILL BE MADE AT THE CONTRACT BID PRICE FOR UNCLASSIFIED EXCAVATION.
 - THE CONTRACTOR SHALL USE ADEQUATE DUST CONTROL MEASURES DURING ALL PHASES OF THE CONSTRUCTION TO MINIMIZE DUST ON SURROUNDING PROPERTIES AT THE CONTRACTOR'S EXPENSE.
 - WATER CAN BE OBTAINED BY RENTING A FIRE HYDRANT METER FROM THE CITY OF LEES SUMMIT, MO WATER UTILITIES DEPARTMENT.
 - DRIVEWAYS, SIDEWALKS, FENCES, SPRINKLER SYSTEMS AND OTHER AREAS DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT EXISTING BEFORE DAMAGE OCCURRED. THIS WORK WILL NOT BE PAID FOR DIRECTLY, BUT IS CONSIDERED SUBSIDIARY TO OTHER BID ITEMS.
 - WHERE THE NEW STREET IS TO CONNECT TO AN EXISTING STREET ALL DETERIORATED OR CRACKED ASPHALT WITHIN TWO (2) FEET OF THE CONNECTION POINT SHALL BE REMOVED TO A DEPTH WHERE SOUND MATERIAL IS FOUND. IF FULL-DEPTH PAVEMENT REMOVAL IS REQUIRED, THE SUB-GRADE SHALL BE RE-COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTM D-698).



1-800-DIG-RITE or 811
www.mo1call.com

- ALL EXISTING FENCING, DRIVEWAYS, SIDEWALKS AND OTHER ITEMS WITHIN THE CONSTRUCTION LIMITS DAMAGED OR REMOVED BY THE CONTRACTOR, SHALL BE REPLACED WITH NEW MATERIALS. ALL FENCE REPLACEMENT SHOULD BE RELOCATED TO THE PROPERTY LINES UNLESS THE EXISTING FENCE WAS LOCATED INSIDE THE PROPERTY LINES, THEN THE FENCE SHOULD BE REPLACED IN ITS ORIGINAL LOCATION. FENCE CORNERS OF FENCES TO BE RELOCATED AT THE ORIGINAL LOCATIONS SHALL BE REFERENCED OUT BY THE CONTRACTOR BEFORE REMOVAL. REMOVALS SHALL BE AS SHOWN ON THESE PLANS, OR APPROVED BY THE CITY PRIOR TO REMOVAL. REMOVALS NOT PRE-APPROVED WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- REMOVAL OF EXISTING STORM DRAINAGE STRUCTURES AND OTHER EXISTING PHYSICAL FEATURES OF THE EXISTING ROADWAY SHALL BE CONSIDERED INCIDENTAL AND REMOVED AS A SUBSIDIARY ITEM TO REMOVAL OF EXISTING STRUCTURES. ALL WASTE SHALL BE TRANSPORTED TO A CITY APPROVED DUMP SITE FOR DISPOSAL.
- ALL EXISTING WATER VALVES, METERS, FIRE HYDRANTS AND BLOW-OFF ASSEMBLIES WITHIN THE LIMITS OF THE PROPOSED PAVEMENT SHALL BE RELOCATED OR ADJUSTED TO GRADE BY THE CONTRACTOR. WATER METERS SHALL BE RELOCATED SO THAT THEY ARE WITHIN THE PUBLIC RIGHT-OF-WAY, APPROXIMATELY ONE FOOT FROM RIGHT-OF-WAY LINE. WATER SERVICE LINES AFFECTED BY METER RELOCATION AND/OR THE WATER MAIN RELOCATIONS SHOWN IN THESE PLANS SHALL BE RECONNECTED BY THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY RESIDENTS OF ANY WATER SERVICE INTERRUPTIONS 48 HOURS PRIOR TO INTERRUPTING THE SERVICE. ANY SERVICE INTERRUPTIONS MUST BE RESTORED THE SAME DAY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS AND SURVEY MONUMENTS WHICH HAVE BEEN DAMAGED OR DESTROYED BY THIS CONSTRUCTION OPERATION INCLUDING THOSE BURIED WITH EMBANKMENT OR REMOVED DURING EXCAVATION. SUCH IRONS AND MONUMENTS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR. REPLACEMENT OF PROPERTY IRONS AND MONUMENTS SHALL BE SUBSIDIARY TO OTHER BID ITEMS.
- THE TOP 6" OF ALL DISTURBED AREAS THAT ARE TO BE SEEDED OR SODDED SHALL BE OF MATERIAL SUITABLE FOR SUSTAINING GRASS. THE GRADED SURFACE SHALL BE MADE FREE OF ROCK, CONCRETE, BRICK, OR FRAGMENTS THEREOF, OR RUBBISH AND SHALL BE FINISHED TO THE LINES, GRADES, AND CROSS-SECTION INDICATED ON THE PLANS.
- ALL EXISTING TRAFFIC CONTROL SIGNS REMOVED SHALL BE SALVAGED AND DELIVERED TO THE CITY OF LEES SUMMIT, MISSOURI MAINTENANCE YARD.
- ALL WATERLINE MAINS, SANITARY SEWER MAINS AND STORM WATER DRAINAGE CROSSINGS UNDER PROPOSED STREET PAVEMENTS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF THE ASPHALT SURFACE OR BASE COURSES.
- APPROPRIATE TRAFFIC CONTROL DEVICES, SIGNAGE, AND PAVEMENT MARKINGS SHALL BE ESTABLISHED AND MAINTAINED THROUGHOUT THE PROJECT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND MUTCD.
- HANDICAP RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ADA REQUIREMENTS AT ALL LOCATIONS WHERE POSSIBLE.
- THE CONTRACTOR MUST REMOVE AT THEIR COST ANY BAD SUBSURFACE SOIL WHICH WOULD NOT BE ABLE TO SUPPORT ANY PROPOSED PUBLIC IMPROVEMENT. BACKFILL SHOULD BE ACCOMPLISHED IN ACCORDANCE WITH SECTIONS 2100 AND 2201 ENTITLED "GRADING AND SITE PREPARATION" AND "SUBGRADE PREPARATION."
- ALL SIGNS INSTALLED, INCLUDING STOP SIGNS, KEEP RIGHT SIGNS AND OBJECT MARKERS ALONG WITH THE SIGN POSTS SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND APWA GUIDELINES.
- SAWCUTS SHALL BE FULL DEPTH. THIS SHALL BE SUBSIDIARY TO PAVING ITEMS.
- ALL EXISTING STRUCTURES WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED, UNLESS OTHERWISE NOTED ON THE PLANS. THIS WORK SHALL BE PAID FOR UNDER THE BID ITEM "REMOVAL OF EXISTING STRUCTURES".
- THE CONTRACTOR SHALL AT NO TIME LEAVE EQUIPMENT, MATERIALS OR DEBRIS WITHIN 4' OF TRAVELED WAY OR LOCATIONS THAT COULD OBSTRUCT INTERSECTION SIGHT DISTANCE, OBSTRUCT ANY EXISTING CAPACITY OF STORM SEWER SYSTEM, OR CAUSE FLOODING OR EROSION TO RESIDENCES.
- THE CONTRACTOR SHALL POT HOLE AND SURVEY ALL UTILITY CROSSINGS PRIOR TO CONSTRUCTION OF ANY PORTION OF STORM SEWER, UNDERDRAINS, CONDUIT, AND ANY OTHER SUBSURFACE ELEMENTS OF THE PROJECT. THIS SURVEY INFORMATION SHALL BE FORWARDED TO THE ENGINEER FOR REVIEW. THE CONTRACTOR SHALL NOT BEGIN CONSTRUCTION ON ANY SUBSURFACE ELEMENT ON THE PROJECT WITHOUT THE APPROVAL OF THE ENGINEER. THIS ITEM SHALL BE SUBSIDIARY TO OTHER BID ITEMS.
- THE CONTRACTOR SHALL SUPPORT AND PROTECT ALL EXPOSED UTILITIES IN TRENCHES AND BRACE ALL POLES AS REQUIRED BY THE ENGINEER.
- ALL REINFORCED CONCRETE PIPE SHALL BE CLASS III, UNLESS OTHERWISE NOTED ON THE PLANS.
- KCMMB CONCRETE SHALL BE USED THROUGHOUT THE PROJECT.
- ANY WORK PERFORMED WITHIN MODOT RIGHT OF WAY SHALL CONFORM TO MODOT STANDARDS AND SPECIFICATIONS. IN ADDITION, THE CONTRACTOR SHALL PROVIDE MATERIALS CERTIFICATION AND COMPACTING TESTING THAT COMPLIES WITH MODOT SPECIFICATIONS.
- MISSOURI DEPARTMENT OF TRANSPORTATION WILL HAVE FIRST RIGHT OF REFUSAL TO SALVAGED MATERIALS SUCH AS LIGHT POLES AND TRAFFIC SIGNAL EQUIPMENT, ETC. THE CONTRACTOR SHALL COORDINATE WITH MODOT FOR A TIME AND LOCATION TO DELIVER THOSE ITEMS.

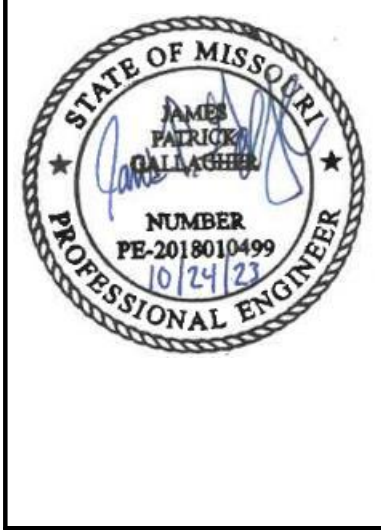
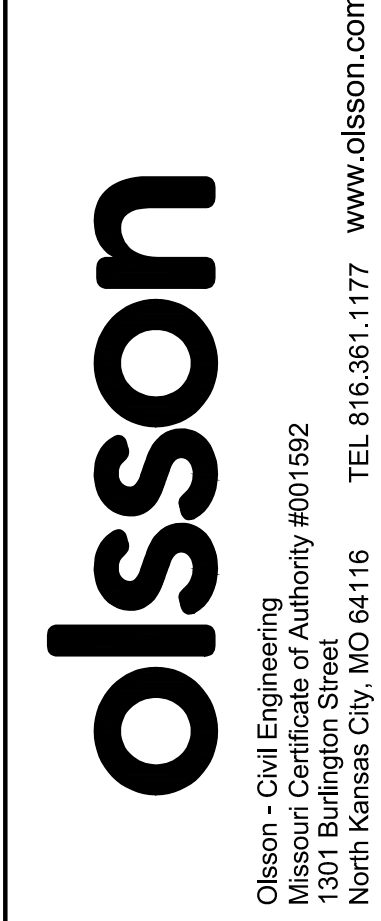
BEST MANAGEMENT PRACTICES:

- PRIOR TO LAND DISTURBANCE ACTIVITIES, THE CONTRACTOR SHALL:
 - PRIOR TO BEGINNING EXCAVATION, THE CONTRACTOR SHALL INSTALL SILT FENCE ALONG THE CONSTRUCTION LIMITS TO DIVERT CLEAN WATER AWAY FROM THE DISTURBED SITE. THE CONTRACTOR AND THE ENGINEERS REPRESENTATIVE SHALL USE DISCRETION IN THE PLACEMENT OF THE SILT FENCE AS TO PREVENT FLOODING IN UNDESIRABLE LOCATIONS.
 - CONSTRUCT A STABILIZED ENTRANCE/PARKING/DELIVERY AREA AND INSTALL ALL PERIMETER SEDIMENT CONTROLS ON THE SITE.
 - INSTALL AND REQUEST THE INSPECTION OF THE PRE-CONSTRUCTION EROSION AND SEDIMENT CONTROL MEASURES DESIGNATED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN. LAND DISTURBANCE WORK SHALL NOT PROCEED UNTIL THERE IS A SATISFACTORY INSPECTION.
 - TEMPORARY FENCING SHALL BE INSTALLED ALONG ALL TEMPORARY EASEMENTS AND MAINTAINED FOR THE DURATION OF THE PROJECT.
- THE CONTRACTOR SHALL MINIMIZE THE AREA DISTURBED DURING EXCAVATION AND CONSTRUCTION OF THE STORM SEWER PIPES AND STRUCTURES. FOLLOWING THE CONSTRUCTION OF THE STORM SEWER LINE, THE CONTRACTOR SHALL INSTALL THE TEMPORARY DITCH CHECKS AT 100' INTERVALS WITHIN TWO WORKING DAYS AFTER CONSTRUCTION ACTIVITY HAS CEASED IN THAT AREA. THE TEMPORARY DITCH CHECKS SHALL REMAIN IN PLACE UNTIL SOD HAS BEEN PLACED ON THE DISTURBED AREAS. INLETS SHALL BE PROTECTED WITH SEDIMENT BARRIERS AS SHOWN ON THE DETAIL.
- THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF KC APWA CHAPTER 5100, SUCH AS:
 - THE CONTRACTOR SHALL SEED, MULCH, OR OTHERWISE STABILIZE ANY DISTURBED AREA WHERE THE LAND DISTURBANCE ACTIVITY HAS CEASED OR IS PLANNED TO CEASE FOR MORE THAN 21 DAYS.
 - THE CONTRACTOR SHALL PERFORM INSPECTIONS OF EROSION AND SEDIMENT CONTROL MEASURES AT LEAST ONCE PER WEEK AND WITHIN 24 HOURS FOLLOWING EACH RAINFALL EVENT OF 1/2" OR MORE WITHIN ANY 24-HOUR PERIOD.
 - THE CONTRACTOR SHALL MAINTAIN AN INSPECTION LOG INCLUDING THE INSPECTOR'S NAME, DATE OF INSPECTION, OBSERVATIONS AS TO THE EFFECTIVENESS OF THE EROSION AND SEDIMENT CONTROL MEASURES, ACTIONS NECESSARY TO CORRECT DEFICIENCIES, WHEN THE DEFICIENCIES WERE CORRECTED, AND THE SIGNATURE OF THE PERSON PERFORMING THE INSPECTION. THE LOG SHALL BE AVAILABLE FOR REVIEW BY THE CITY OF LEES SUMMIT AND THE STATE OF MISSOURI.
- THE CONTRACTOR SHALL MAINTAIN INSTALLED EROSION AND SEDIMENT CONTROL DEVICES IN A MANNER THAT PRESERVES THEIR EFFECTIVENESS FOR PREVENTING SEDIMENT FROM LEAVING THE SITE OR ENTERING A SENSITIVE AREA SUCH AS A NATURAL STREAM CORRIDOR, AREAS OF THE SITE INTENDED TO BE LEFT UNDISTURBED, A STORM SEWER, OR AN ON-SITE DRAINAGE CHANNEL.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING EROSION AND SEDIMENT CONTROL FOR THE DURATION OF A PROJECT. IF THE CITY DETERMINES THAT THE BMP'S IN PLACE DO NOT PROVIDE ADEQUATE EROSION AND SEDIMENT CONTROL AT ANY TIME DURING THE PROJECT, THE CONTRACTOR SHALL INSTALL ADDITIONAL OR ALTERNATE MEASURES THAT PROVIDE EFFECTIVE CONTROL.
- THE CONTRACTOR MAY UTILIZE PUBLIC RIGHT-OF-WAY, PERMANENT DRAINAGE EASEMENTS AND TEMPORARY EASEMENTS FOR STAGING EQUIPMENT AND MATERIALS SO LONG AS TWO-WAY TRAFFIC AND ACCESS TO DRIVEWAYS IS MAINTAINED AT ALL TIMES.
- EXCAVATED MATERIAL AND TOPSOIL STAGING SHALL NOT BE PERMITTED IN STREET RIGHT-OF-WAY AND SHALL BE CONFINED TO DRAINAGE EASEMENTS AND THOSE AREAS IDENTIFIED ON THIS PLAN. STOCKPILE AREAS SHALL BE PROTECTED WITH SILT FENCING TO PREVENT SOIL LOSS TO NEARBY STORM DRAINAGE SYSTEMS AND PROPERTY.
- PROJECT SHALL BE CONSTRUCTED DOWNSTREAM TO UPSTREAM. THE AMOUNT OF DISTURBED AREA LEFT EXPOSED SHALL BE MINIMIZED.
- ALL AREA INLETS AND CURB INLETS SHALL BE PROTECTED WITH TEMPORARY INLET SEDIMENT BARRIERS PRIOR TO TOP SLAB INSTALLATION AS WELL AS AFTER TOP SLAB INSTALLATION UNTIL SODDING AND PAVING IS COMPLETE.
- SODDING SHALL OCCUR IN PHASES AS DEPICTED ON THIS PLAN. SOD SHALL NOT BE INSTALLED AFTER NOV. 15.

RECAPITULATION OF QUANTITIES		
ITEM NO.	ITEM DESCRIPTION	QUANTITY
1	MOBILIZATION	1
2	CLEARING AND GRUBBING	1
3	DEMOLITION AND REMOVALS	1
4	CONTRACTOR SURVEYING AND STAKING	1
5	UNCLASSIFIED EXCAVATION	2599
6	COMPACTING EMBANKMENT	6758
7	EMBANKMENT (BORROW)	4159
8	AGGREGATE BASE COURSE TYPE 5 (4")	1330
9	AGGREGATE BASE COURSE TYPE 5 (6")	3725
10	GEOGRID	3725
11	ASPHALTIC CONCRETE SURFACE (2")	964
12	PORTLAND CEMENT CONCRETE PAVEMENT (9")	1755
13	PORTLAND CEMENT CONCRETE PAVEMENT (10")	953
14	COLORED CONCRETE PAVEMENT (9")	30
15	COLORED CONCRETE PAVEMENT (12")	17
16	COLORED AND STAMPED CONCRETE PAVEMENT (9")	60
17	COLORED AND STAMPED CONCRETE PAVEMENT (12")	44
18	CONCRETE SIDEWALK (4")	11439
19	CONCRETE SIDEWALK RAMP (6")	553
20	DETECTABLE WARNING SURFACE	146
21	CURB AND GUTTER (TYPE CG-1)	3001
22	CONCRETE MEDIAN (4")	122
23	CONCRETE MEDIAN STRIP (6")	42
24	15" RCP	458.5
25	4'X3' CURB INLET	2
26	6'X3' CURB INLET	2
27	8'X3' CURB INLET	3
28	JUNCTION BOX CONVERSION	2
29	CONNECTION TO EXISTING CURB INLET	2
30	CONNECTION TO EXISTING RCB	2
31	SEEDING AND SODDING	1
32	TEMPORARY EROSION CONTROL	1
33	PAVEMENT MARKING AND SIGNING	1
34	TRAFFIC CONTROL	1
35	STREET LIGHTING MODIFICATION	1
36	TRAFFIC SIGNAL MODIFICATION	1



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Lee's Summit, Missouri
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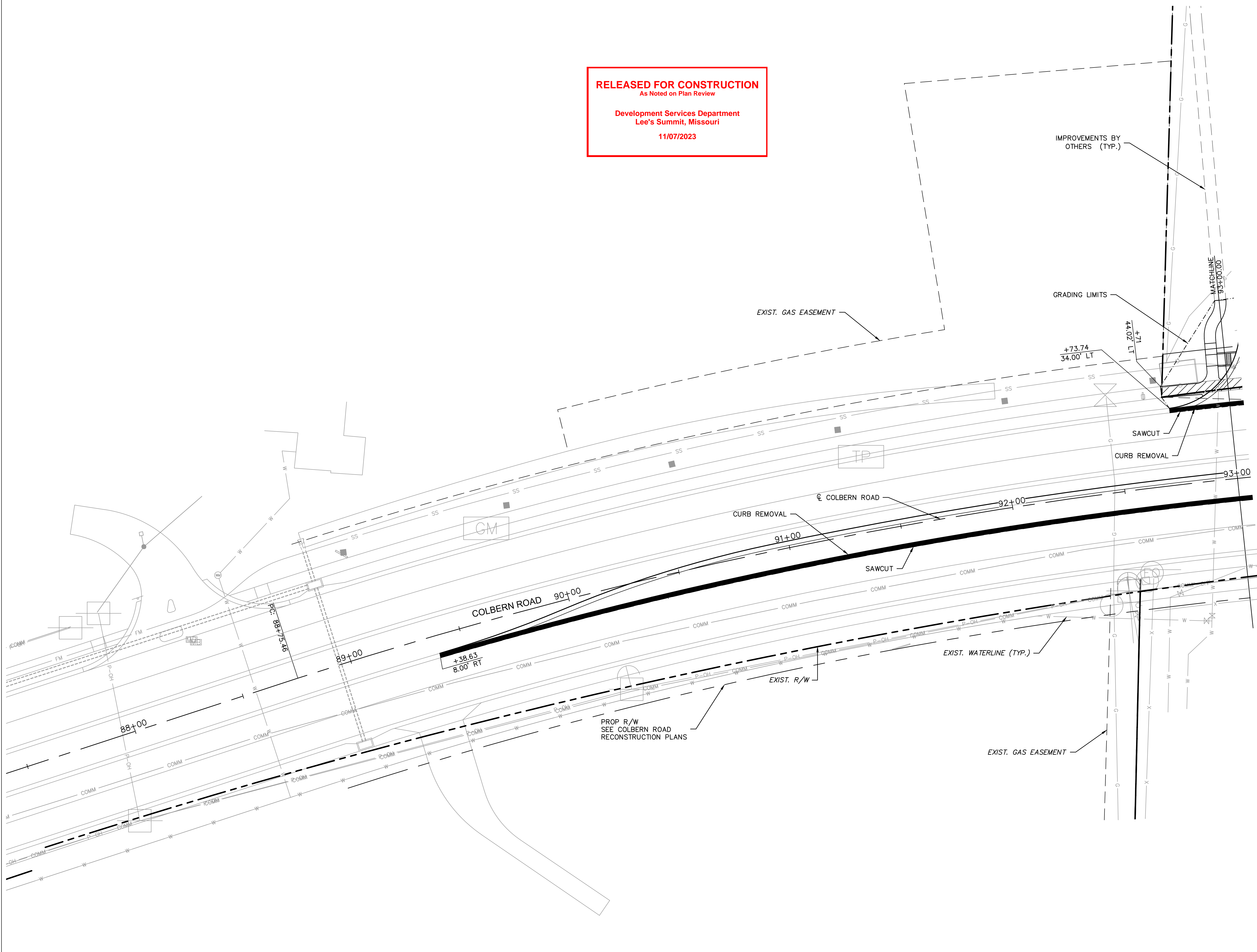
GENERAL NOTES AND SUMMARY OF QUANTITIES
THE VILLAGE AT DISCOVERY PARK
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
LEE'S SUMMIT, MISSOURI

drawn by: BJW
checked by: KLW
approved by: JPG
QA/QC by: JJW
project no.: 021-04643
drawing no.: QTY01_D02104643
date: 7/14/2023

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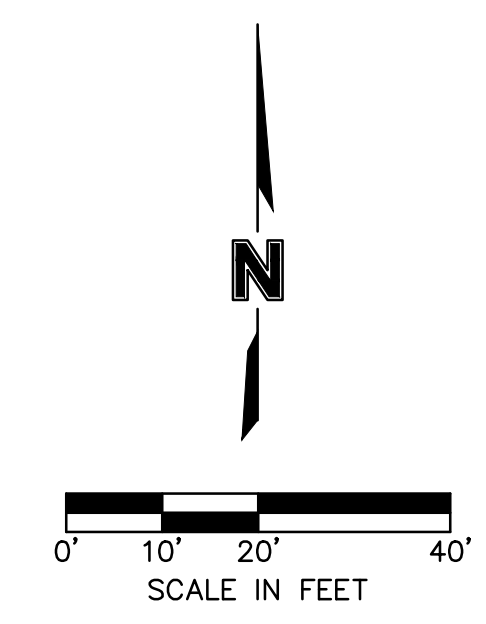
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 SEE PUBLIC WATER MAIN EXTENSION PLANS FOR LIMITS OF WATERLINE ABANDONMENT

LEGEND

- SIDEWALK REMOVAL
- PAVEMENT REMOVAL
- CURB AND GUTTER REMOVAL



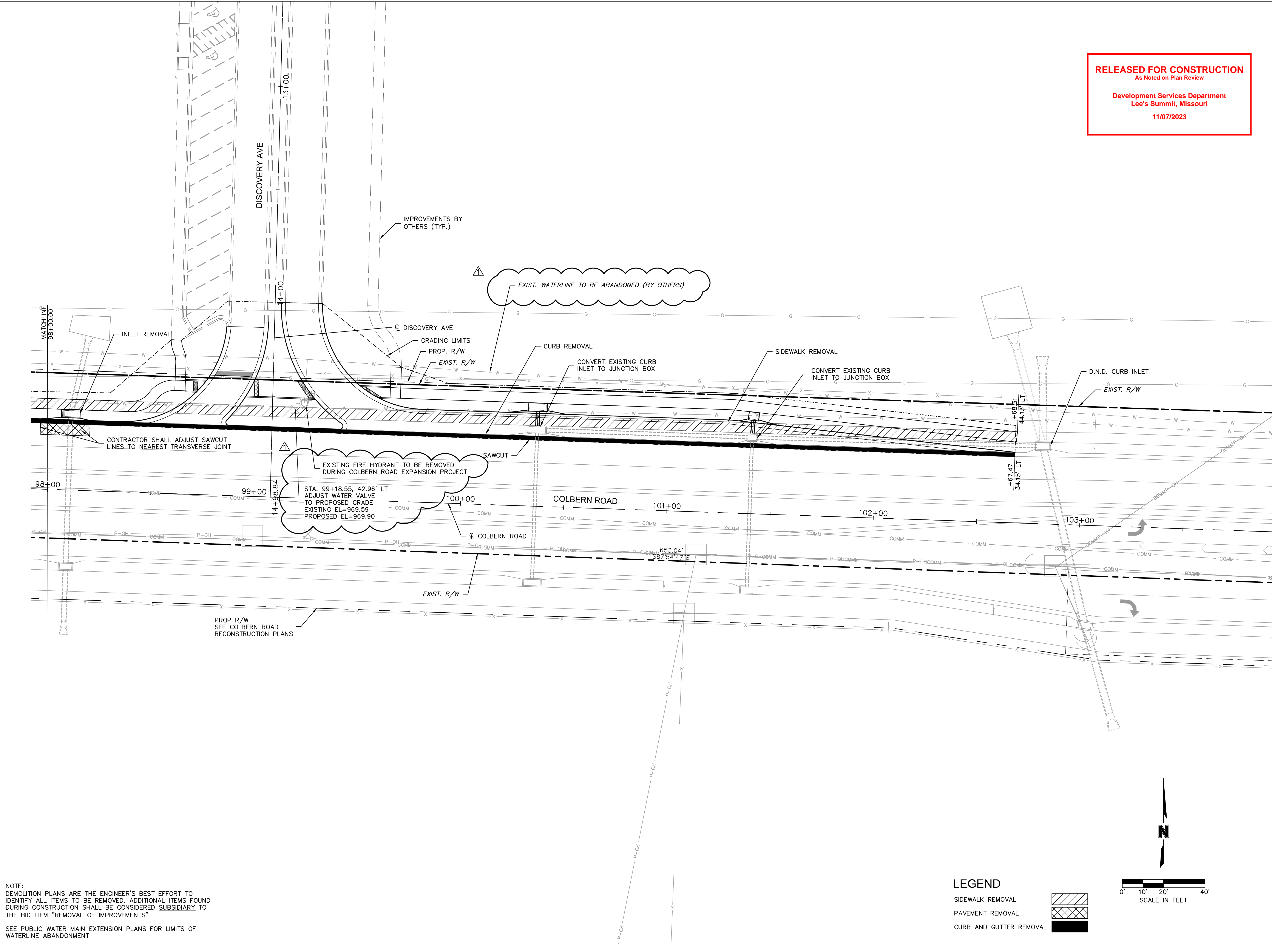
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REV. NO.	DATE	REVISIONS DESCRIPTION
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DEMOLITION & REMOVALS
 COLBERN ROAD
 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

drawn by: BJW
 checked by: KJW
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: T_DEM01_D02104643
 date: 7/14/2023

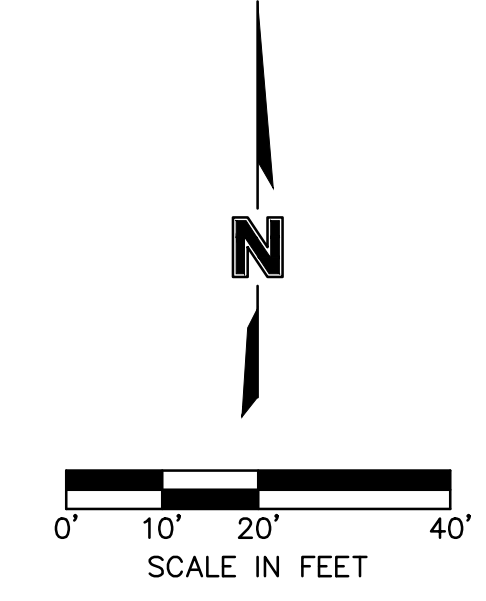
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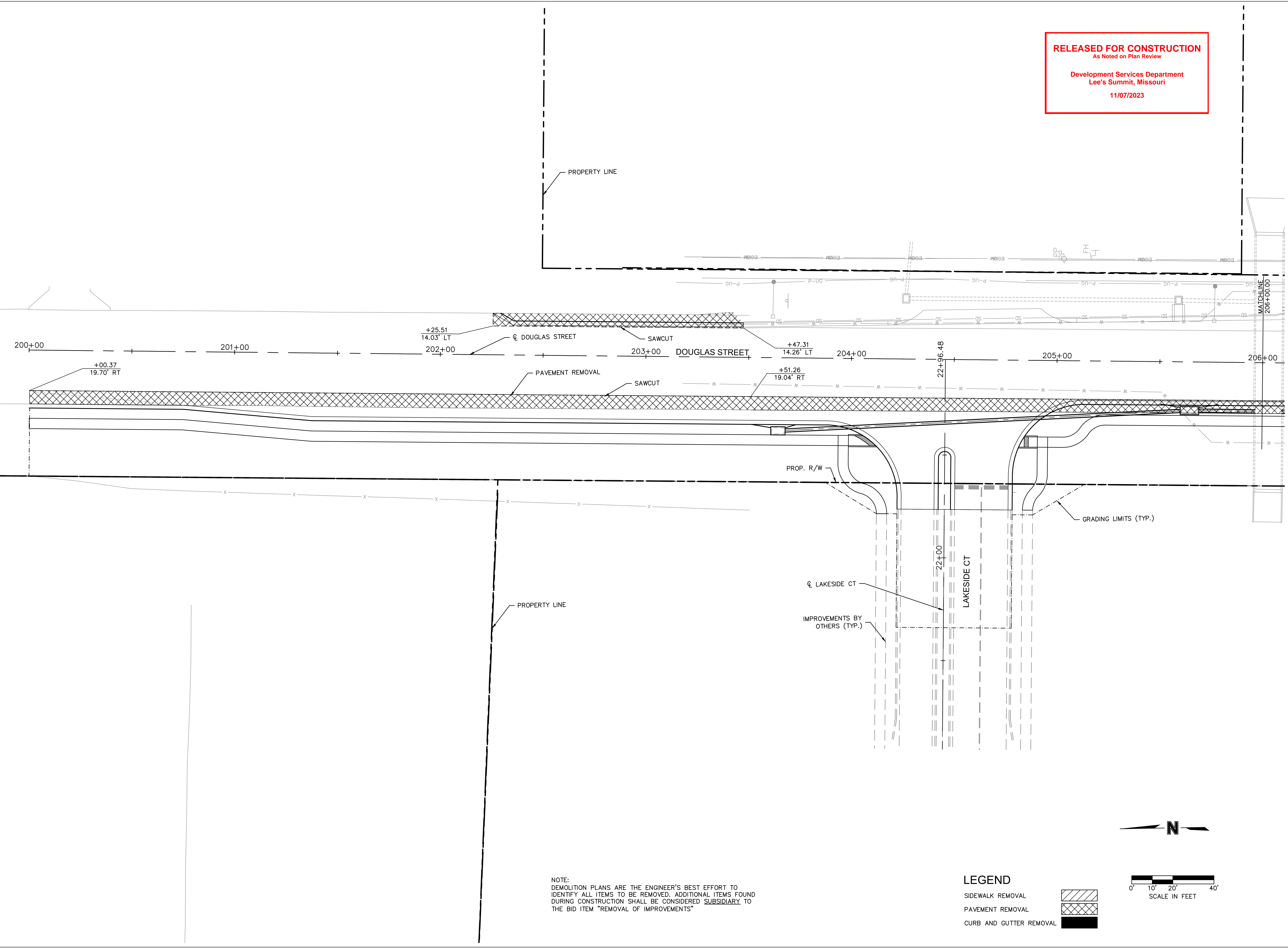
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DEMOLITION & REMOVALS
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 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

drawn by: BJW
 checked by: KLV
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: T_DEM01_D02104643
 date: 7/14/2023

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 USER: twilliams2

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LEGEND

- SIDEWALK REMOVAL
- PAVEMENT REMOVAL
- CURB AND GUTTER REMOVAL



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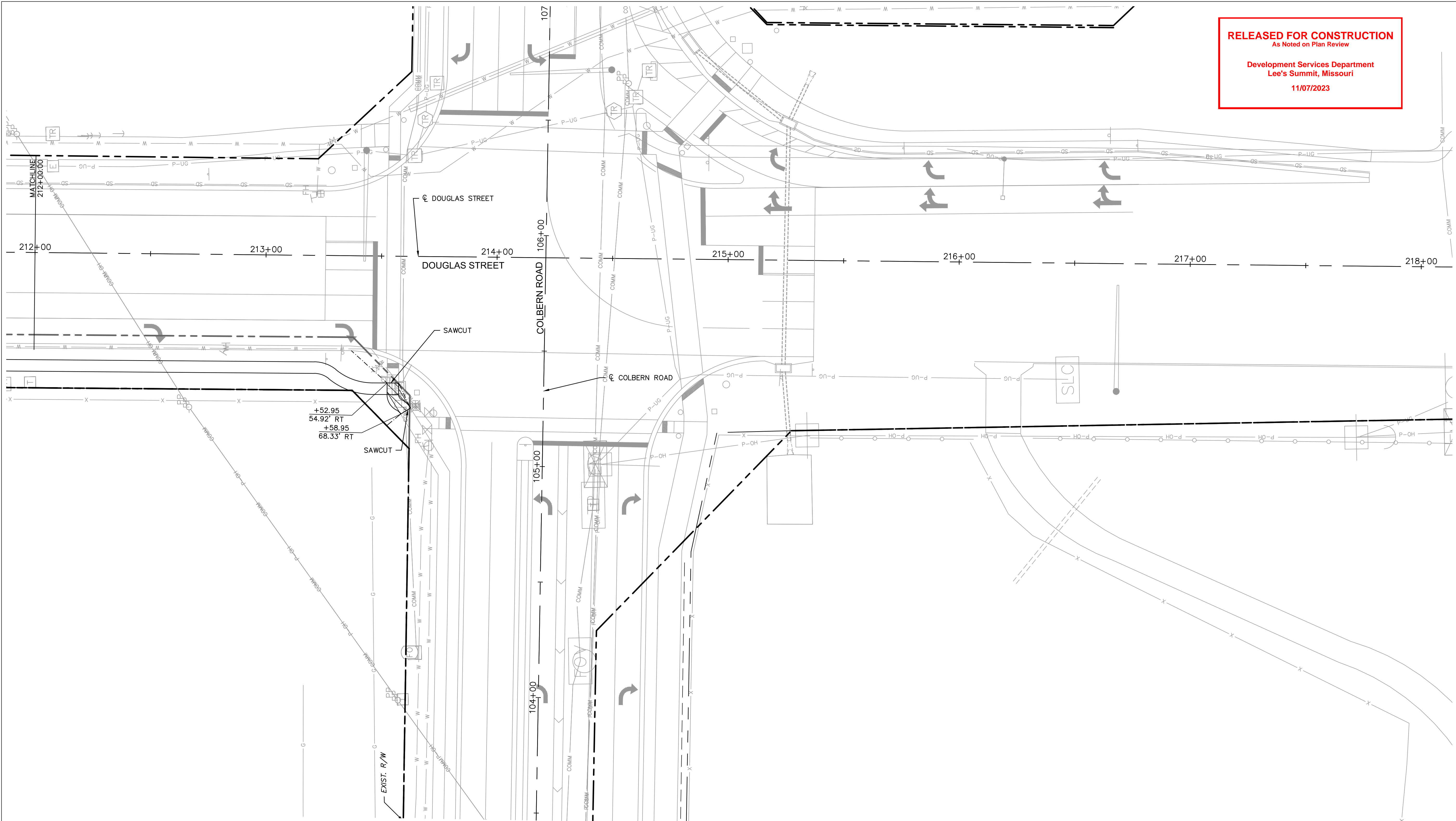
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DEMOLITION & REMOVALS
 DOUGLAS STREET
 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI
 2023

drawn by: BJW
 checked by: KLW
 approved by: JFG
 QA/QC by: JWW
 project no.: 021-04643
 drawing no.: DEM01_D02104643
 date: 7/14/2023

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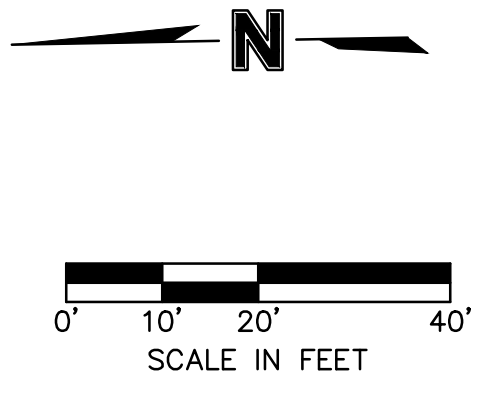
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LEGEND

- SIDEWALK REMOVAL
- PAVEMENT REMOVAL
- CURB AND GUTTER REMOVAL



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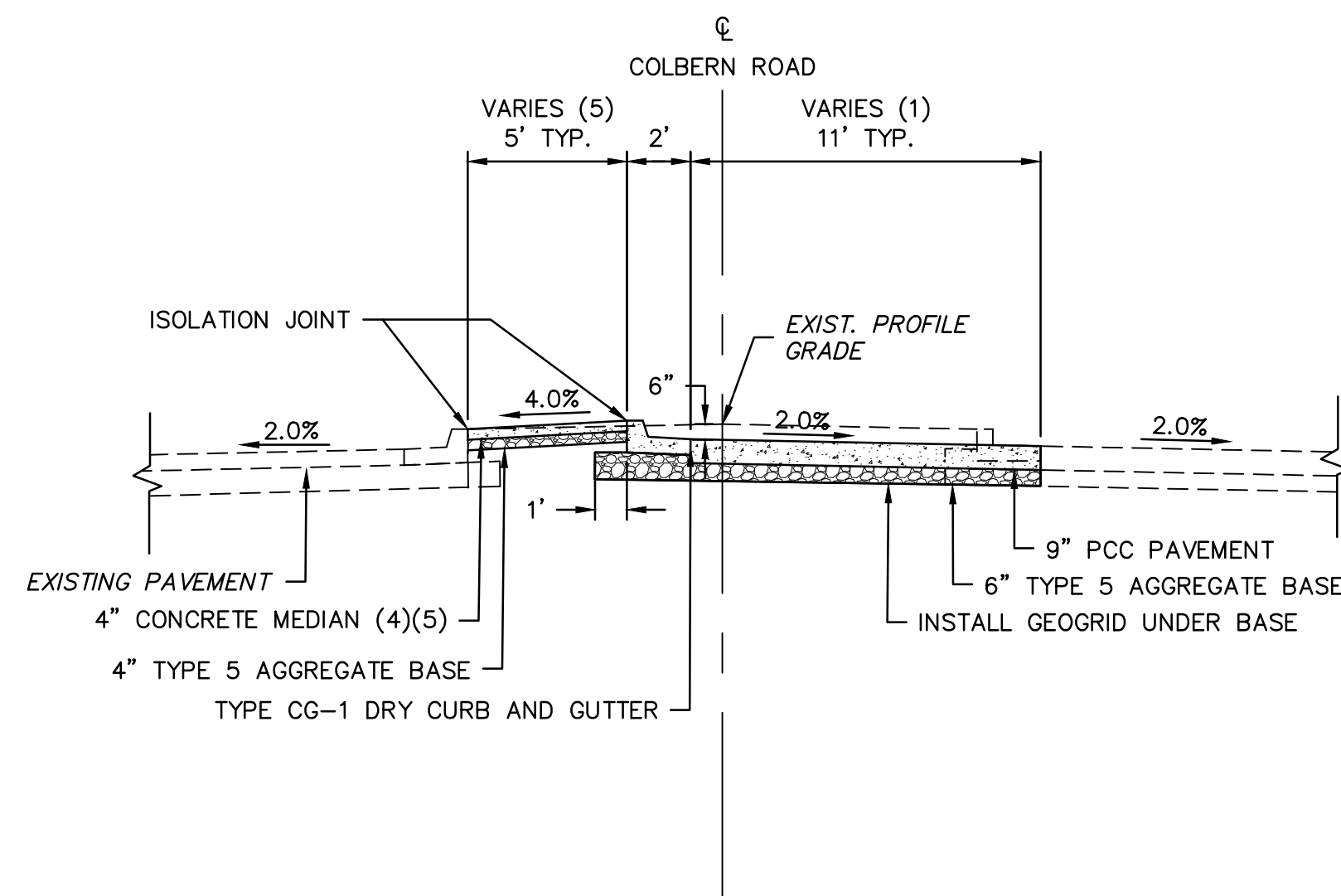
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DEMOLITION & REMOVALS
 DOUGLAS STREET
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 LEE'S SUMMIT, MISSOURI

drawn by: BJW
 checked by: KLV
 approved by: JFG
 QA/QC by: JJW
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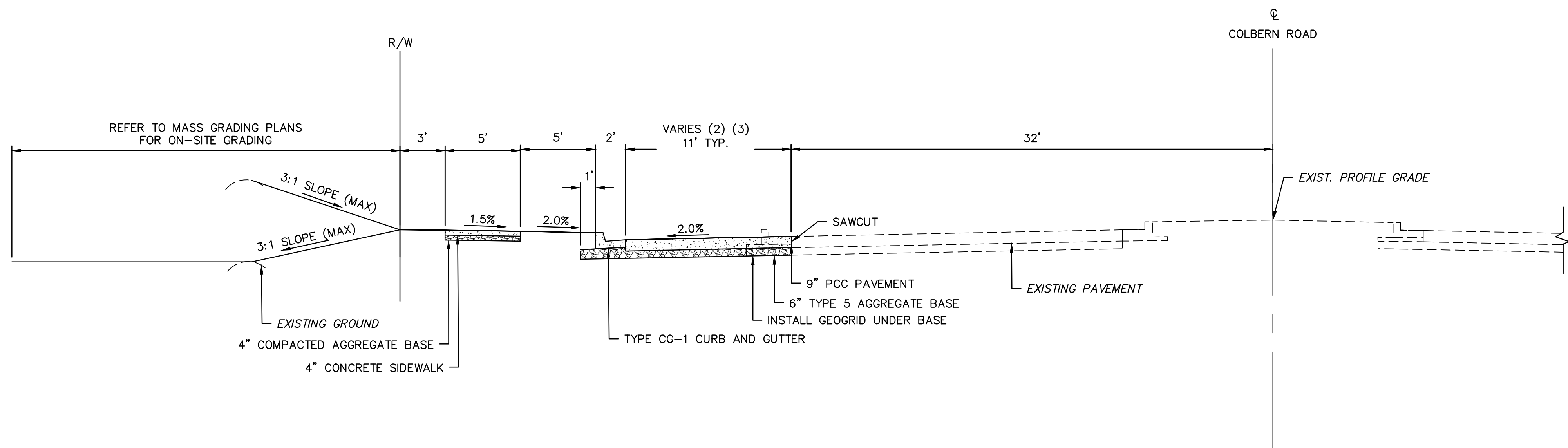
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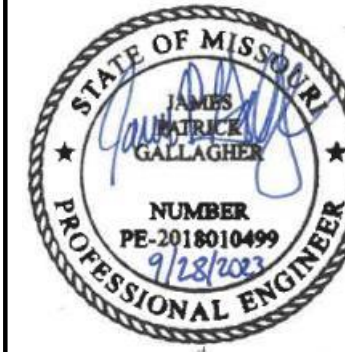


TYPICAL SECTION - COLBERN ROAD
 STA. 90+10.77 TO STA. 93+64.24

- NOTES:
- (1) WIDTH VARIES 0 FEET TO 11 FEET FROM STATION 90+10.77 TO STATION 90+91.60, RESPECTIVELY.
 - (2) WIDTH VARIES 11 FEET TO 0 FEET FROM STATION 96+47.55 TO STATION 97+84.65, RESPECTIVELY.
 - (3) WIDTH VARIES 11 FEET TO 0 FEET FROM STATION 101+30.07 TO STATION 102+67.55, RESPECTIVELY.
 - (4) CONSTRUCT 4" CONCRETE MEDIAN FROM STATION 90+91.60 TO STATION 93+09.84.
 - (5) CONSTRUCT GRASS MEDIAN FROM STATION 90+10.77 TO STATION 90+91.60. WIDTH VARIES 16 FEET TO 5 FEET FROM STATION 90+10.77 TO STATION 90+91.60, RESPECTIVELY.



TYPICAL SECTION - COLBERN ROAD
 STA. 93+95.23 TO STA. 97+84.65
 STA. 99+80.11 TO STA. 102+67.55



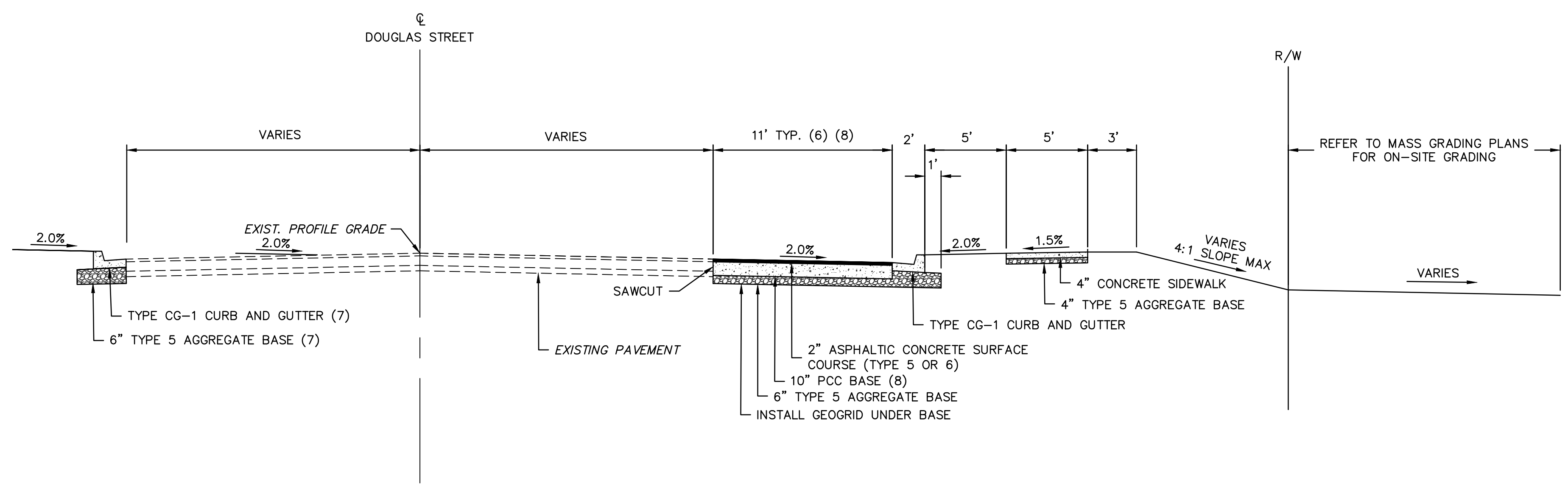
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TYPICAL SECTIONS
 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI
 2023

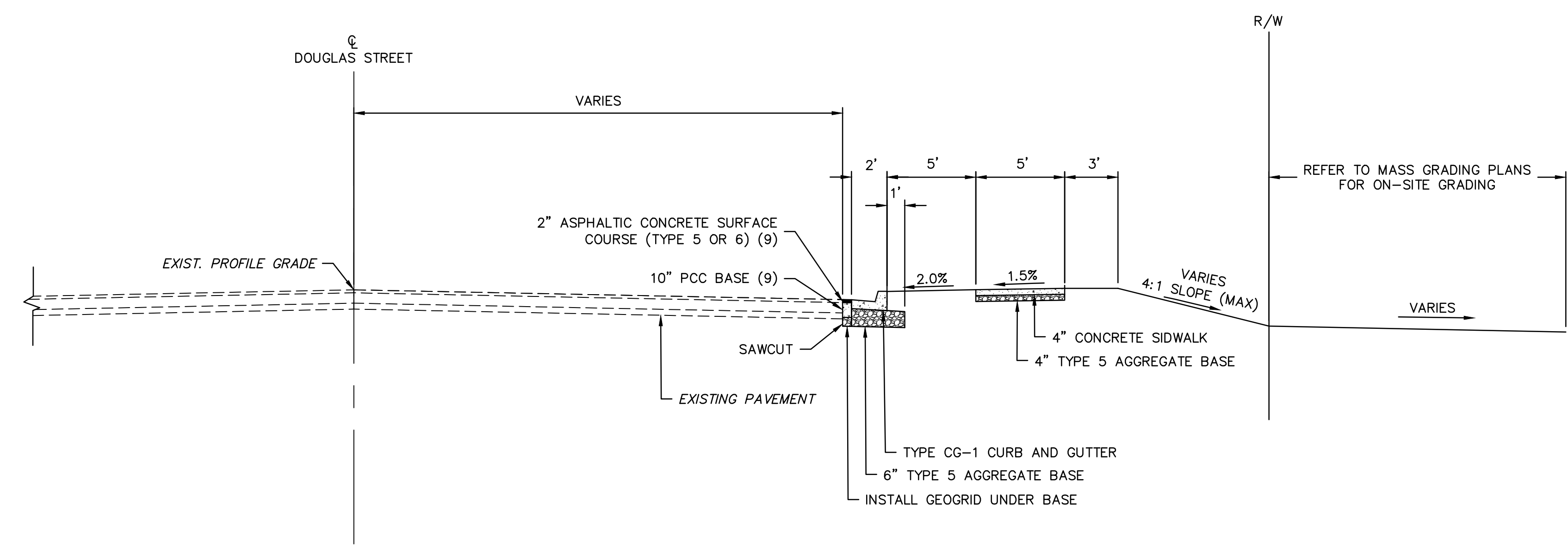
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 checked by: KLW
 approved by: JPG
 QA/QC by: JJW
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 drawing no.: TYP01_D02104643
 date: 7/14/2023

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TYPICAL SECTION - DOUGLAS STREET
STA. 200+00.38 TO STA. 203+87.77

- NOTES:
- (6) WIDTH VARIES 6 FEET TO 11 FEET FROM STATION 200+77.21 TO STATION 201+37.80, RESPECTIVELY.
 - (7) CONSTRUCT TYPE CG-1 CURB AND GUTTER FROM STATION 202+25.50 TO STATION 203+47.30.
 - (8) PCC BASE SHALL MEET TYPICAL PAVEMENT JOINT REQUIREMENTS SPECIFIED BY THE CITY OF LEE'S SUMMIT, MISSOURI. SEE STANDARD DETAILS
 - (9) WIDTH VARIES 0.5 FEET TO 4.5 FEET FROM STATION 208+72.41 TO STATION 211+47.42



TYPICAL SECTION - DOUGLAS STREET
STA. 205+13.75 TO STA. 211+47.42



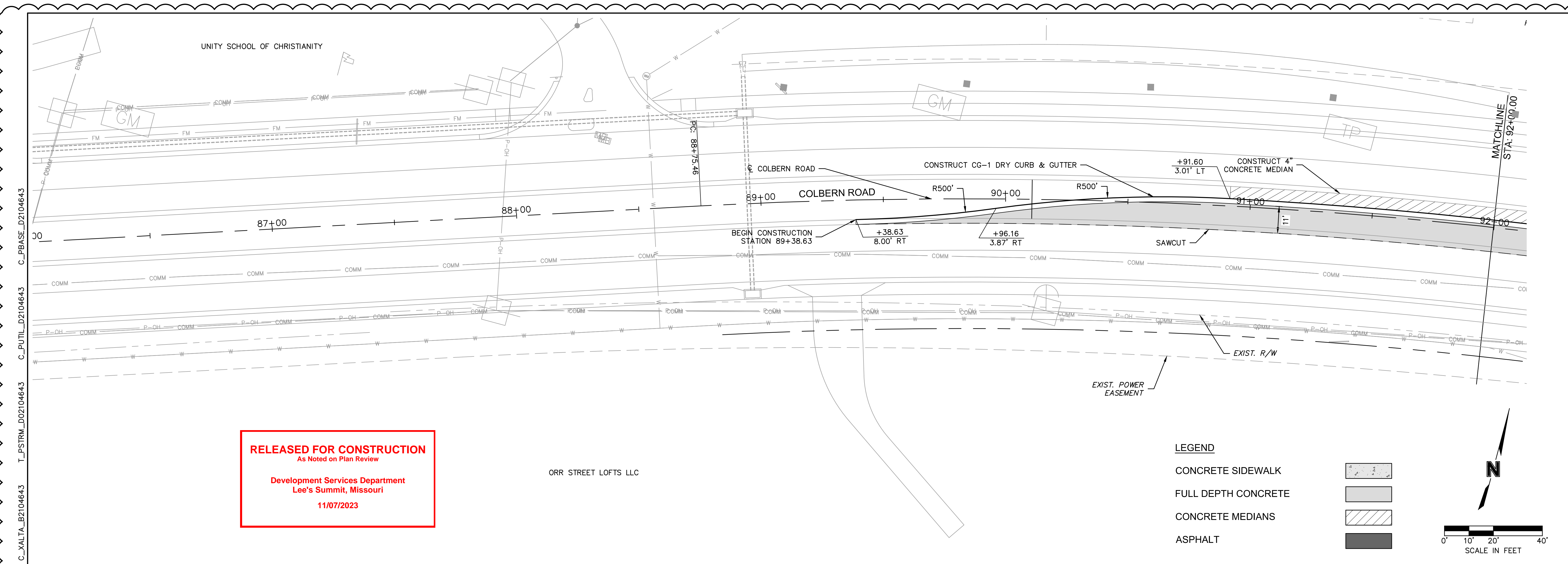
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 2023

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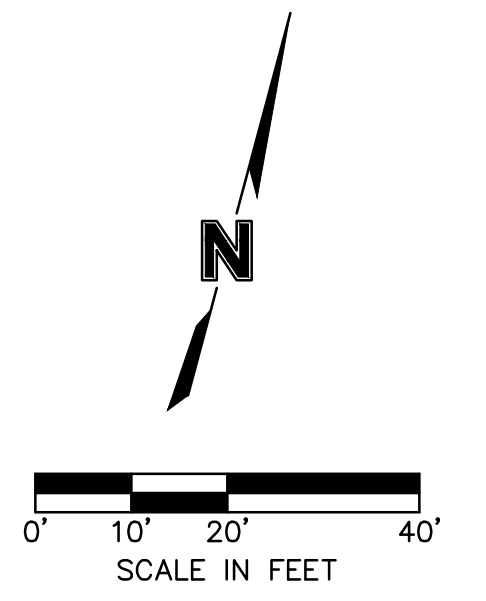
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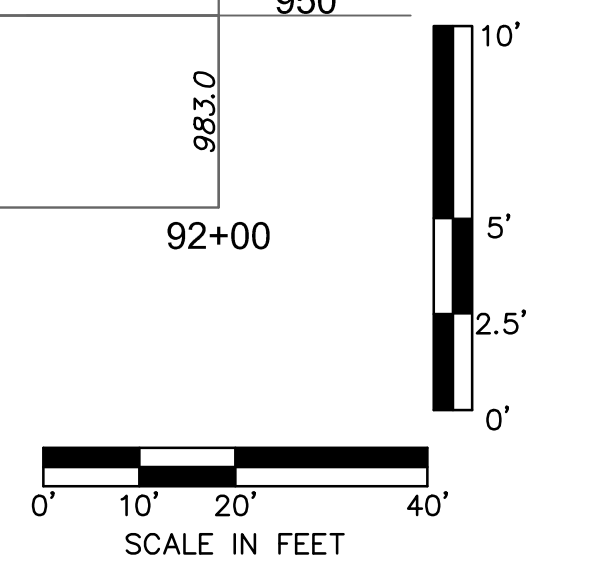
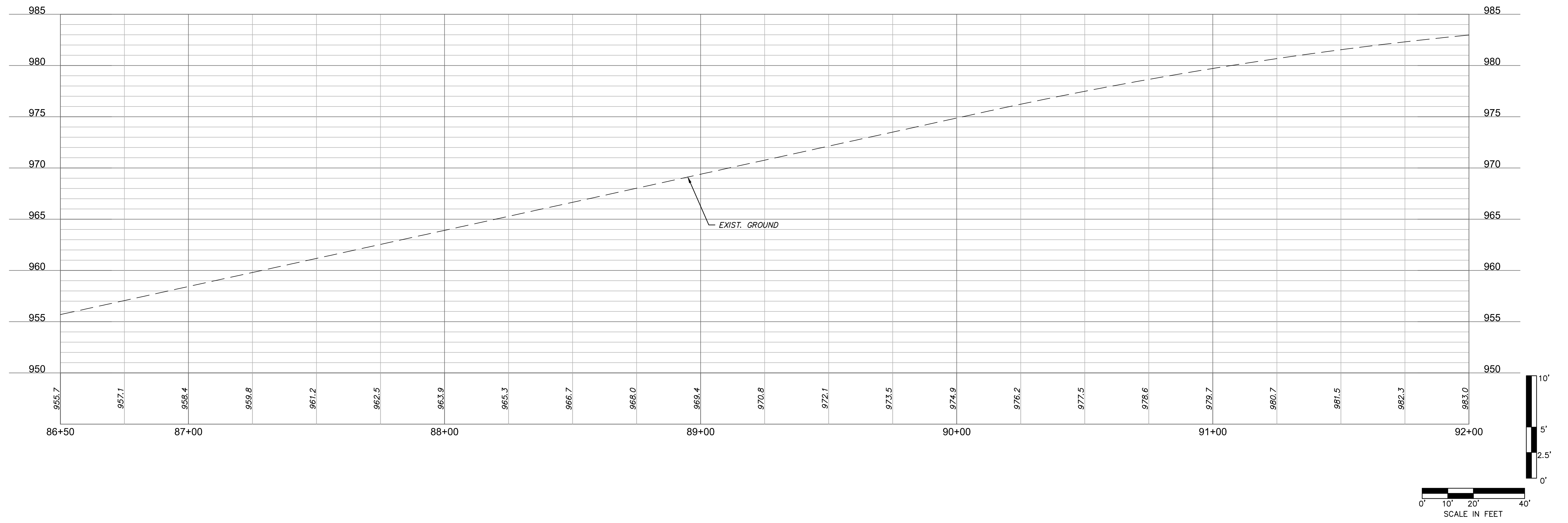
ORR STREET LOFTS LLC

LEGEND

CONCRETE SIDEWALK	
FULL DEPTH CONCRETE	
CONCRETE MEDIANS	
ASPHALT	



COLBERN ROAD (86+50 - 92+00)



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PLAN & PROFILE
COLBERN ROAD

THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

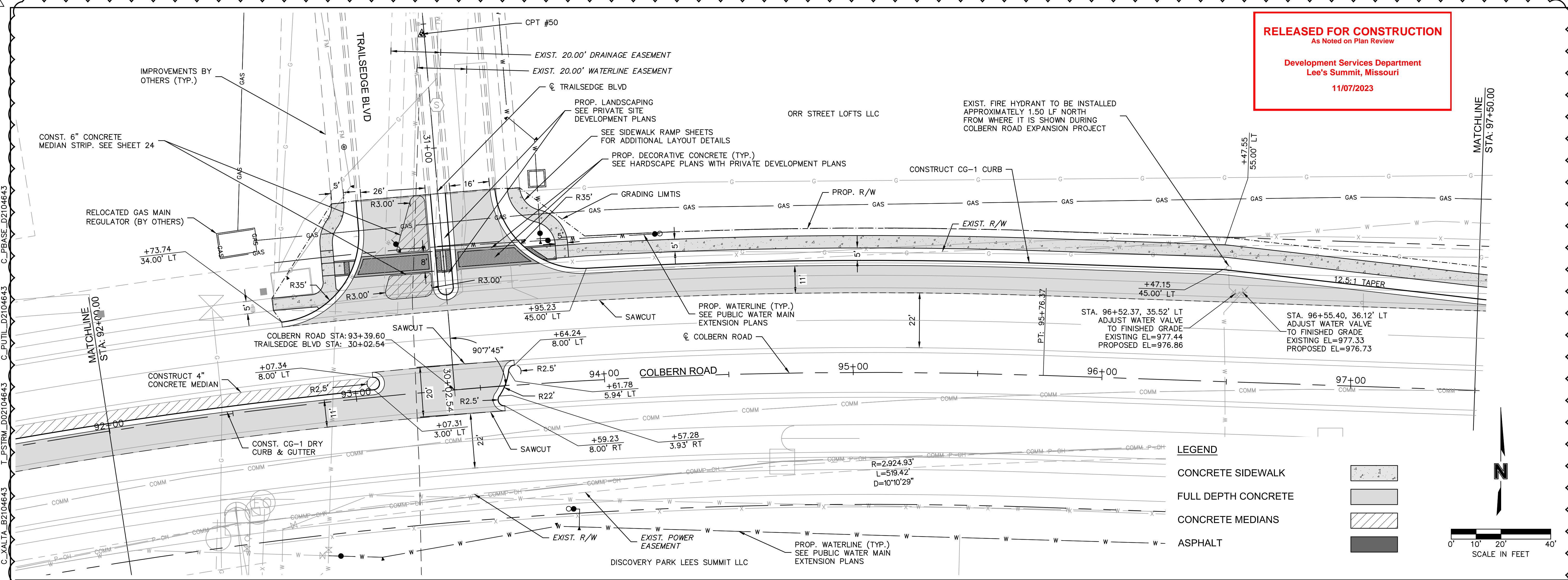
LEE'S SUMMIT, MISSOURI

drawn by: BLW
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 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: RPP01_D02104643
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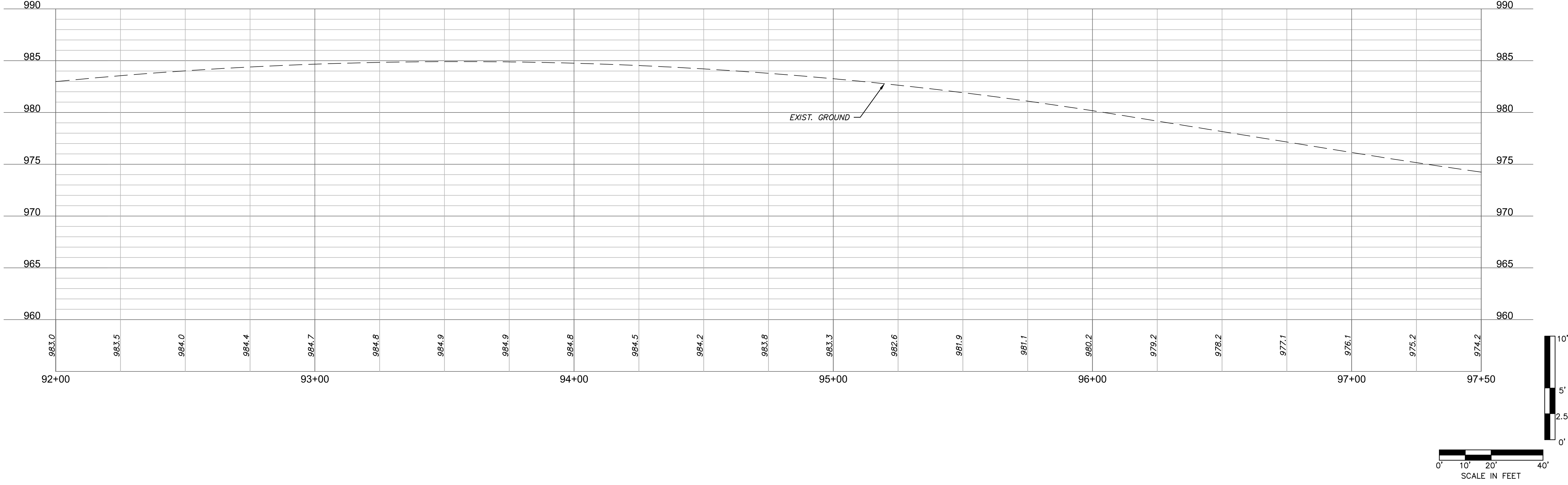
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13 OF 86

2023

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COLBERN ROAD (92+00 - 97+50)



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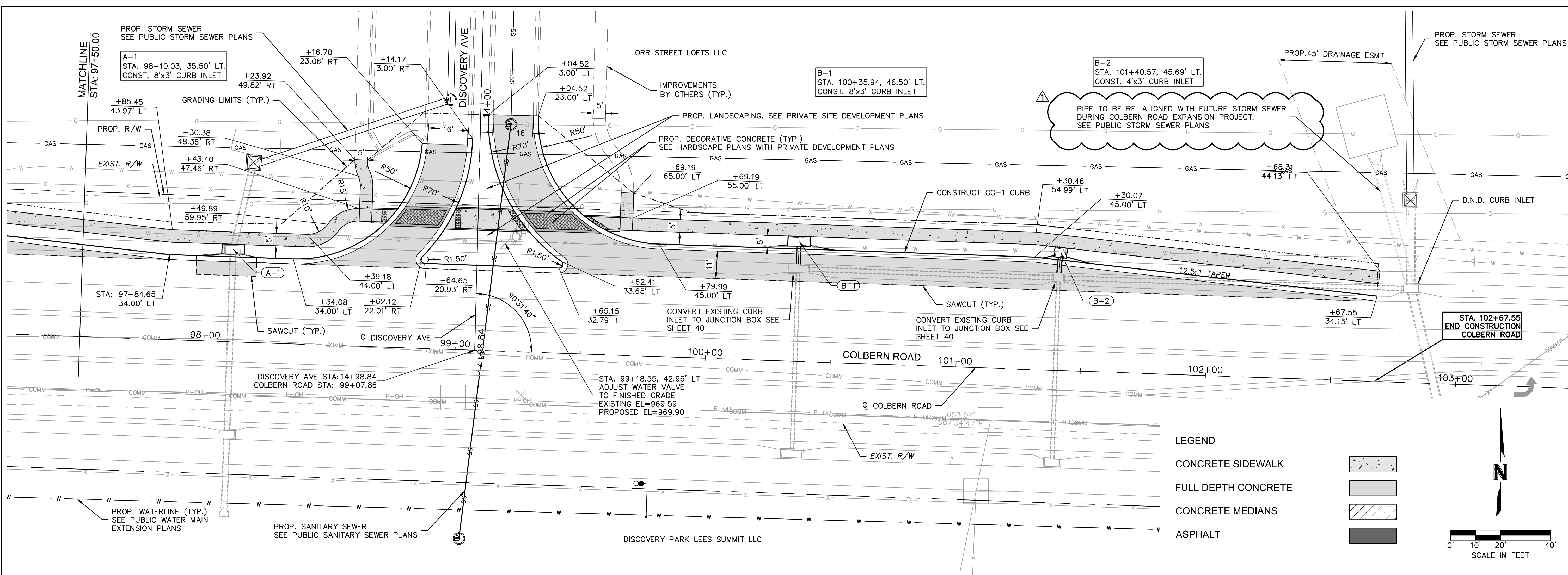
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PLAN & PROFILE
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 LEE'S SUMMIT, MISSOURI

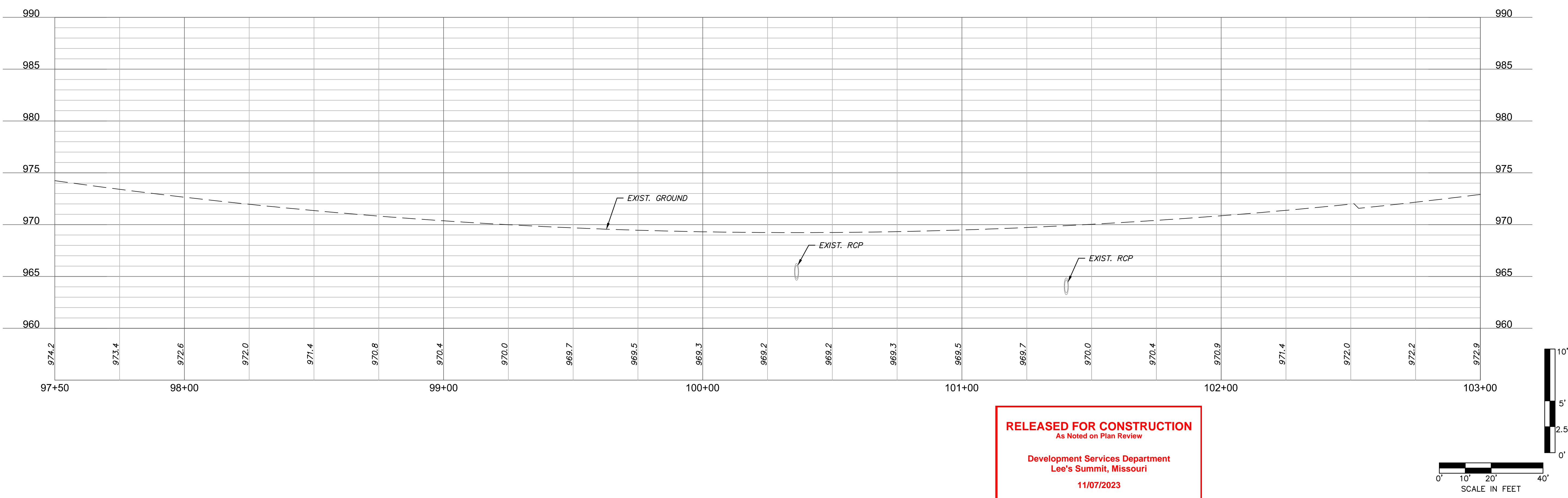
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USER: kwilliams2
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 USER: kwilliams2



COLBERN ROAD (97+50 - 103+00)



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 Development Services Department
 Lee's Summit, Missouri
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REV. NO.	DATE	REVISIONS DESCRIPTION
1	10/18/2023	CITY COMMENTS ON 10/05/2023

PLAN & PROFILE
COLBERN ROAD

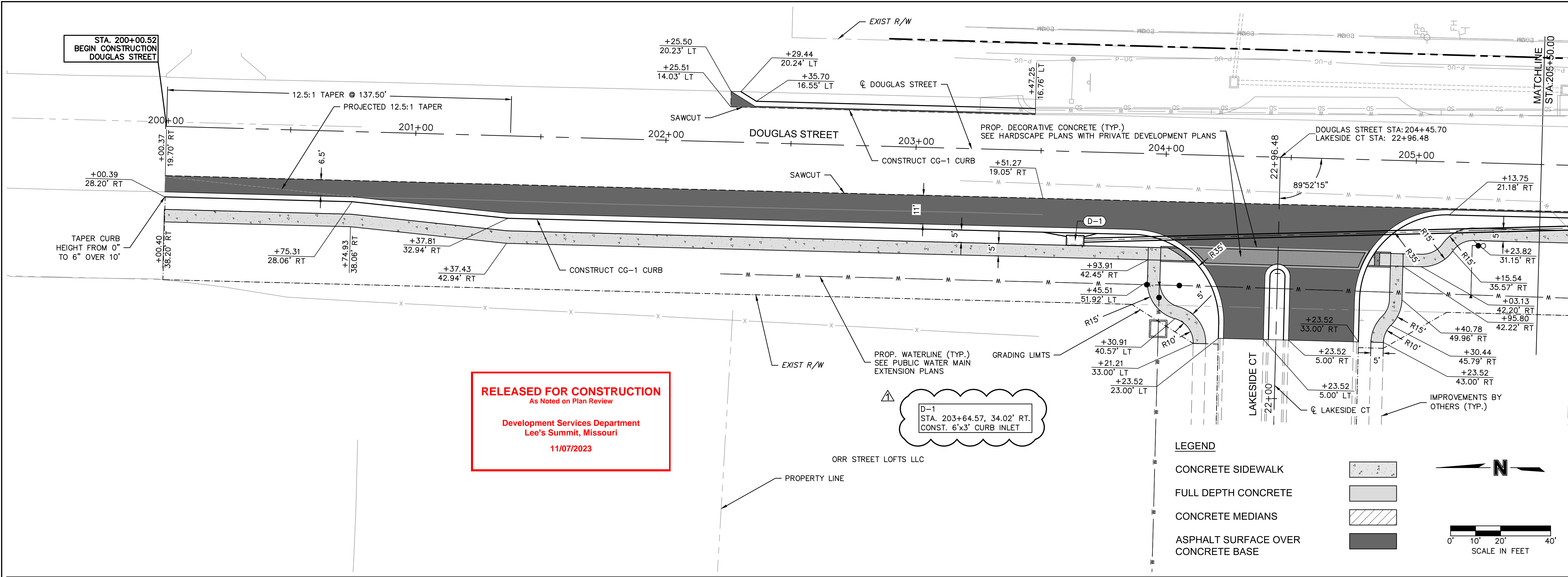
THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

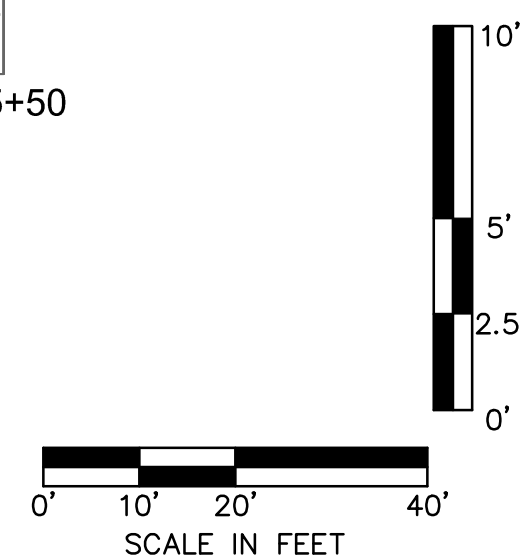
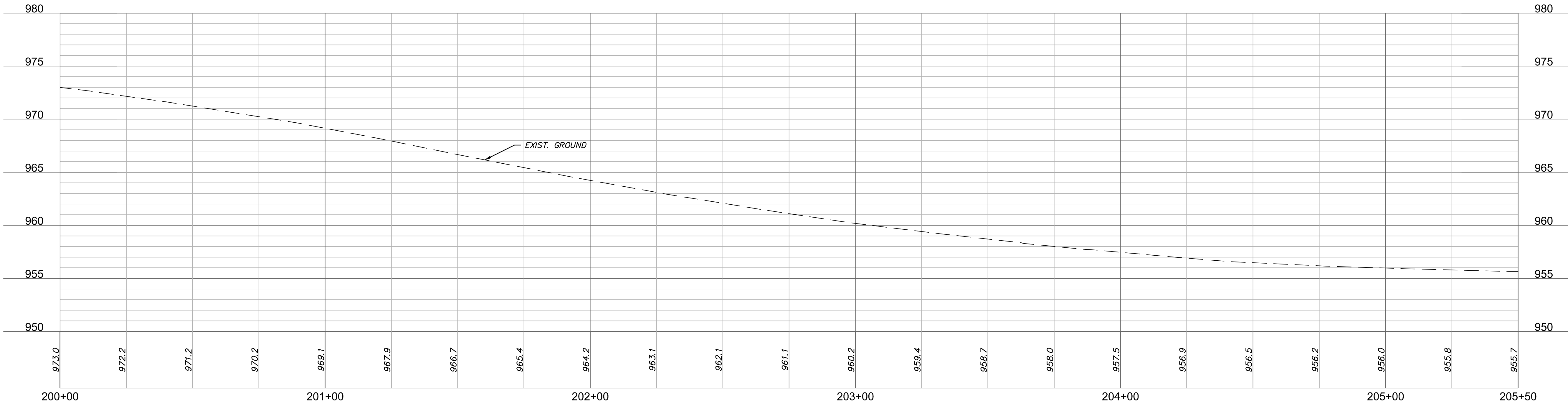
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 checked by: KLV
 approved by: JFG
 QA/QC by: JWW
 project no.: 021-04643
 drawing no.: RPP01_D02104643
 date: 7/14/2023

SHEET
15 OF 86

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 USER: kwilliams2 C_FROAD_D2104643



DOUGLAS STREET (200+00 - 205+50)



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 North Kansas City, MO 64116
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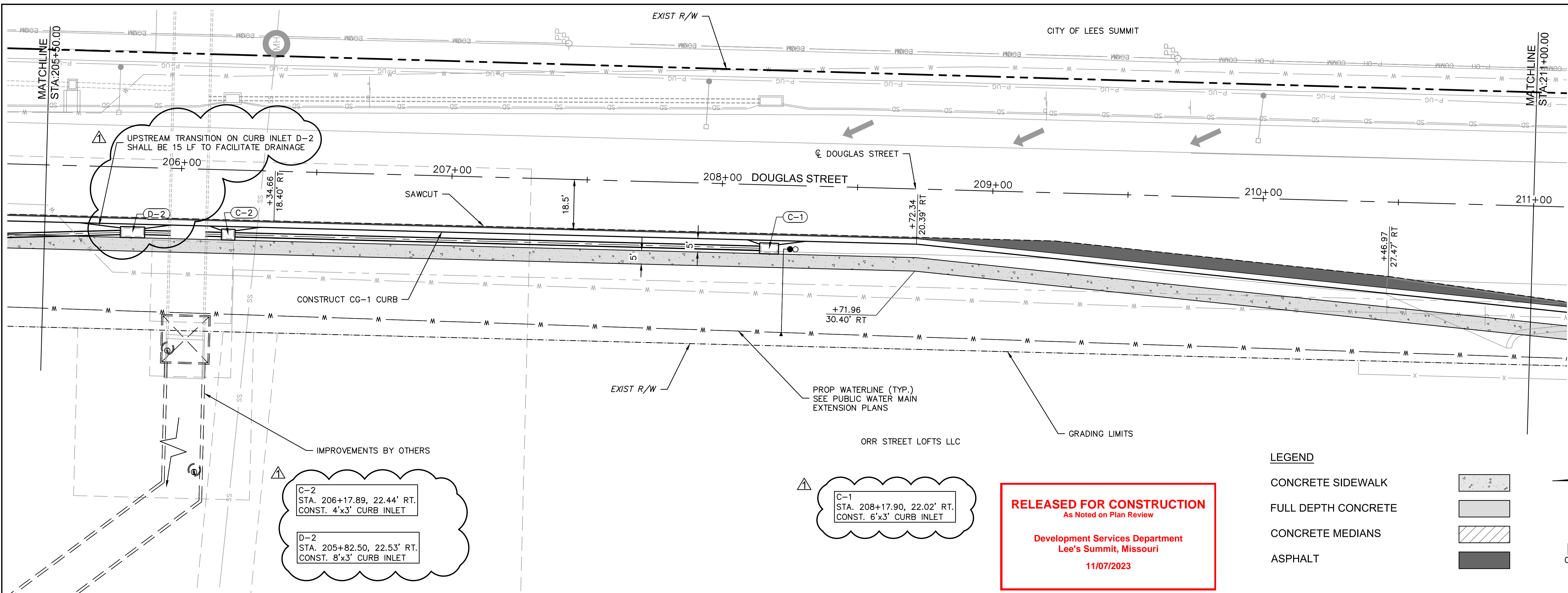


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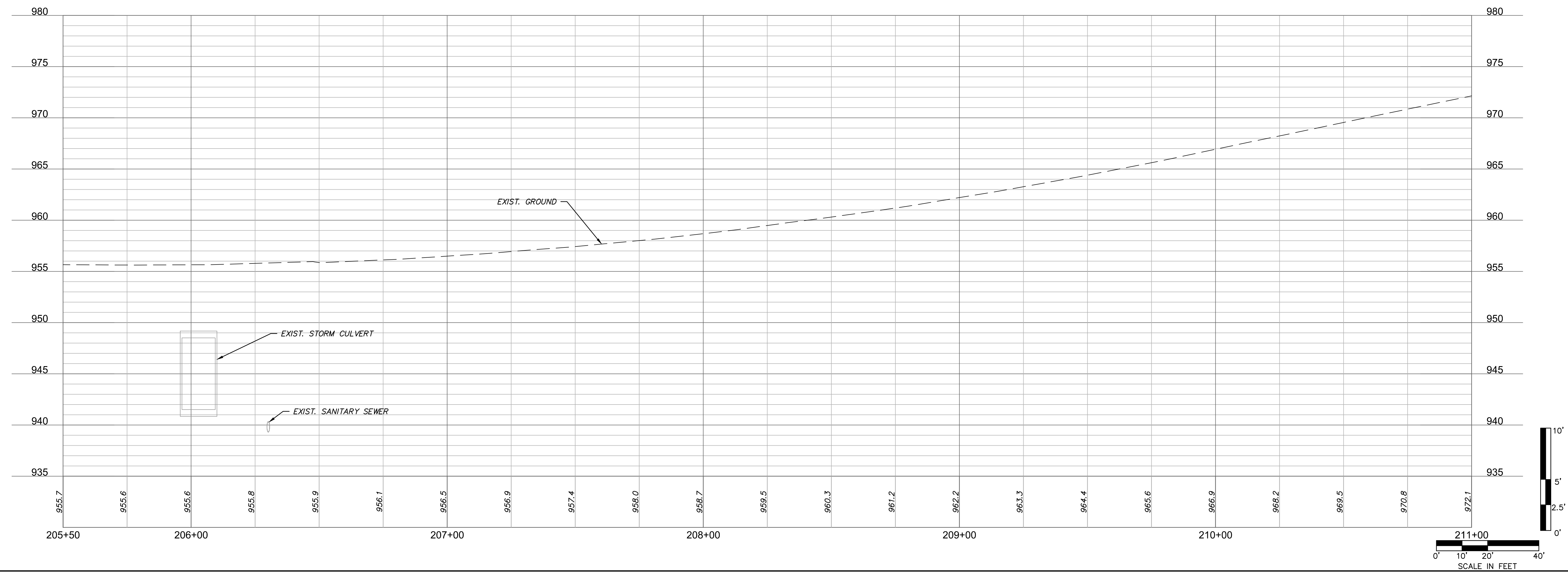
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DOUGLAS STREET
 THE VILLAGE AT DISCOVERY PARK
 COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI
 2023

drawn by: BJW
 checked by: KLV
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: RPP01_D02104643
 date: 7/14/2023

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DOUGLAS STREET (205+50 - 211+00)

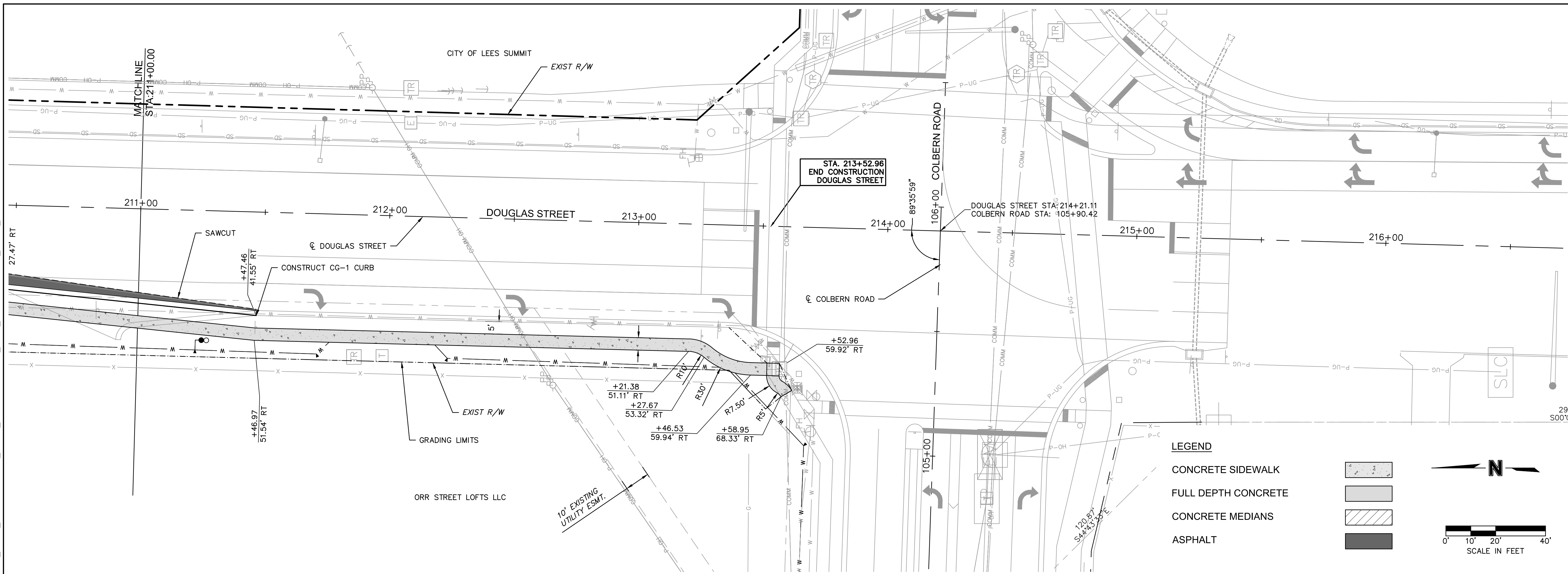


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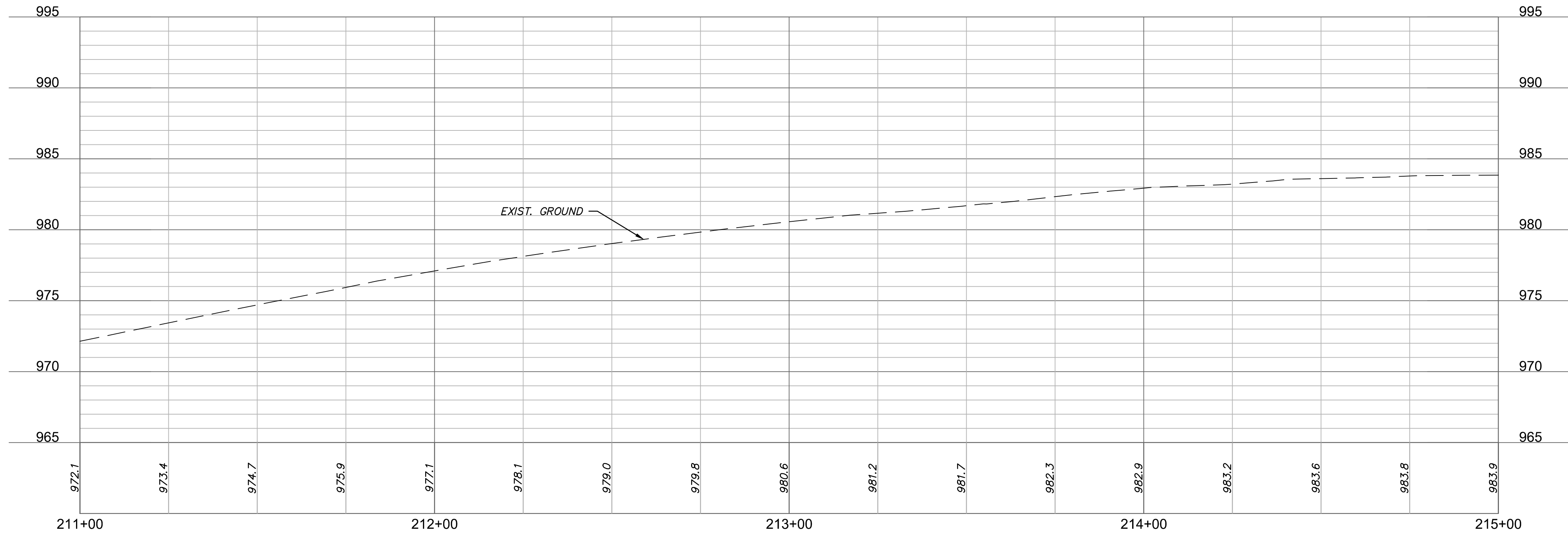
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DOUGLAS STREET
 THE VILLAGE AT DISCOVERY PARK
 COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

drawn by: BLW
 checked by: KLW
 approved by: JFG
 QA/QC by: JWW
 project no.: 021-04643
 drawing no.: RPP01_D02104643
 date: 7/14/2023

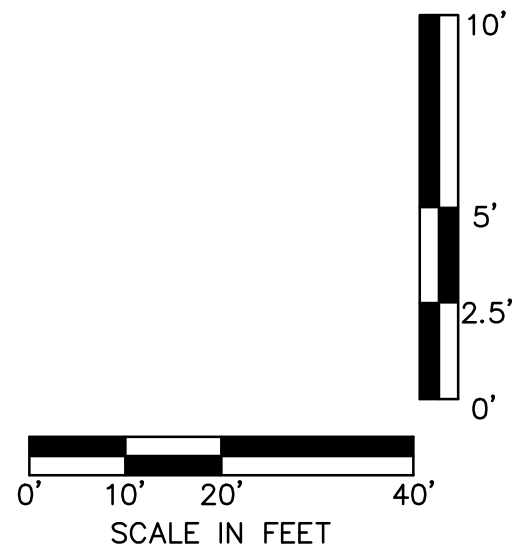
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DOUGLAS STREET (211+00 - 215+00)



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 11/07/2023

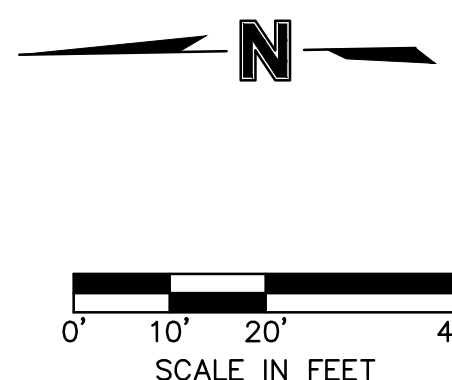
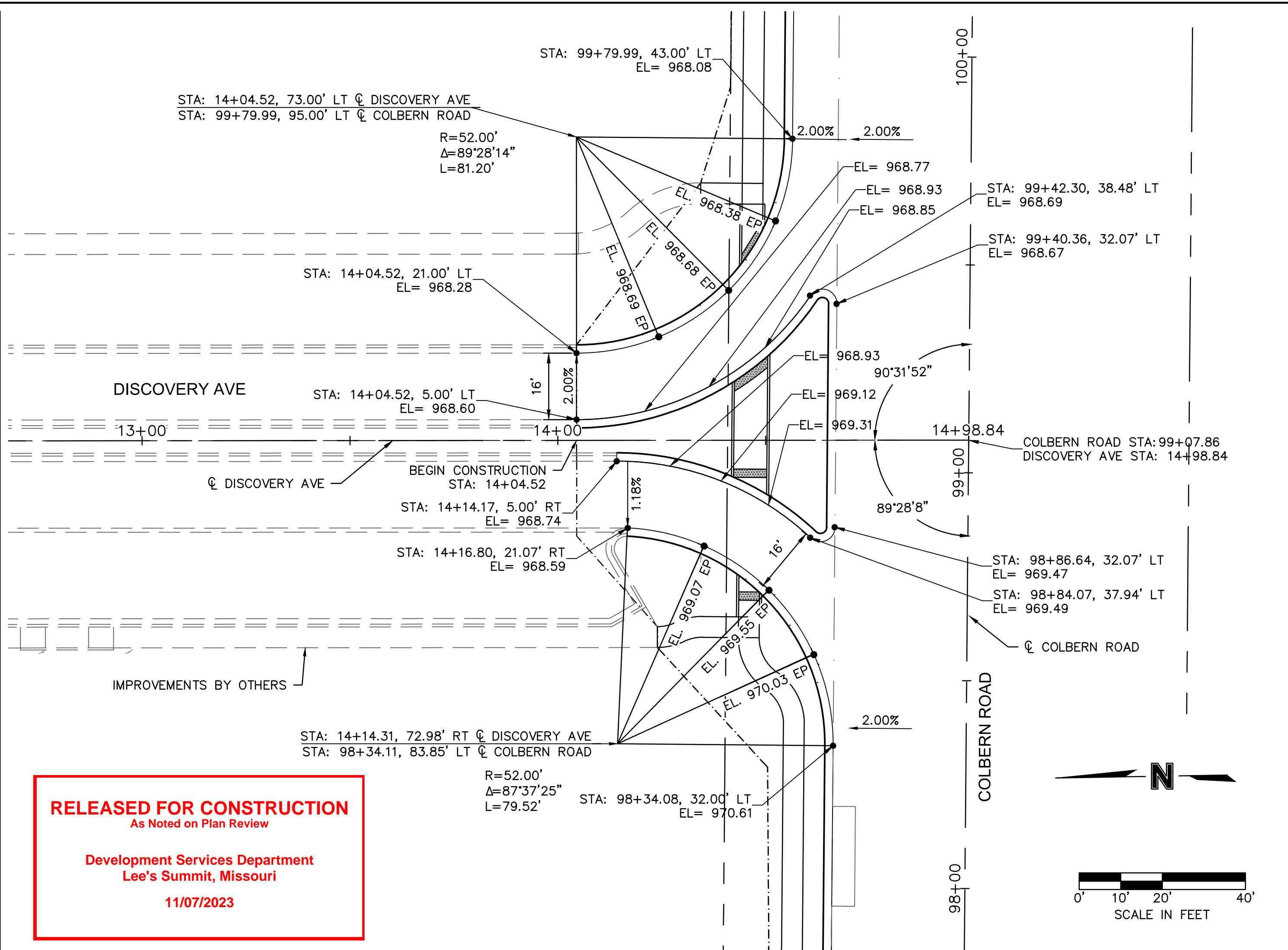
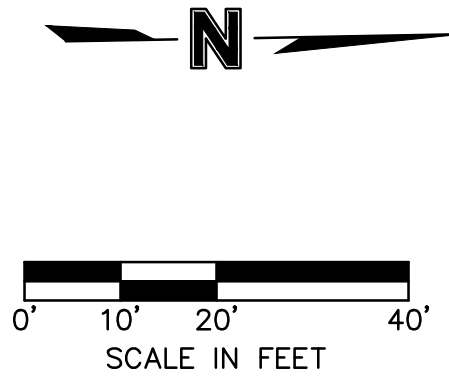
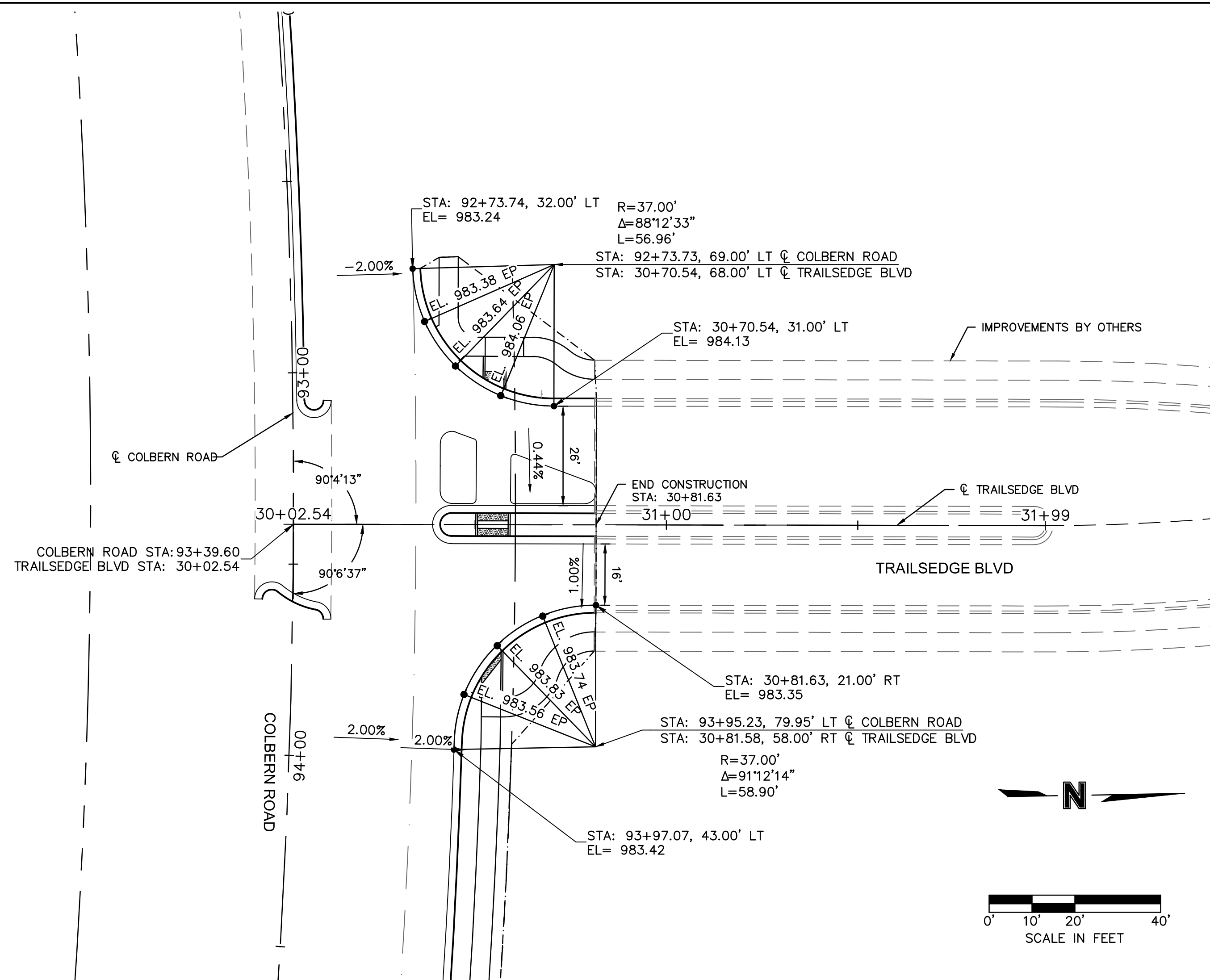


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PLAN & PROFILE
 DOUGLAS STREET
 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

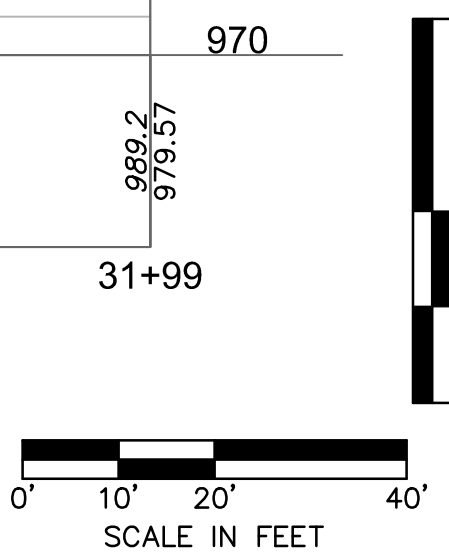
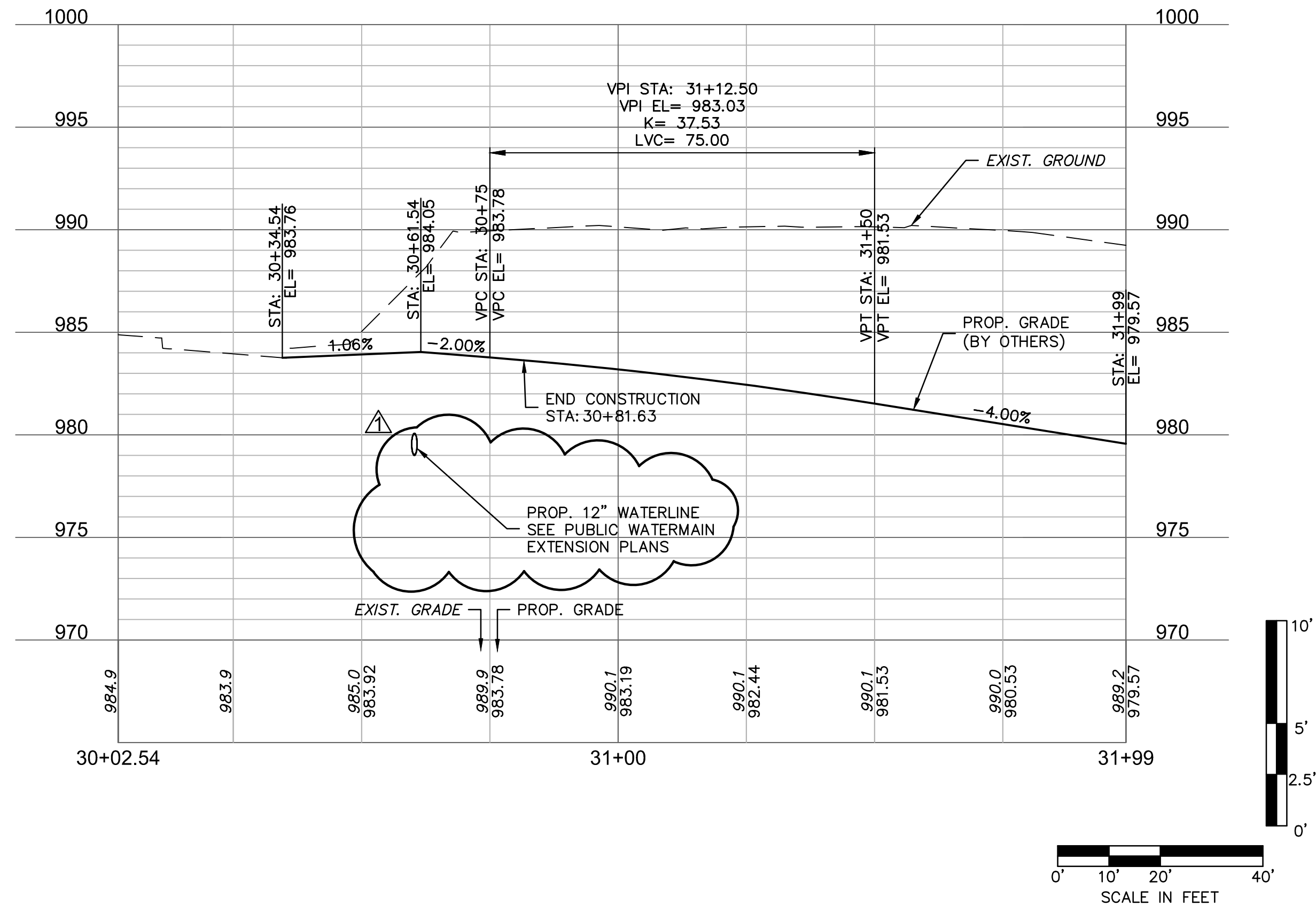
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 checked by: KLW
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: RPP01_D02104643
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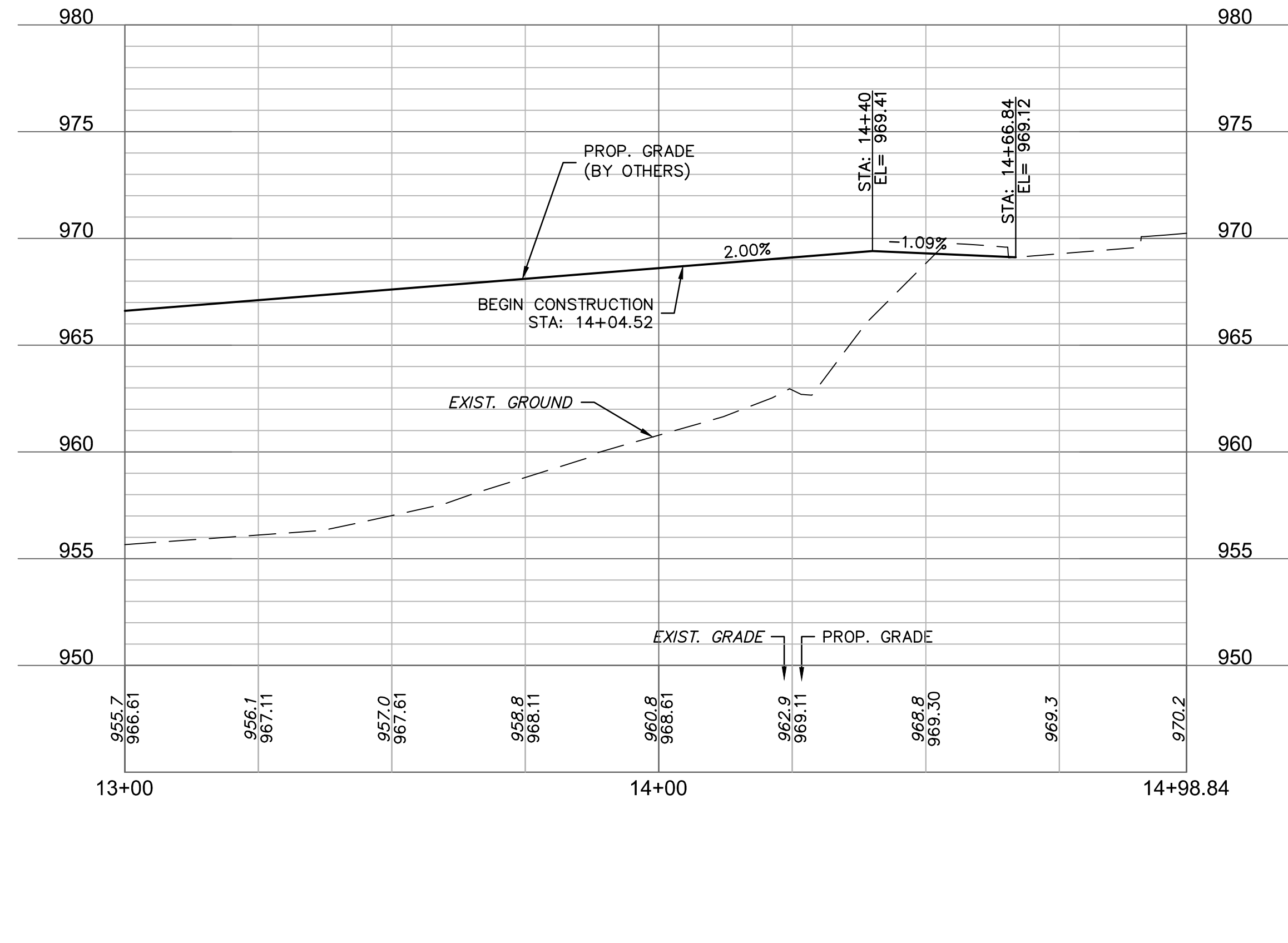


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 Lee's Summit, Missouri
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TRAILSEGE BLVD (30+02.54 - 31+99)



DISCOVERY AVE (13+00 - 14+98.84)



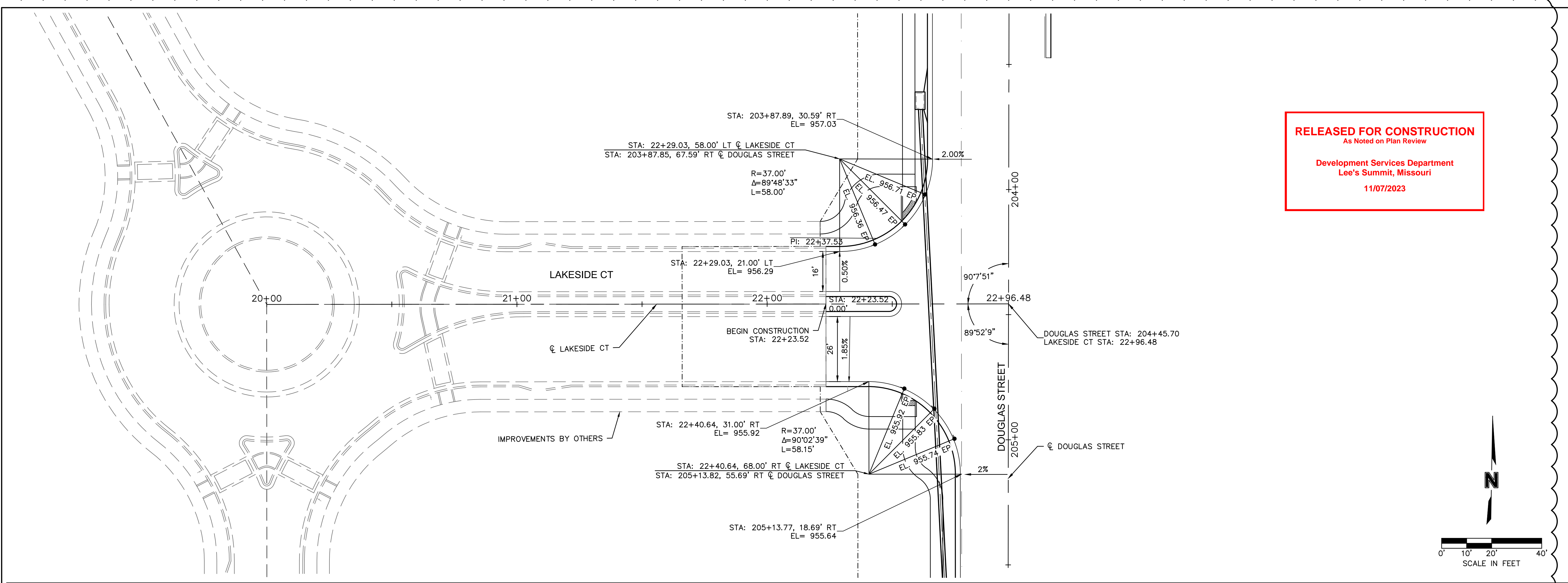
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1	10/13/2023	CITY COMMENTS ON 10/05/2023

DRIVE LAYOUTS
 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI
 2023

drawn by: BJW
 checked by: KLW
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: T_DRV01_D02104643
 date: 7/14/2023

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USER: kwilliam2



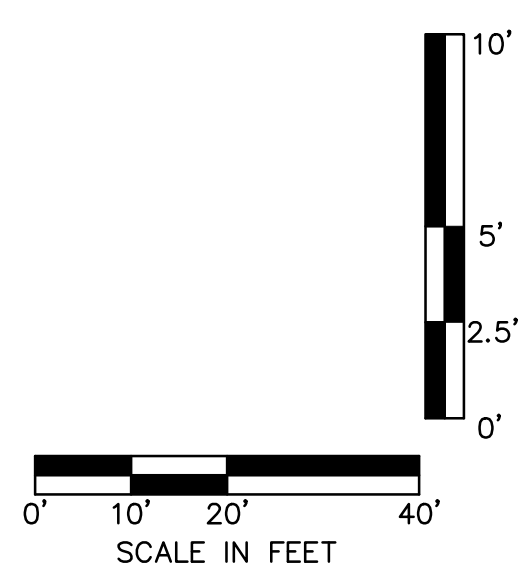
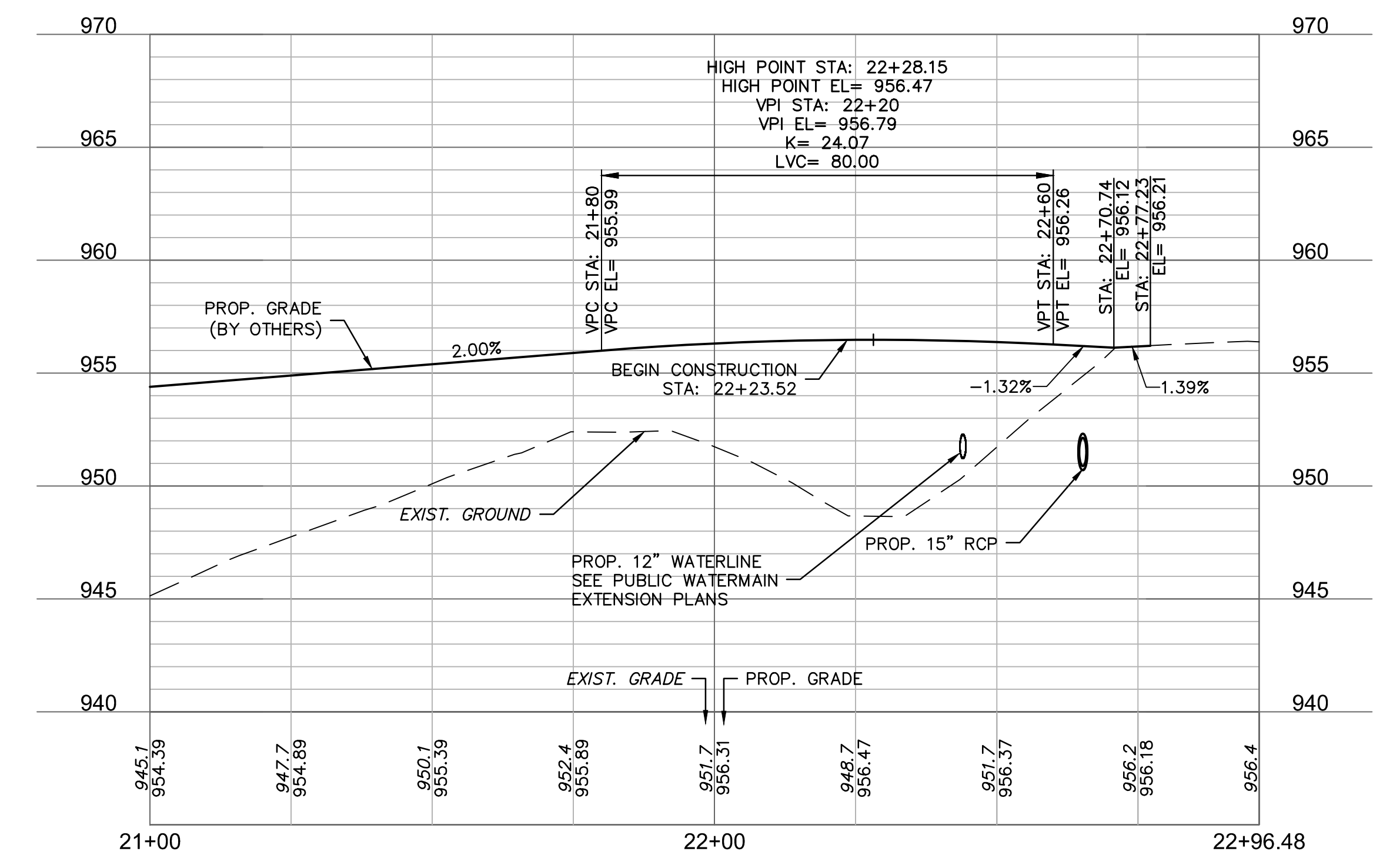
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11/07/2023



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LAKESIDE CT (21+00 - 22+96.48)

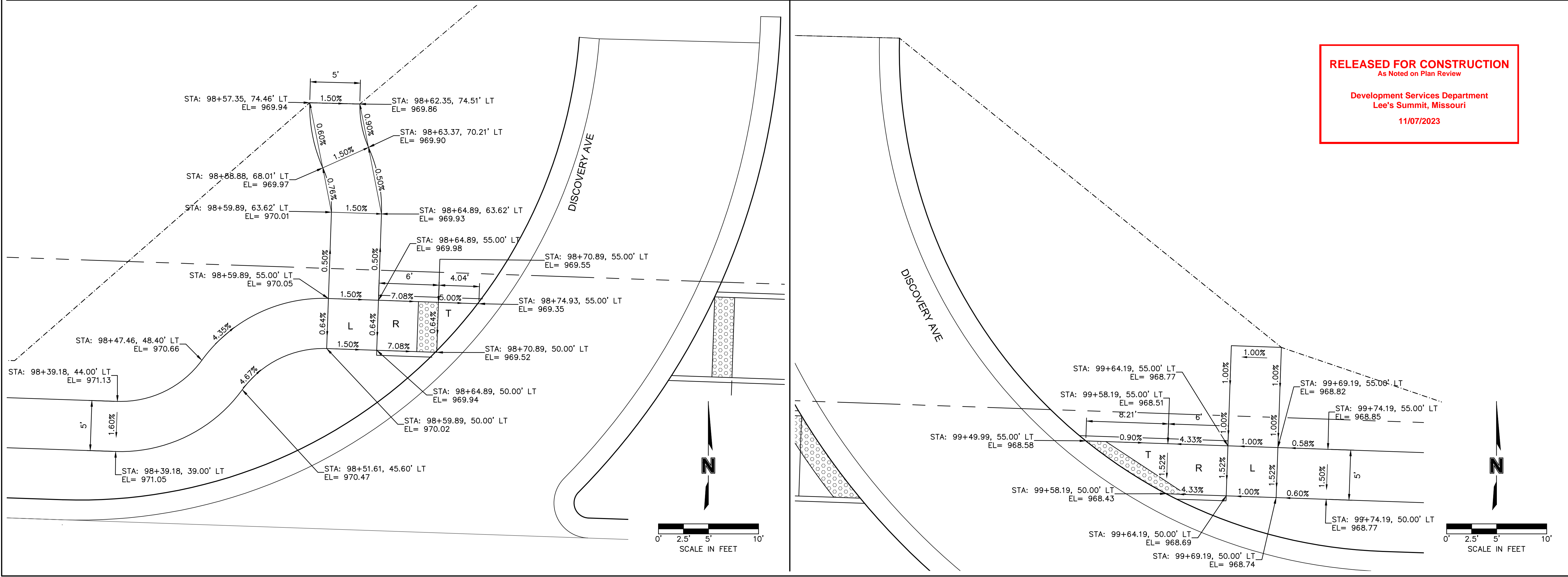
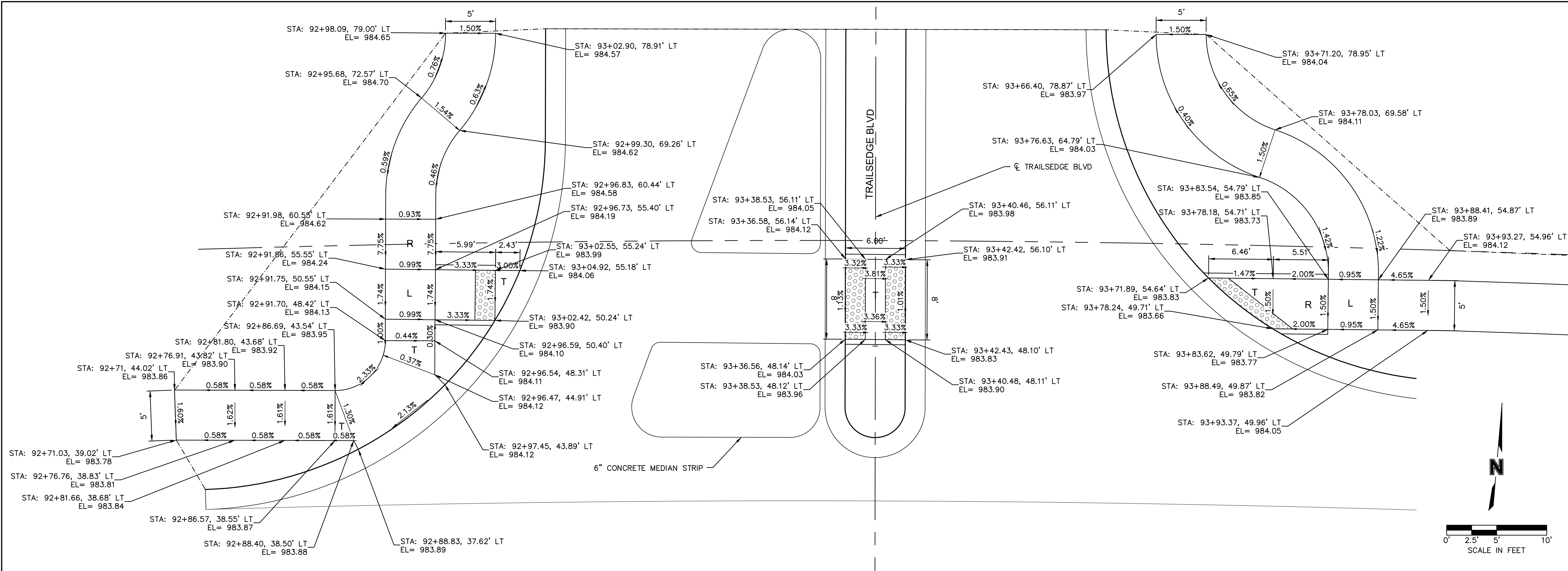


REV. NO.	DATE	REVISIONS DESCRIPTION
1	10/18/2023	CITY COMMENTS ON 10/05/2023

DRIVE LAYOUTS
THE VILLAGE AT DISCOVERY PARK
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
LEE'S SUMMIT, MISSOURI
2023

drawn by: BJW
checked by: KLV
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: DRV01_D02104643
date: 7/14/2023

USER: kwilliams2
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REV. NO.	DATE	REVISIONS DESCRIPTION

SIDEWALK RAMP LAYOUTS
 THE VILLAGE AT DISCOVERY PARK
 COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI
 2023

drawn by: BWJ
 checked by: KLW
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: SDWK01_D02104643
 date: 7/14/2023

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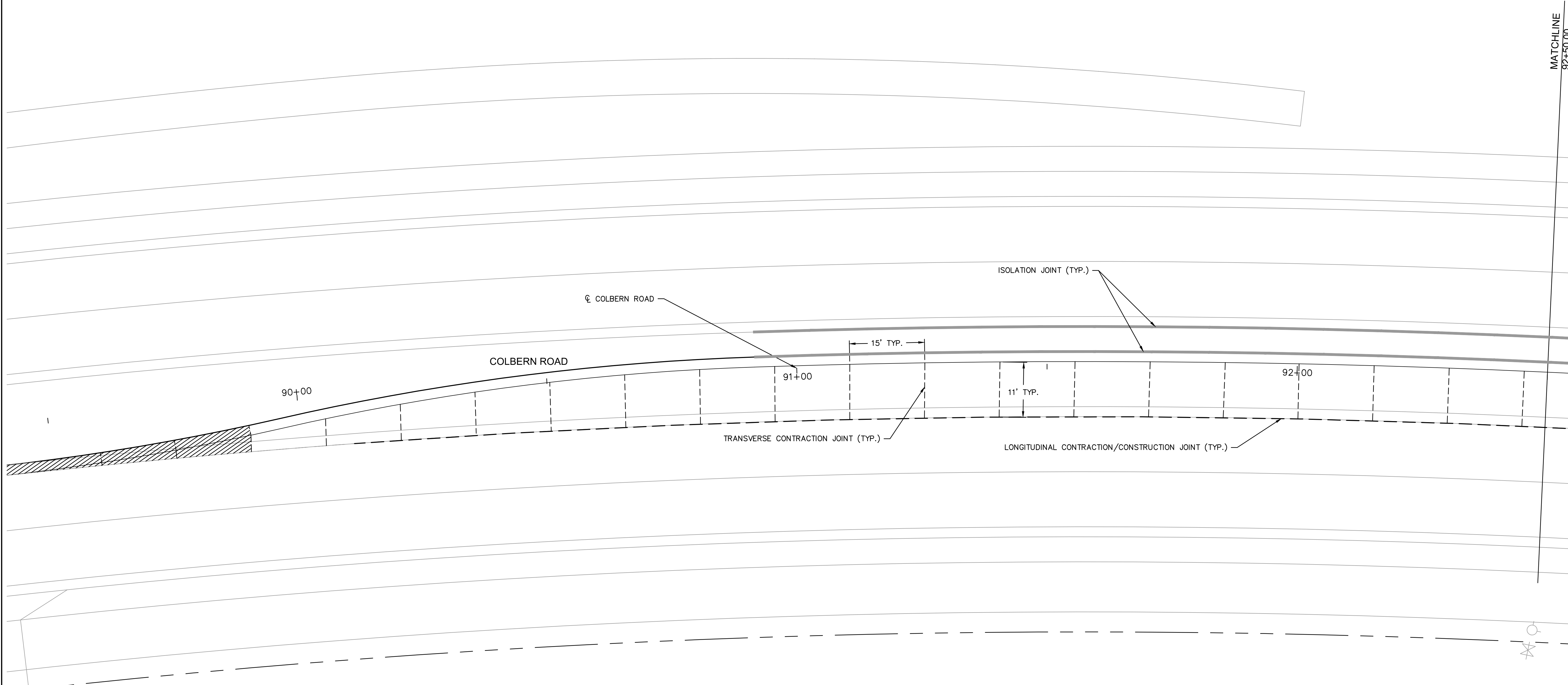
REVISIONS

CONCRETE JOINTING PLANS
 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

drawn by: BJW
 checked by: KLV
 approved by: JFG
 QA/QC by: JWW
 project no.: 021-04643
 drawing no.: JNT01_D02104643
 date: 11/14/2023

SHEET
 23 OF 86

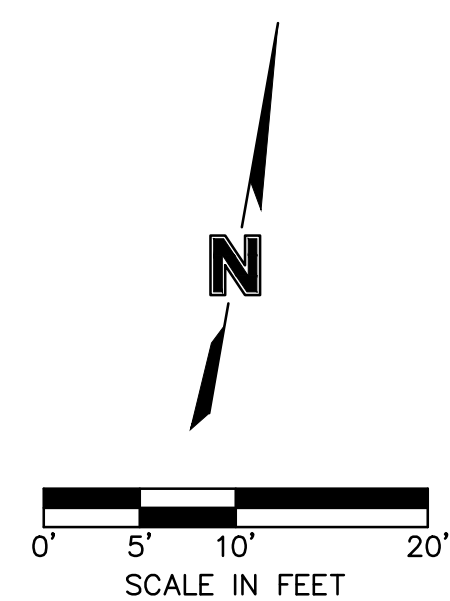
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 USER: kwilliams2
 T_FSTRM_D02104643



NOTES:
 THE CONTRACTOR SHALL FIELD VERIFY EXISTING JOINT LOCATIONS FROM THE COLBERN ROAD RECONSTRUCTION AND SUBMIT A JOINTING PLAN FOR APPROVAL BY THE ENGINEER.
 ALL STATION AND OFFSET LABELS REFERENCE COLBERN ROAD CENTERLINE.
 ALL SAWCUTS SHALL BE FULL DEPTH.
 CONTRACTION JOINTS ALONG THE TRAIL SHALL BE SAWED AT RIGHT ANGLES TO THE CENTERLINE OF THE TRAIL. CONTRACTION JOINTS SHALL BE 1/8" WIDE BY ONE INCH DEEP AND SHALL BE MADE WITH A CONCRETE SAW ONLY.
 SEE CITY OF LEE'S SUMMIT TYPICAL PAVEMENT JOINT DETAILS ON SHEET 33 OF 86.

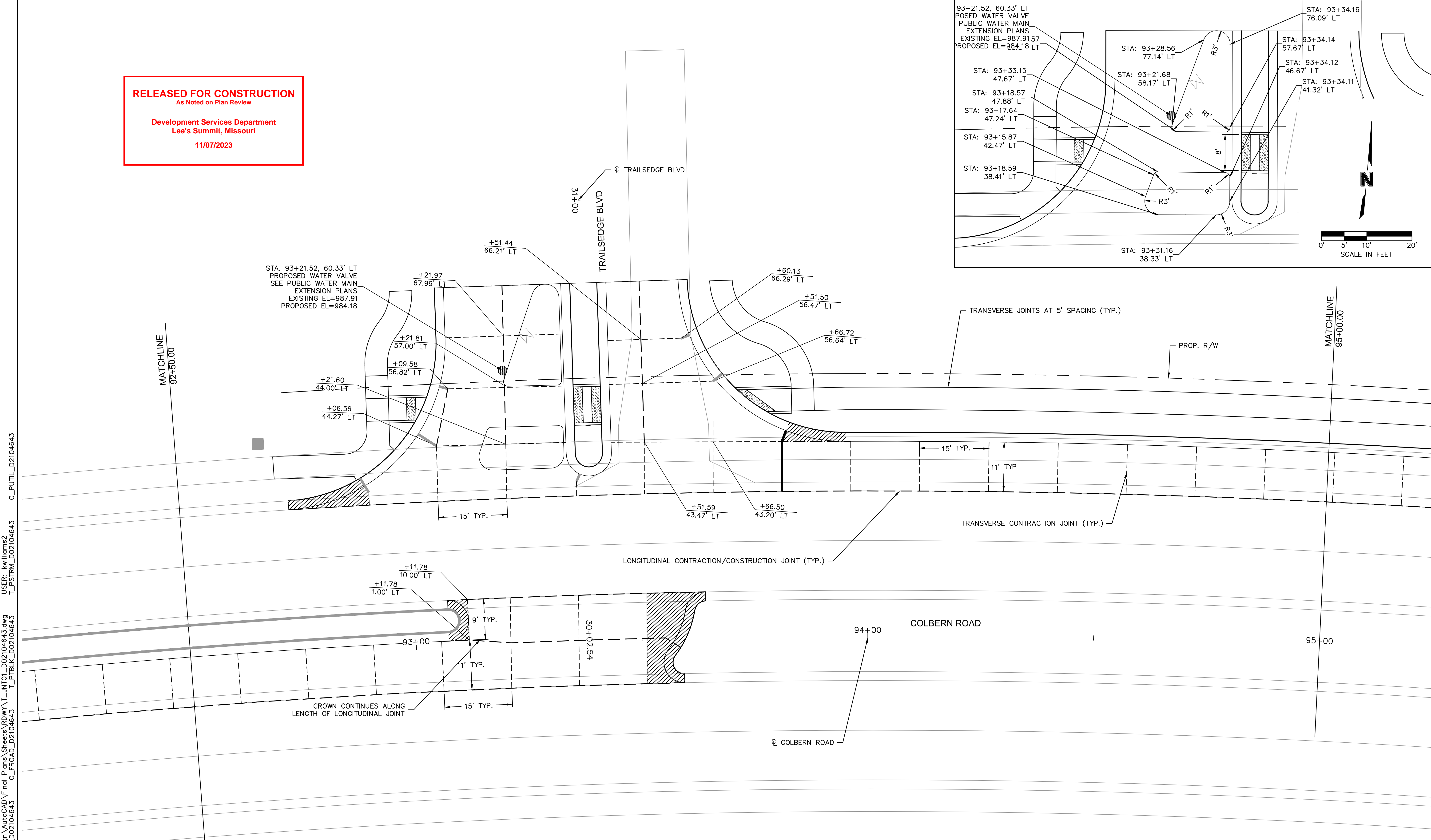
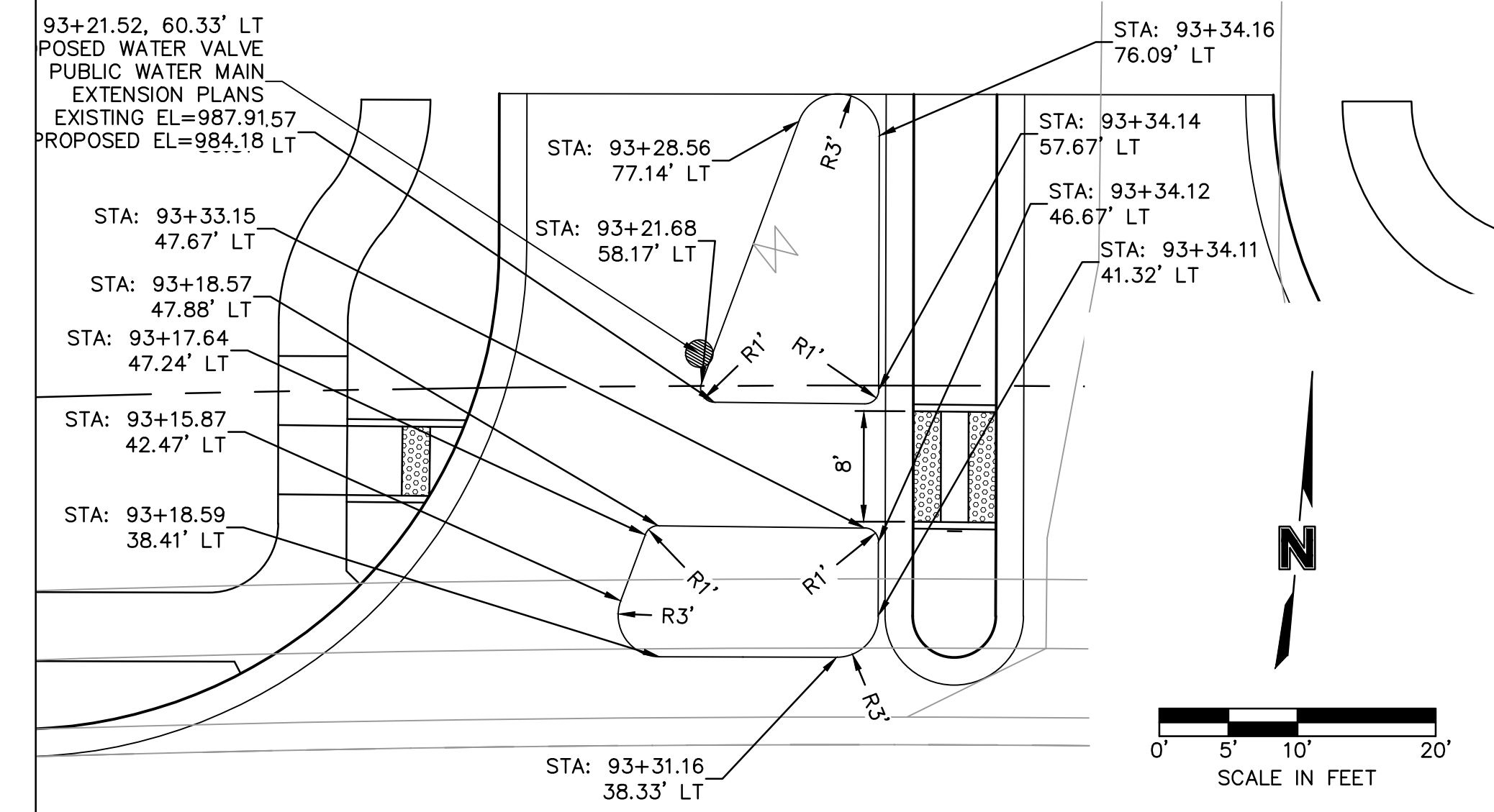
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	MONOLITHIC CURB
	TRANSVERSE CONTRACTION JOINT
	LONGITUDINAL CONTRACTION/CONSTRUCTION JOINT
	ISOLATION JOINT
	CONTRACTION JOINT WITHOUT DOWEL



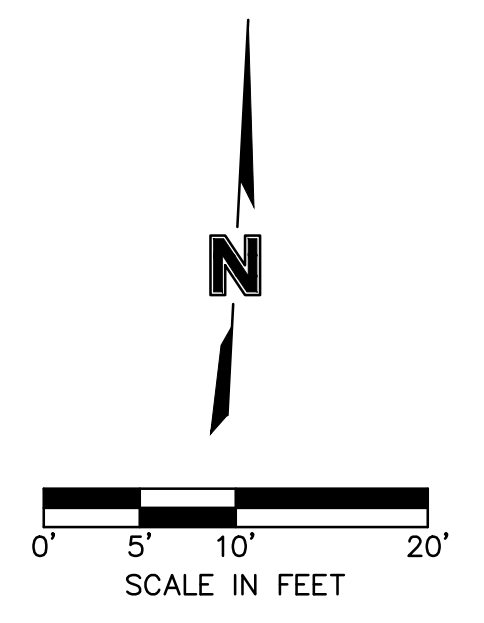
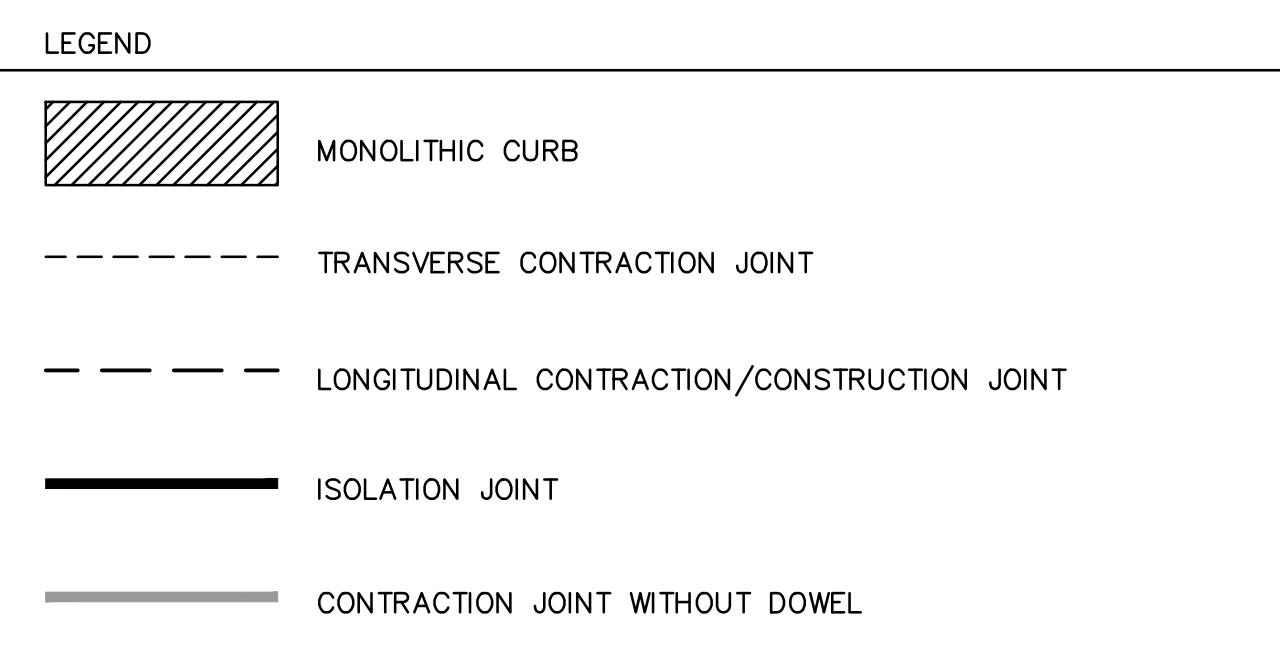
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Lee's Summit, Missouri
11/07/2023



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NOTES:
 THE CONTRACTOR SHALL FIELD VERIFY EXISTING JOINT LOCATIONS FROM THE COLBERN ROAD RECONSTRUCTION AND SUBMIT A JOINTING PLAN FOR APPROVAL BY THE ENGINEER.
 ALL STATION AND OFFSET LABELS REFERENCE COLBERN ROAD CENTERLINE.
 ALL SAWCUTS SHALL BE FULL DEPTH.
 CONTRACTION JOINTS ALONG THE TRAIL SHALL BE SAWED AT RIGHT ANGLES TO THE CENTERLINE OF THE TRAIL. CONTRACTION JOINTS SHALL BE 1/2" WIDE BY ONE INCH DEEP AND SHALL BE MADE WITH A CONCRETE SAW ONLY.
 SEE CITY OF LEE'S SUMMIT TYPICAL PAVEMENT JOINT DETAILS ON SHEET 33 OF 86



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REV. NO.	DATE	REVISIONS DESCRIPTION
1	10/18/2023	CITY COMMENTS ON 10/05/2023

CONCRETE JOINTING PLANS
COLBERN ROAD

THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2023

drawn by: BJW
 checked by: KLV
 approved by: JFG
 QA/QC by: JWW
 project no.: 021-04643
 drawing no.: INT01_D02104643
 date: 7/14/2023

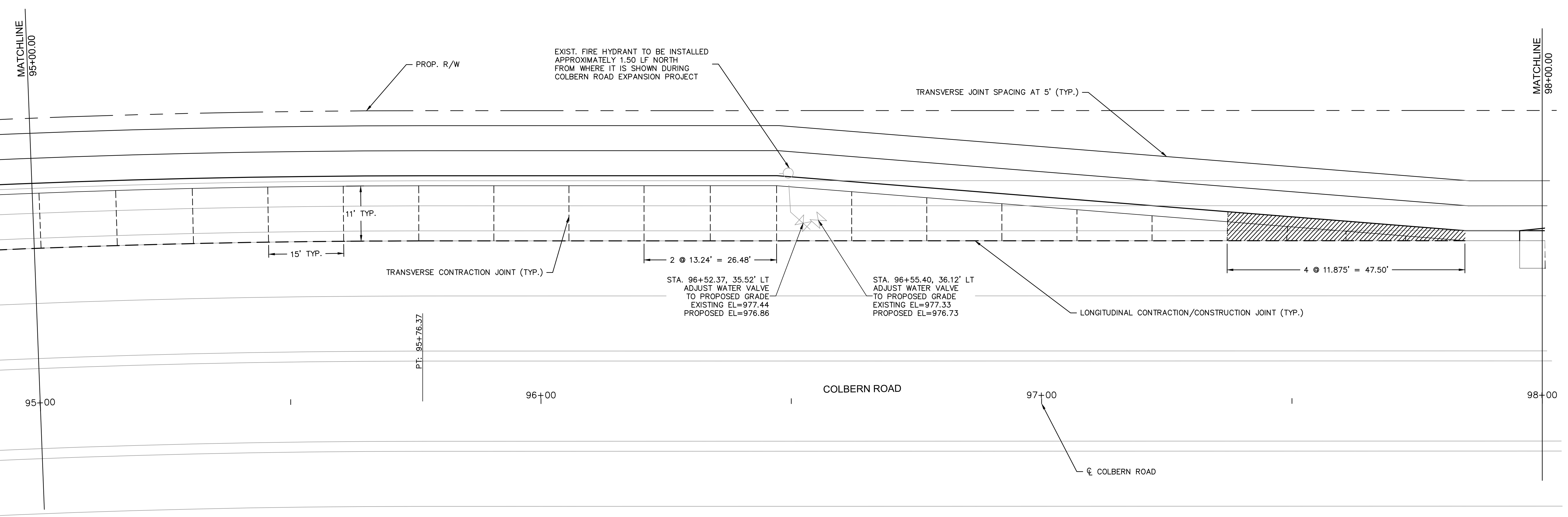
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Lee's Summit, Missouri
11/07/2023



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 USER: kwilliams2
 T_PSTRM_D02104643



NOTES:
THE CONTRACTOR SHALL FIELD VERIFY EXISTING JOINT LOCATIONS FROM THE COLBERN ROAD RECONSTRUCTION AND SUBMIT A JOINTING PLAN FOR APPROVAL BY THE ENGINEER.

ALL STATION AND OFFSET LABELS REFERENCE COLBERN ROAD CENTERLINE.

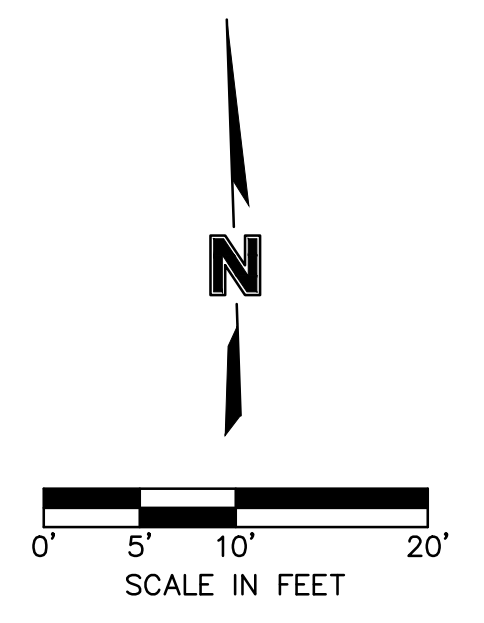
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SEE CITY OF LEE'S SUMMIT TYPICAL PAVEMENT JOINT DETAILS ON SHEET 33 OF 86

LEGEND

	MONOLITHIC CURB
	TRANSVERSE CONTRACTION JOINT
	LONGITUDINAL CONTRACTION/CONSTRUCTION JOINT
	ISOLATION JOINT
	CONTRACTION JOINT WITHOUT DOWEL



REV. NO.	DATE	REVISIONS DESCRIPTION
1	10/18/2023	CITY COMMENTS ON 10/05/2023

CONCRETE JOINTING PLANS
COLBERN ROAD

THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

drawn by: BJW
 checked by: KLW
 approved by: JPG
 QA/QC by: JWJ
 project no.: 021-04643
 drawing no.: T_INT01_D02104643
 date: 11/14/2023

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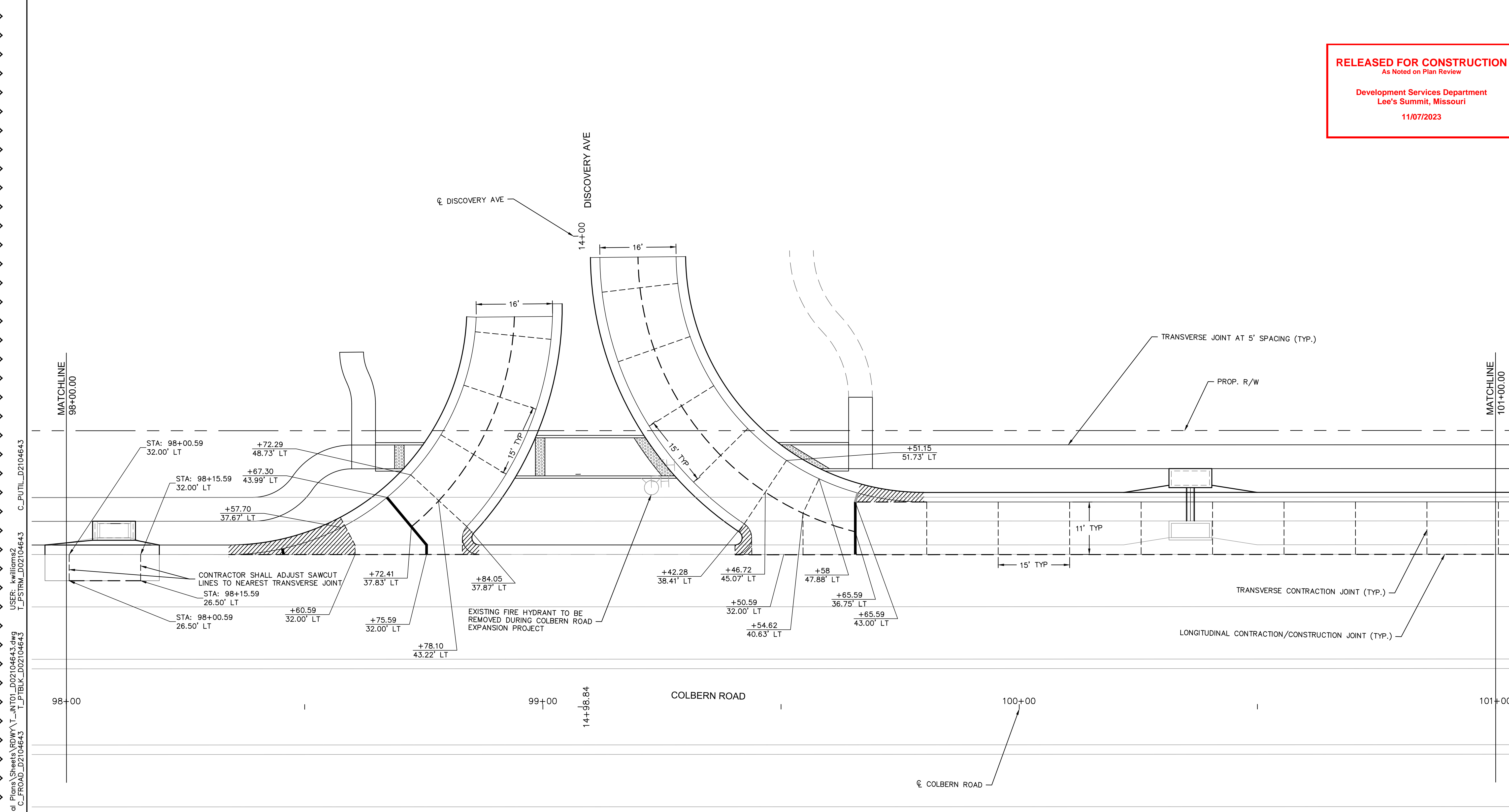
CONCRETE JOINTING PLANS
COLBERN ROAD

THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2023

drawn by: BJW
checked by: KLW
approved by: JPG
QA/QC by: JJW
project no.: 021-04643
drawing no.: JNT01_D02104643
date: 11/14/2023

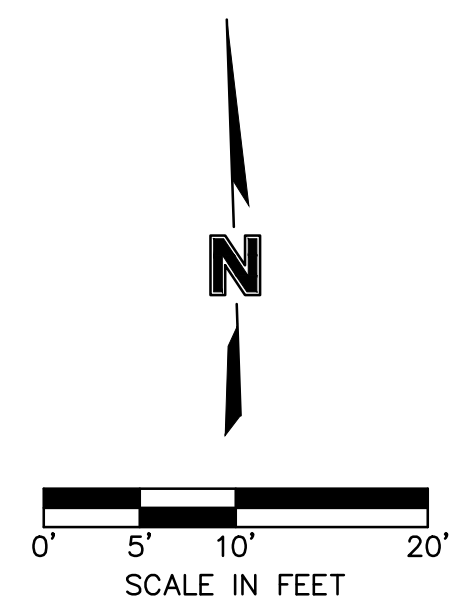


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 USER: kwilliams2
 T_PSTRM_D02104643

NOTES:
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 SEE CITY OF LEE'S SUMMIT TYPICAL PAVEMENT JOINT DETAILS ON SHEET 33 OF 86

LEGEND

	MONOLITHIC CURB
	TRANSVERSE CONTRACTION JOINT
	LONGITUDINAL CONTRACTION/CONSTRUCTION JOINT
	ISOLATION JOINT
	CONTRACTION JOINT WITHOUT DOWEL



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CONCRETE JOINTING PLANS
 COLBERN ROAD

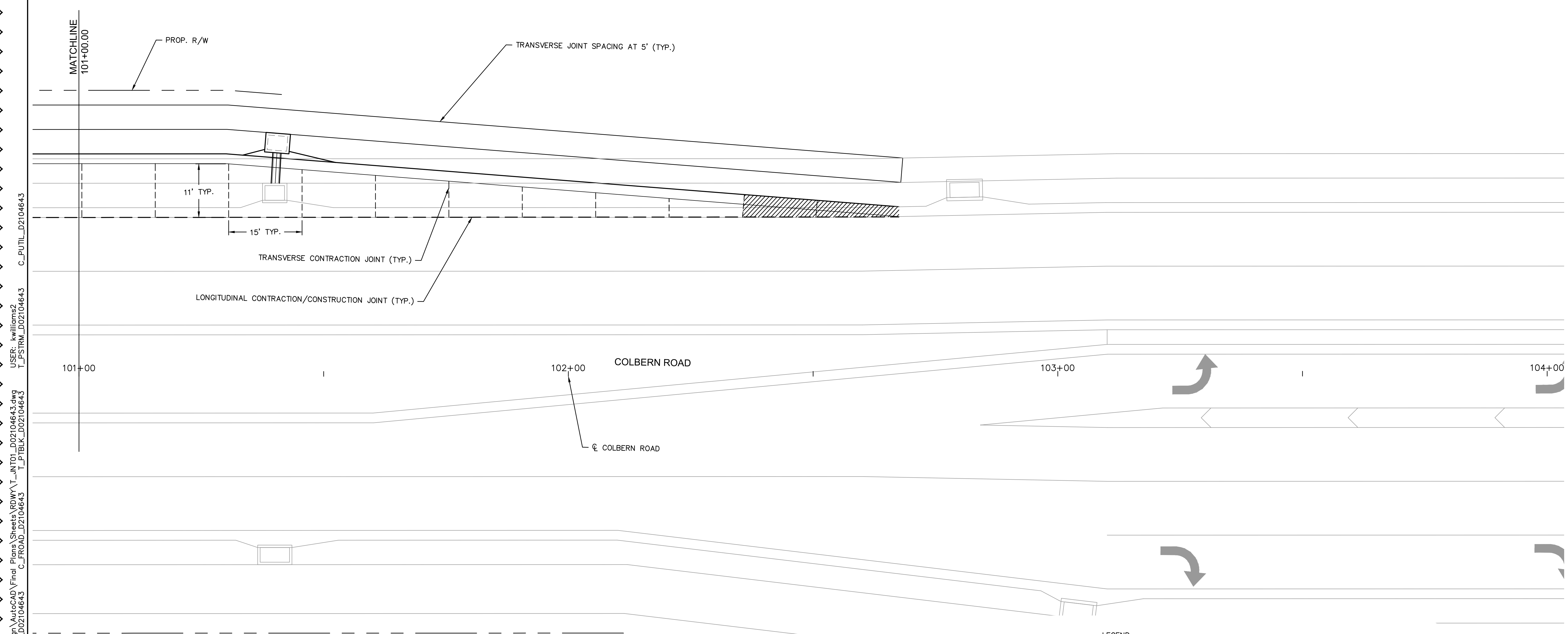
THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

drawn by: BJW
 checked by: KKW
 approved by: JFG
 QA/QC by: JWW

project no.: 021-04643
 drawing no.: JNT01_D02104643
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SHEET
 27 OF 86



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NOTES:
 THE CONTRACTOR SHALL FIELD VERIFY EXISTING JOINT LOCATIONS FROM THE COLBERN ROAD RECONSTRUCTION AND SUBMIT A JOINTING PLAN FOR APPROVAL BY THE ENGINEER.

ALL STATION AND OFFSET LABELS REFERENCE COLBERN ROAD CENTERLINE.

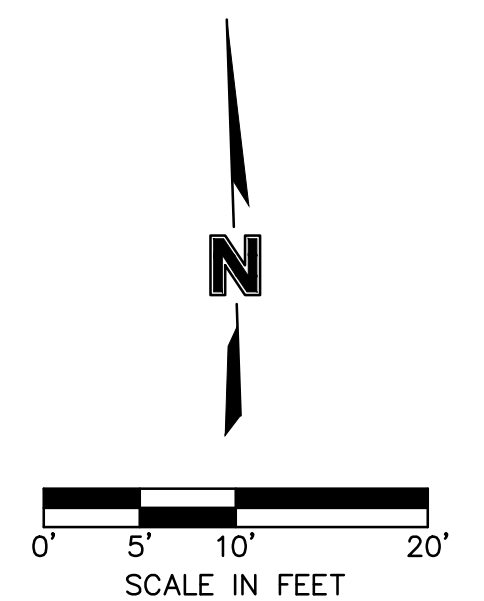
ALL SAWCUTS SHALL BE FULL DEPTH.

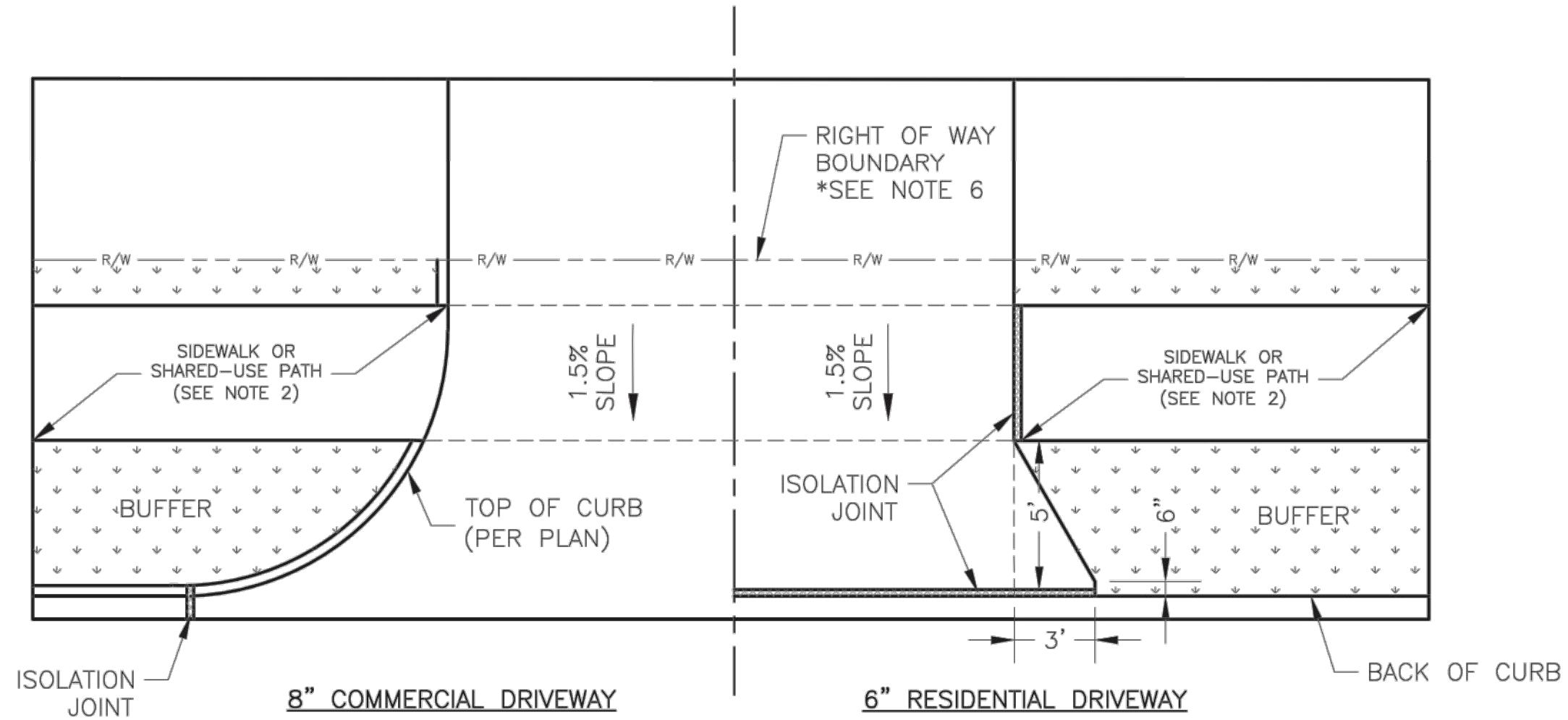
CONTRACTION JOINTS ALONG THE TRAIL SHALL BE SAWED AT RIGHT ANGLES TO THE CENTERLINE OF THE TRAIL. CONTRACTION JOINTS SHALL BE 1/4" WIDE BY ONE INCH DEEP AND SHALL BE MADE WITH A CONCRETE SAW ONLY.

SEE CITY OF LEE'S SUMMIT TYPICAL PAVEMENT JOINT DETAILS ON SHEET 33 OF 86

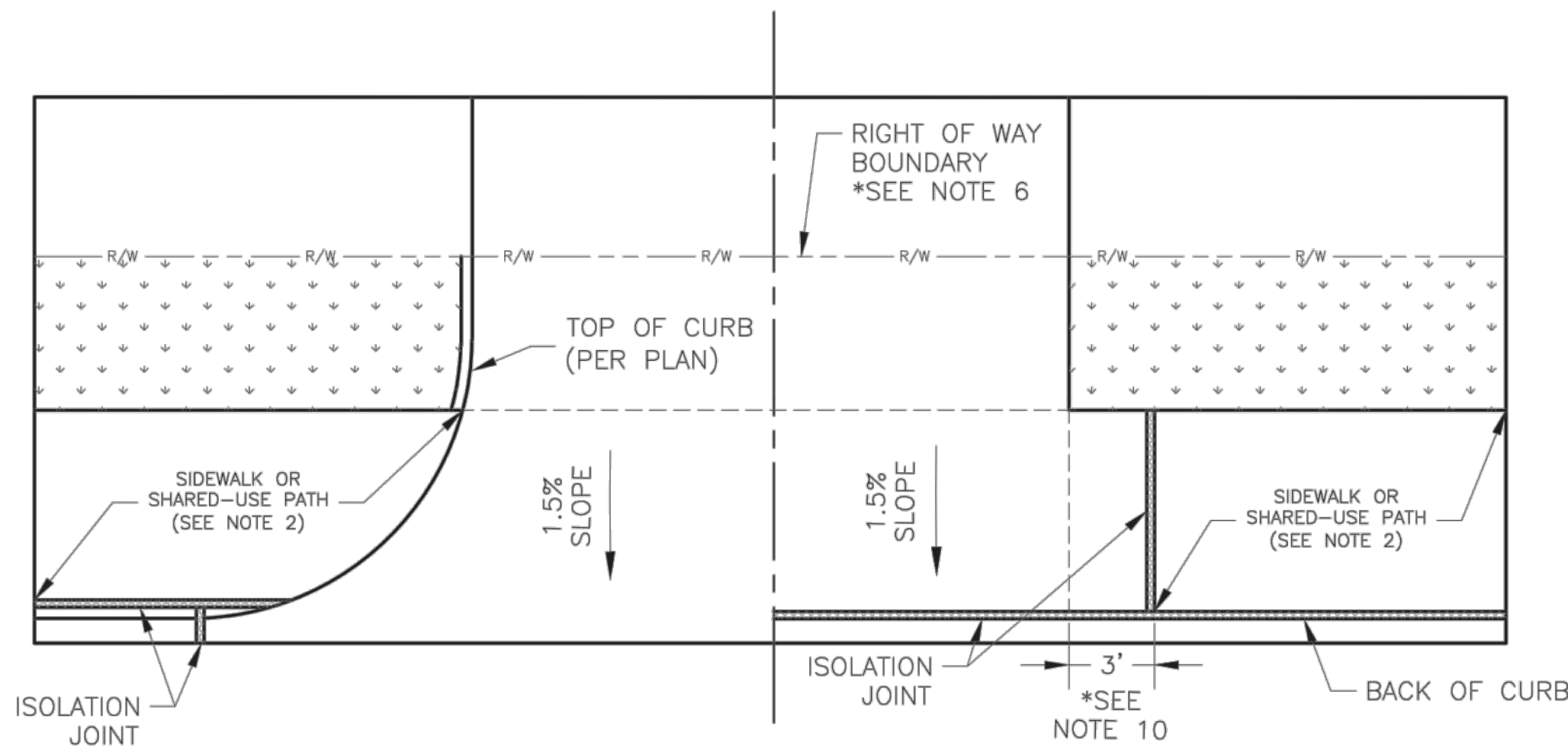
LEGEND

	MONOLITHIC CURB
	TRANSVERSE CONTRACTION JOINT
	LONGITUDINAL CONTRACTION/CONSTRUCTION JOINT
	ISOLATION JOINT
	CONTRACTION JOINT WITHOUT DOWEL





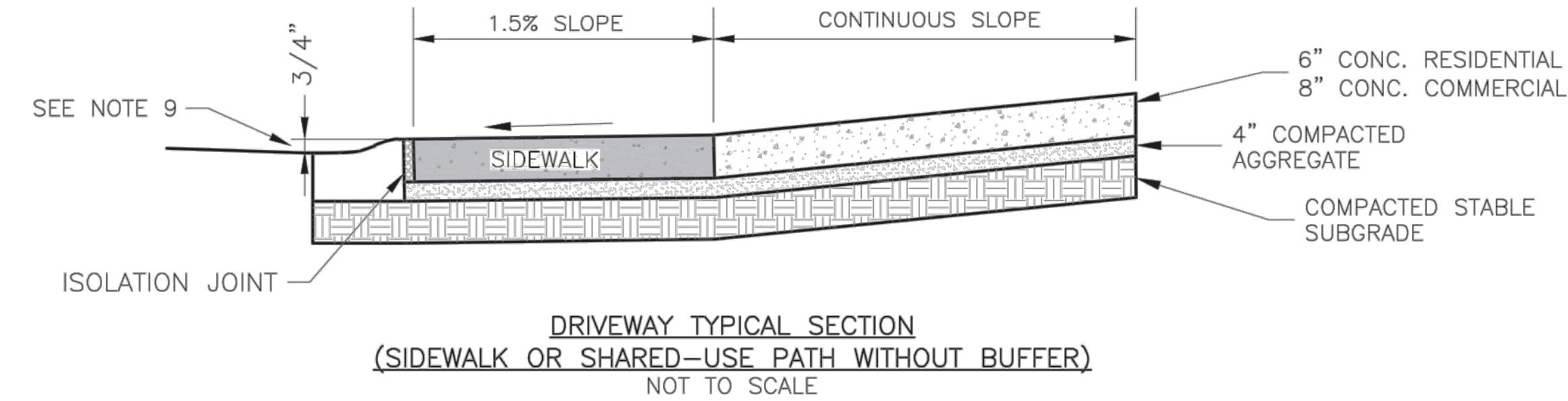
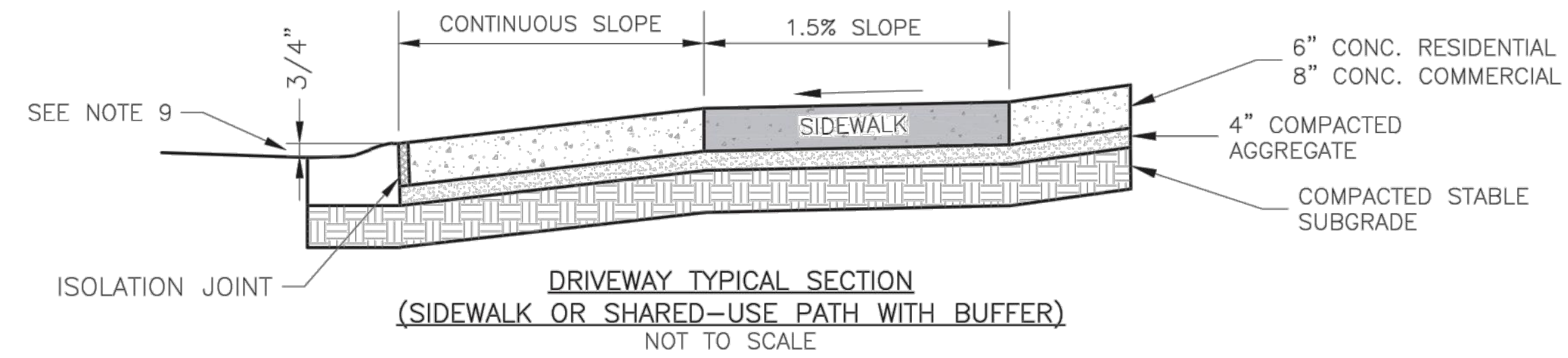
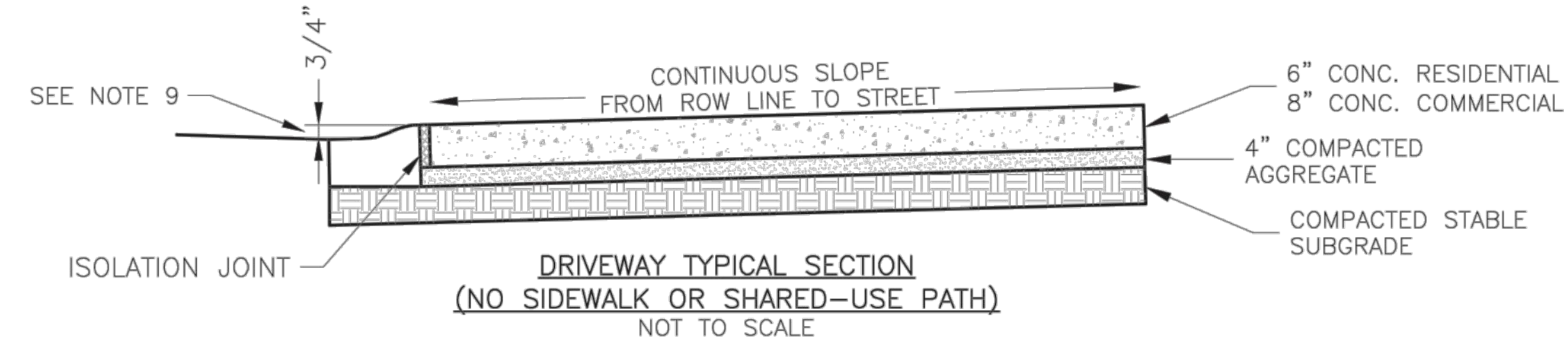
DRIVEWAY WITH BUFFER
NOT TO SCALE



DRIVEWAY WITHOUT BUFFER
NOT TO SCALE

GENERAL NOTES

1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-3B, SIDEWALK/SHARED USE PATH RAMP AT DRIVEWAY DETAIL).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. RESIDENTIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, KCMMB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEED TO BE APPROVED BY CITY INSPECTOR.
7. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
9. 3/4" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
10. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
11. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.



RELEASED FOR CONSTRUCTION
 As Noted on Plan Review
 Development Services Department
 Lee's Summit, Missouri
 11/07/2023

LEE'S SUMMIT
MISSOURI

STANDARD DETAILS
 CITY OF LEE'S SUMMIT, MO
 LEE'S SUMMIT, JACKSON COUNTY, MO
 DRIVEWAY DETAIL

Project: LEE'S SUMMIT, MO 64083
 Sheet Name: DRIVEWAY DETAIL
 Drawn By: MIF
 Checked By: DL
 Date: 05/2021
 Proj. #:

GEN-1

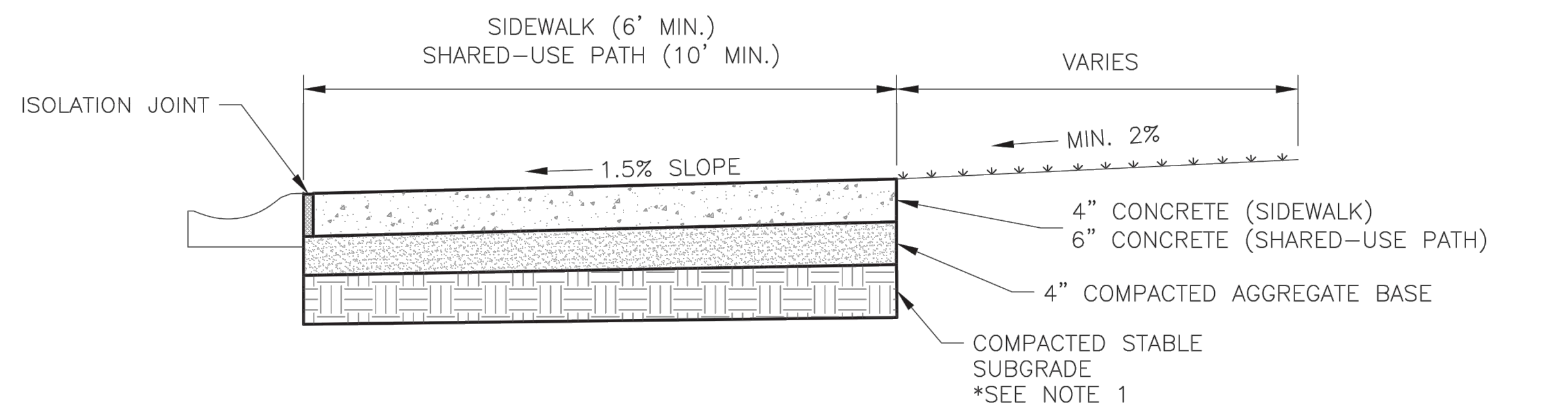


REV. NO.	DATE	REVISIONS DESCRIPTION

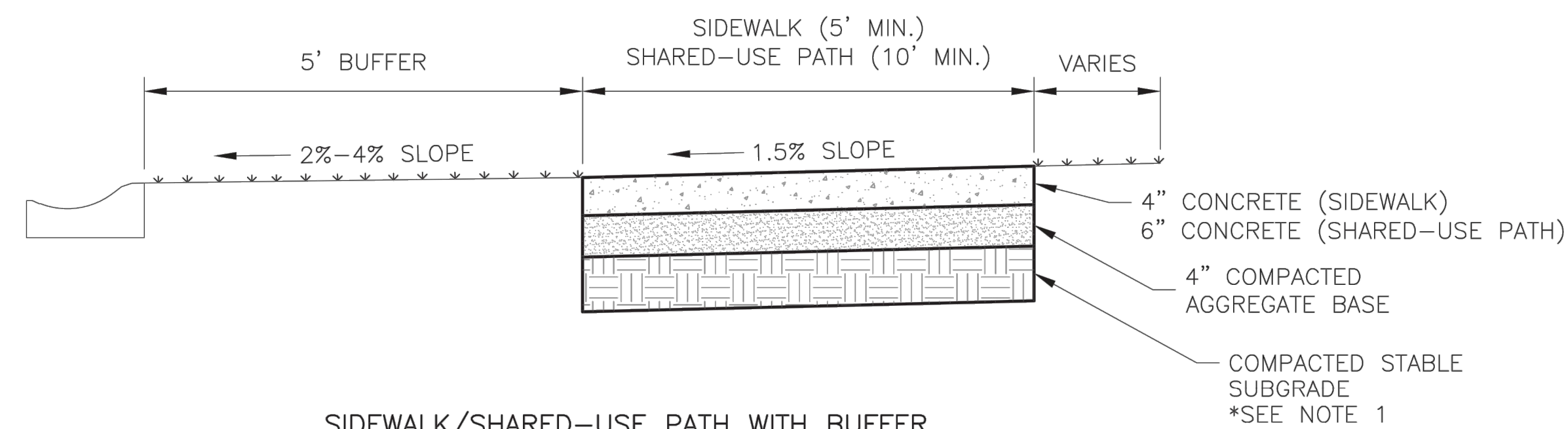
STANDARD DETAILS
 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI
 2023

drawn by: BJW
 checked by: KLV
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: T_DET01_02104643
 date: 7/14/2023

DWG: F:\2021\04501-06000\021-04643-D\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_DET01_02104643.dwg
 DATE: Sep 28, 2023 4:15pm
 USER: kwilliams2
 XREFS: T_TBLK_002104643



SIDEWALK/SHARED-USE PATH WITHOUT BUFFER
 NOT TO SCALE



SIDEWALK/SHARED-USE PATH WITH BUFFER
 NOT TO SCALE

GENERAL NOTES:

1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS/SHARED-USE PATHS.
4. ALL SIDEWALK/SHARED-USE PATHS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
5. AN ISOLATION JOINT SHALL BE PLACED AT A MAXIMUM OF 100 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK/SHARED-USE PATHS, BUT NO GREATER THAN 10 FT.
6. AN ISOLATION JOINT SHALL BE PLACED WHERE THE SIDEWALK/SHARED-USE PATHS MEETS A RESIDENTIAL DRIVEWAY.
7. SHARED-USE PATHS WIDTH SHALL BE 10 FT. WIDE.
8. SIDEWALK/SHARED-USE PATHS FINISHING SHALL BE FULL BROOM FINISH OR AS DIRECTED BY CITY INSPECTOR.
9. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.



**LEE'S SUMMIT
 MISSOURI**

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

SIDEWALK/SHARED-USE PATH DETAIL

Date: 05/2021

Drawn By: MJF

Checked By: DL

GEN-2

RELEASED FOR CONSTRUCTION
 As Noted on Plan Review
 Development Services Department
 Lee's Summit, Missouri
 11/07/2023



REVISIONS DESCRIPTION

DATE

REV. NO.

2023

STANDARD DETAILS

THE VILLAGE AT DISCOVERY PARK
 COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

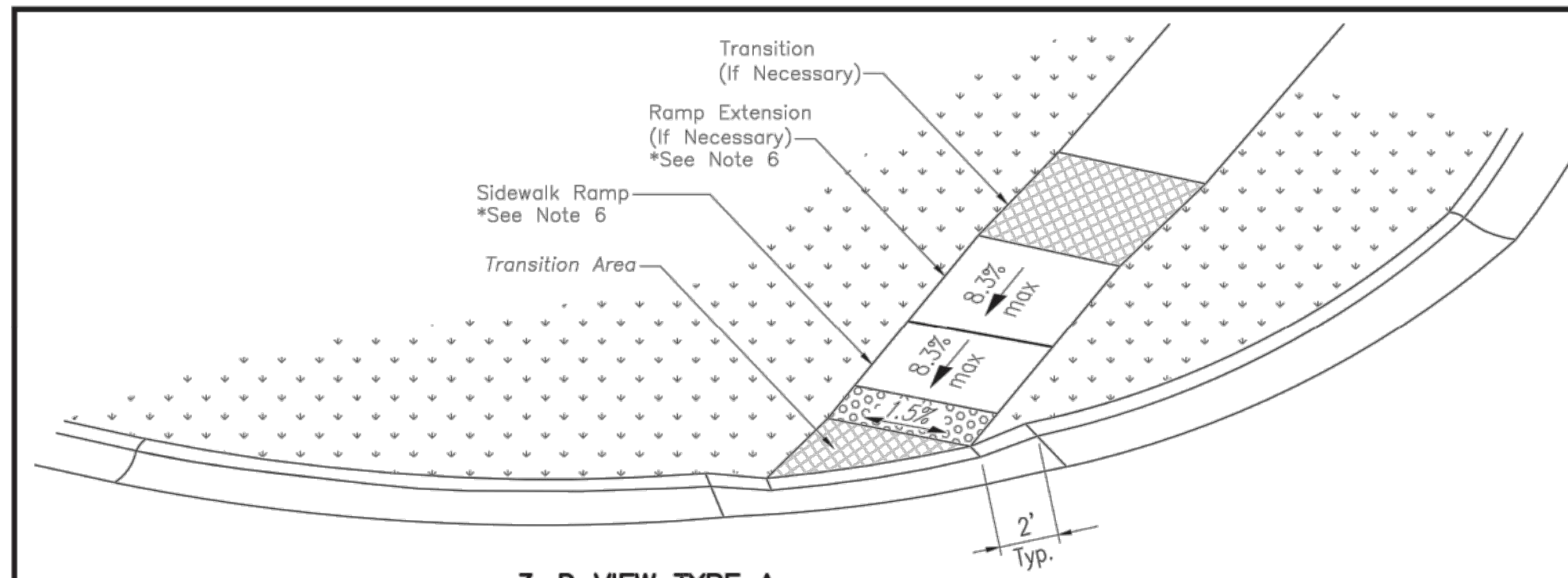
LEE'S SUMMIT, MISSOURI

drawn by: BJW
 checked by: KLV
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: T_DET01_02104643
 date: 7/14/2023

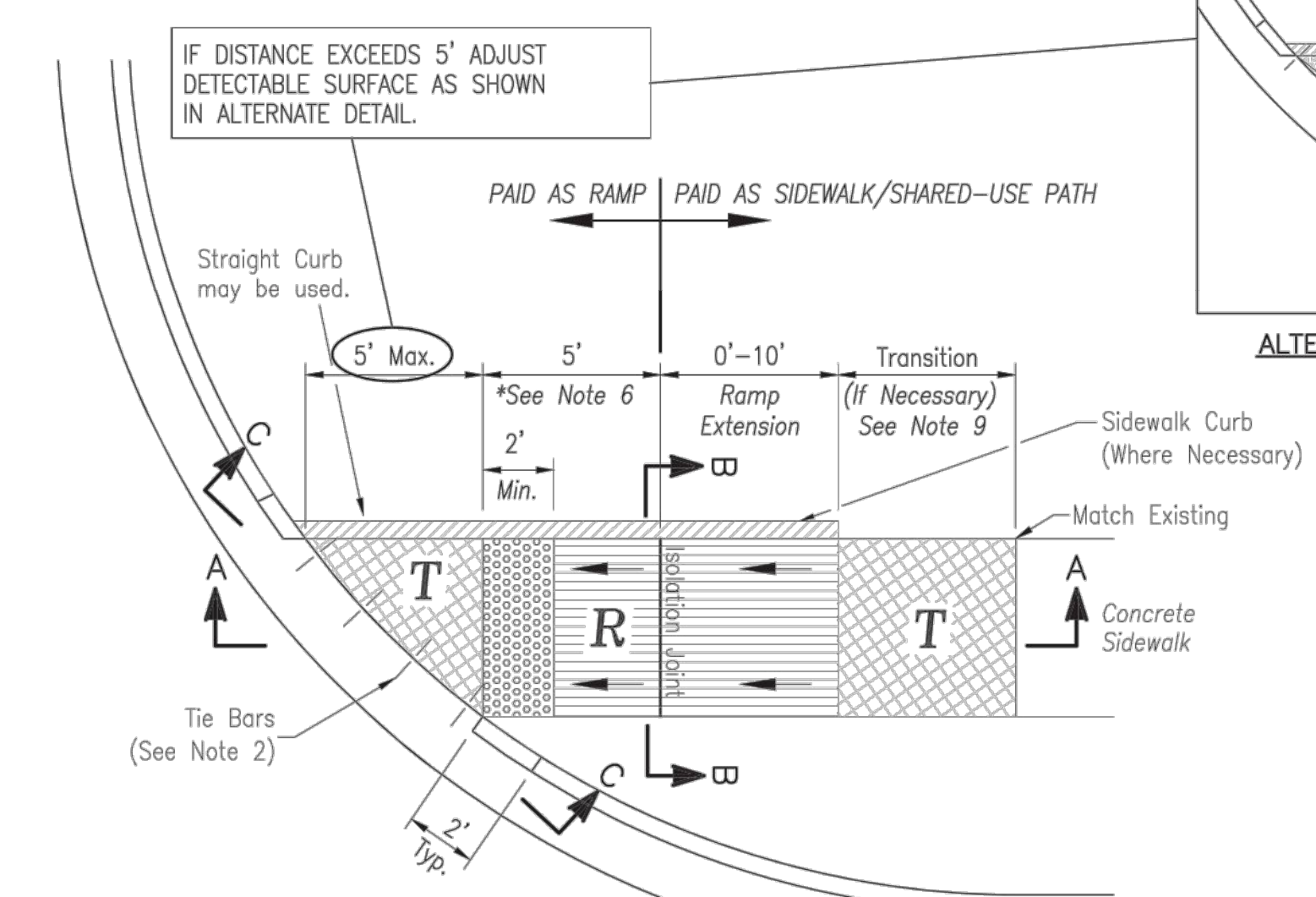
SHEET
 29 OF 86

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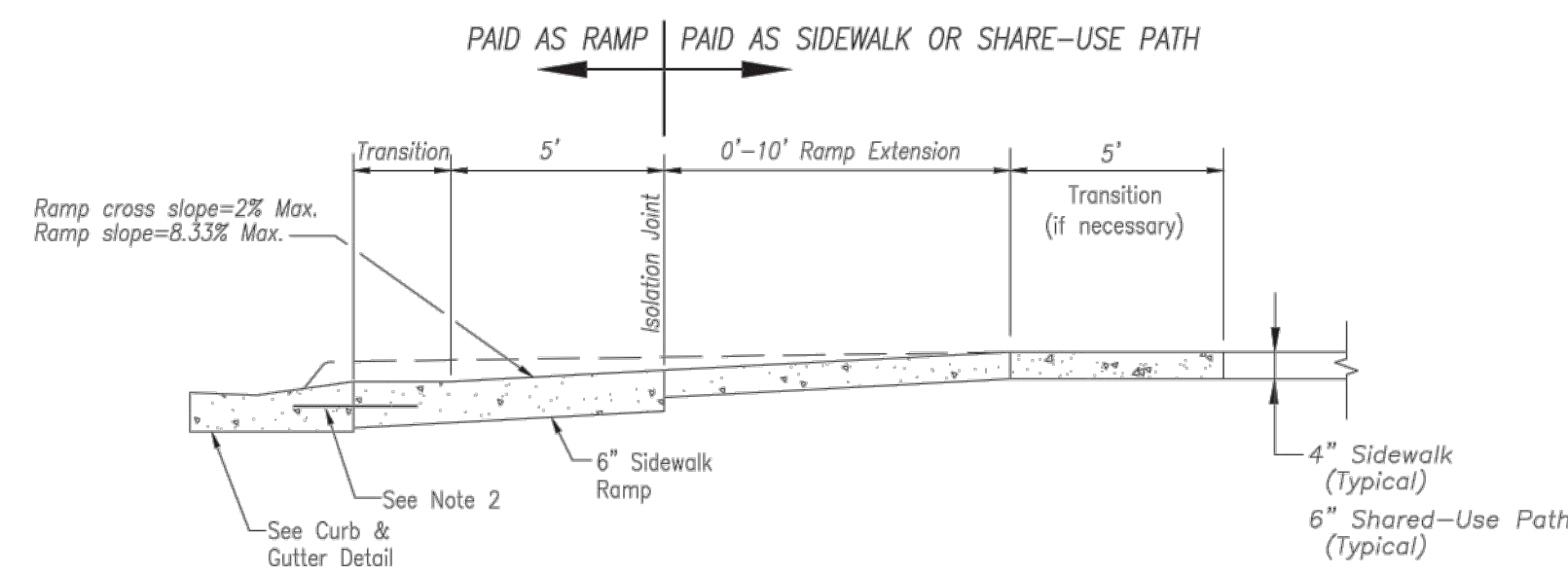
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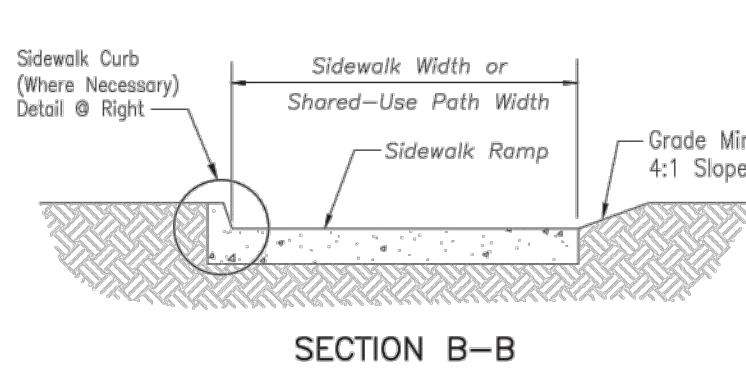
3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP



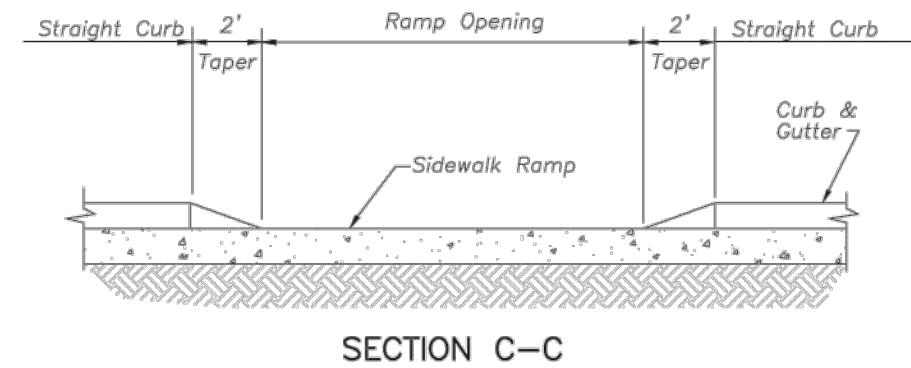
TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale



SECTION A-A

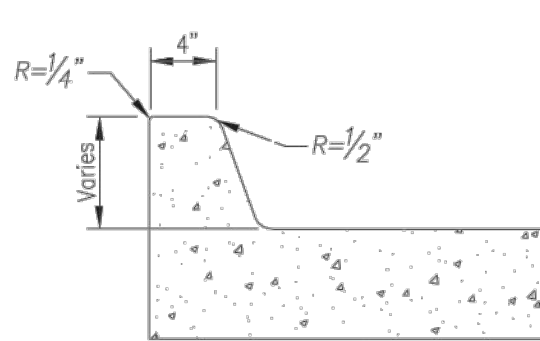


SECTION B-B

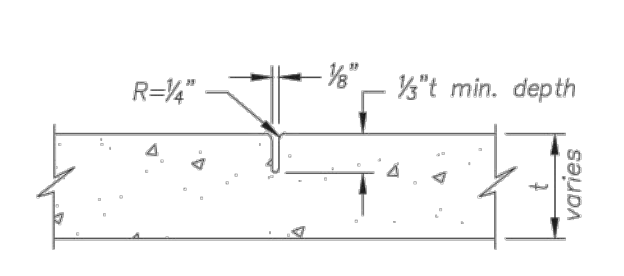


SECTION C-C

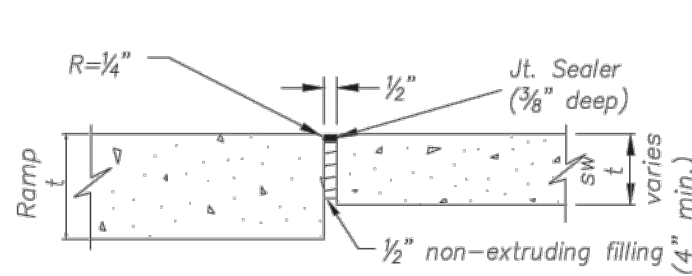
TYPE A & B SIDEWALK RAMP
Not to Scale



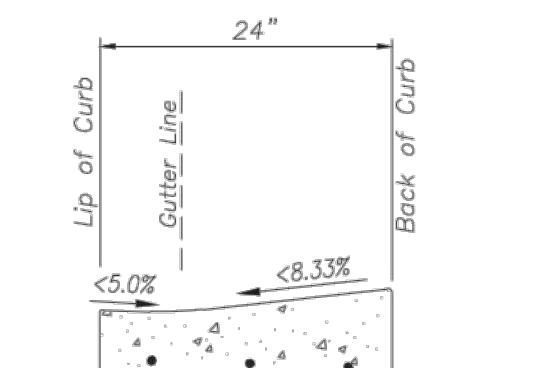
SIDEWALK CURB DETAIL
Not to Scale



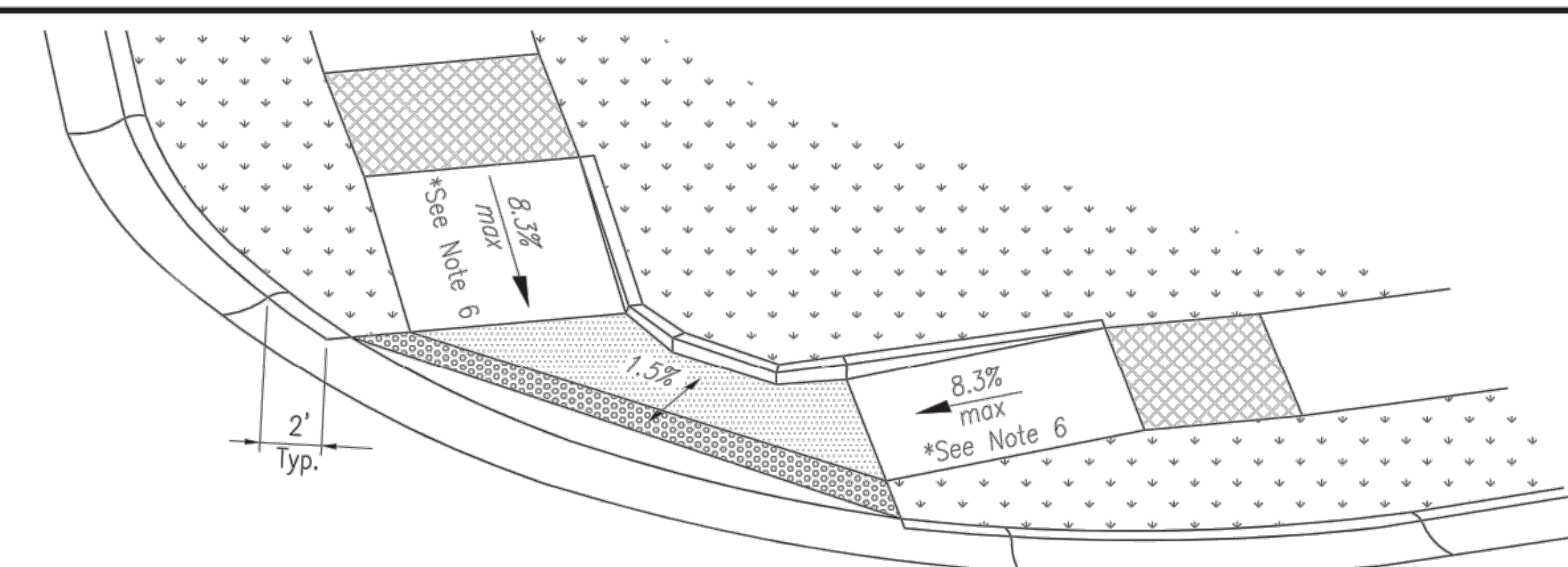
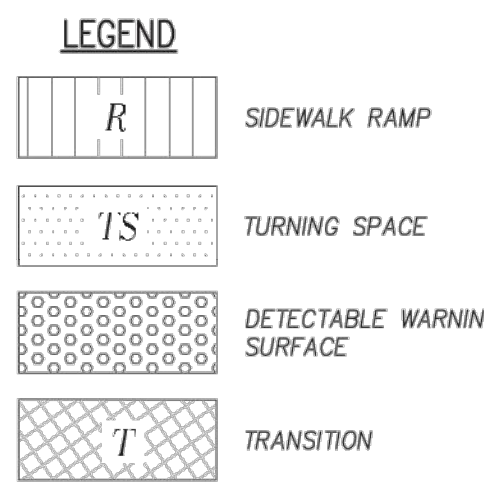
CONTRACTION JOINT



ISOLATION JOINT



CURB & GUTTER DETAIL AT RAMP
Not to Scale

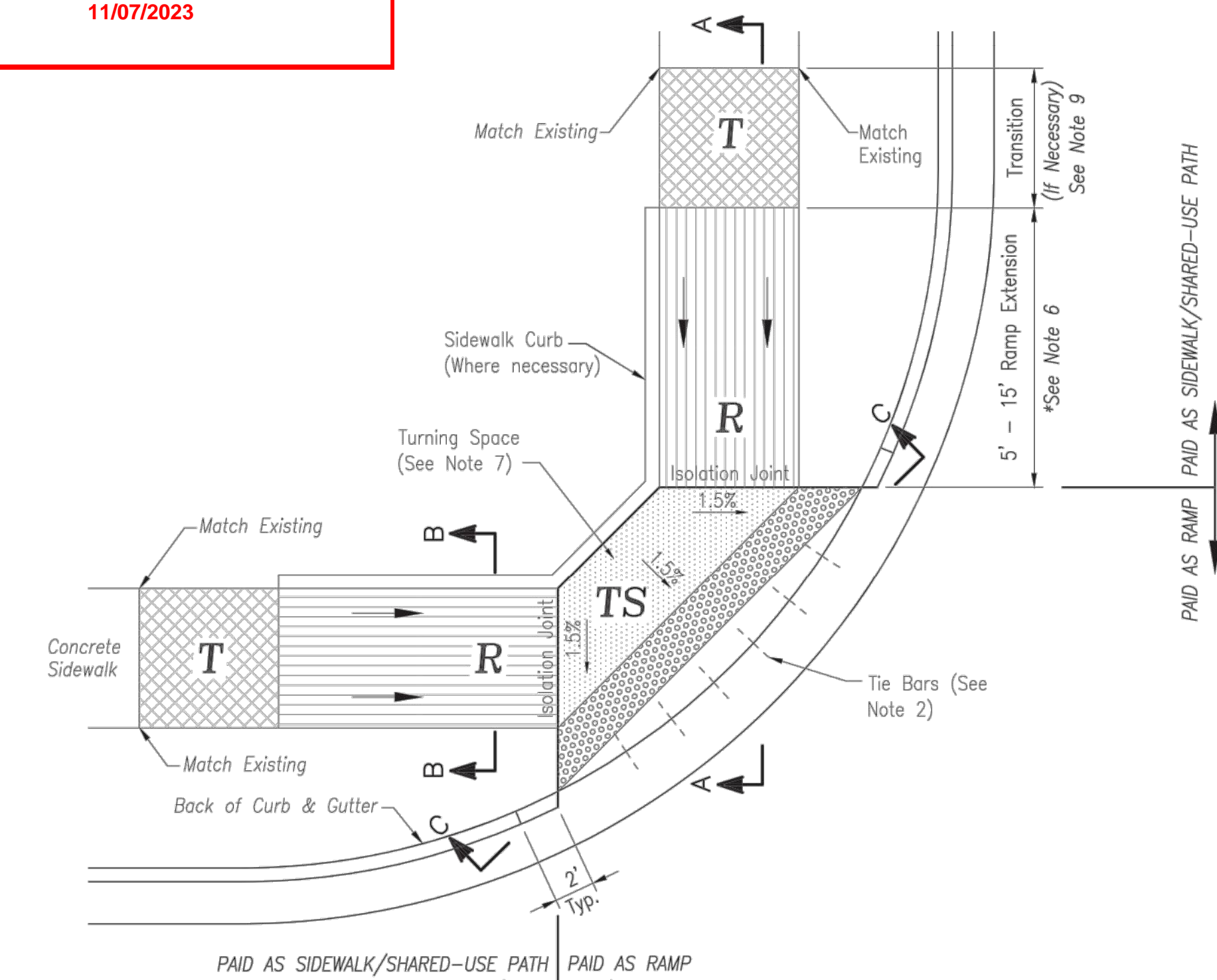


3-D VIEW TYPE B
SIDEWALK/SHARED-USE RAMP

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 Development Services Department
 Lee's Summit, Missouri
 11/07/2023

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMP, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 100' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
 ADA MAXIMUM CROSS SLOPE = 2.0%
***ROADWAY EXCEPTION:** WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5% SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMP TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).



TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale

LEE'S SUMMIT
MISSOURI

Project: STANDARD DETAILS
 CITY OF LEE'S SUMMIT, MO
 LEE'S SUMMIT, JACKSON COUNTY, MO
 Sheet Name: ADA RAMP RETROFIT DETAIL

Drawn By: MJF
 Checked By: DL
 Date: 05/2021
 Proj. #:

GEN-3A

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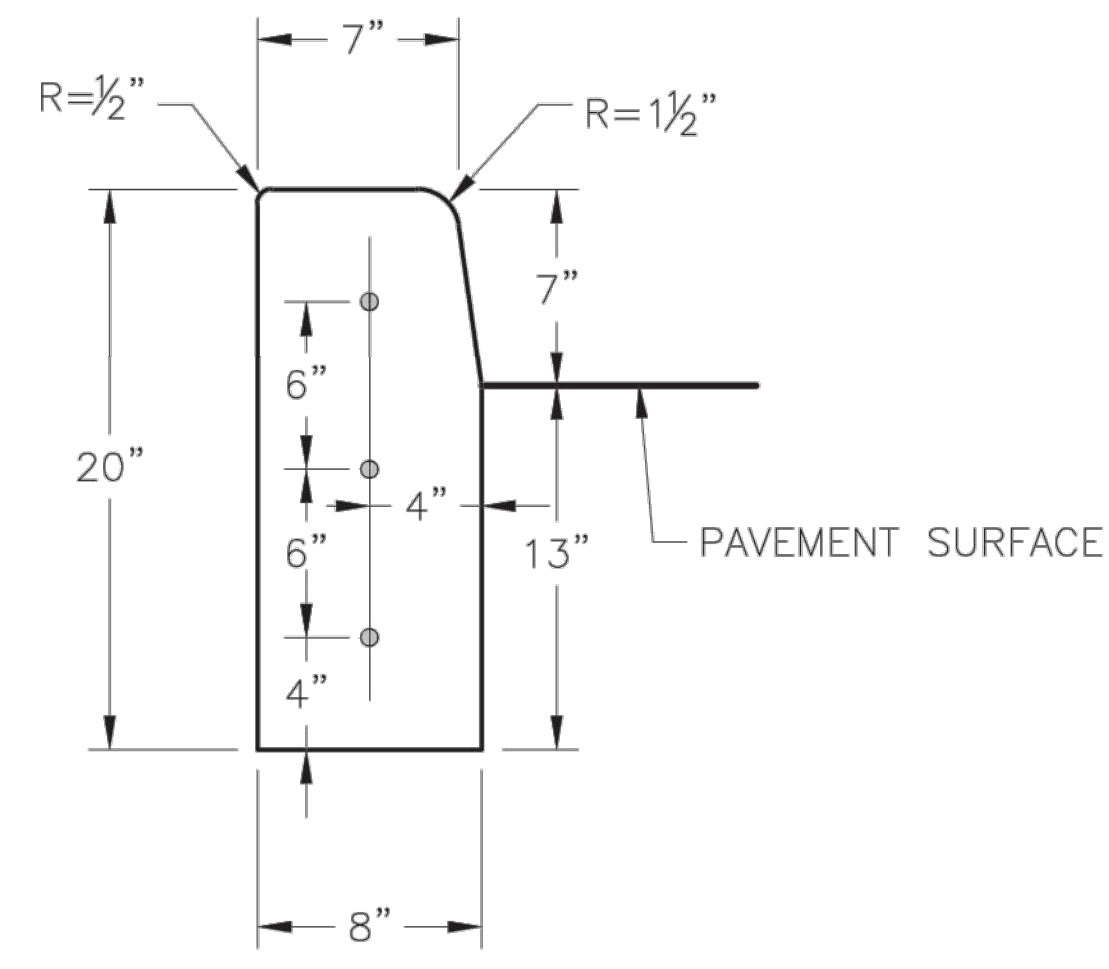
REV. NO.	DATE	REVISIONS DESCRIPTION

STANDARD DETAILS

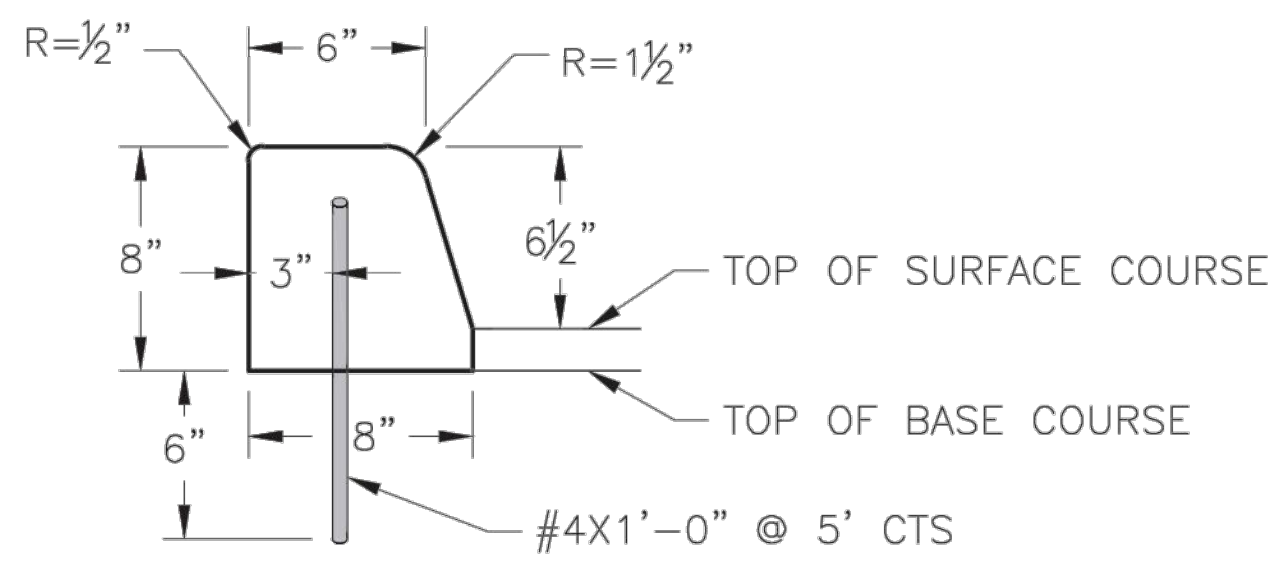
THE VILLAGE AT DISCOVERY PARK
 COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

drawn by: BJW
 checked by: KLW
 approved by: JPG
 QA/QC by: JWJ
 project no.: 021-04643
 drawing no.: T_DET01_02104643
 date: 7/14/2023

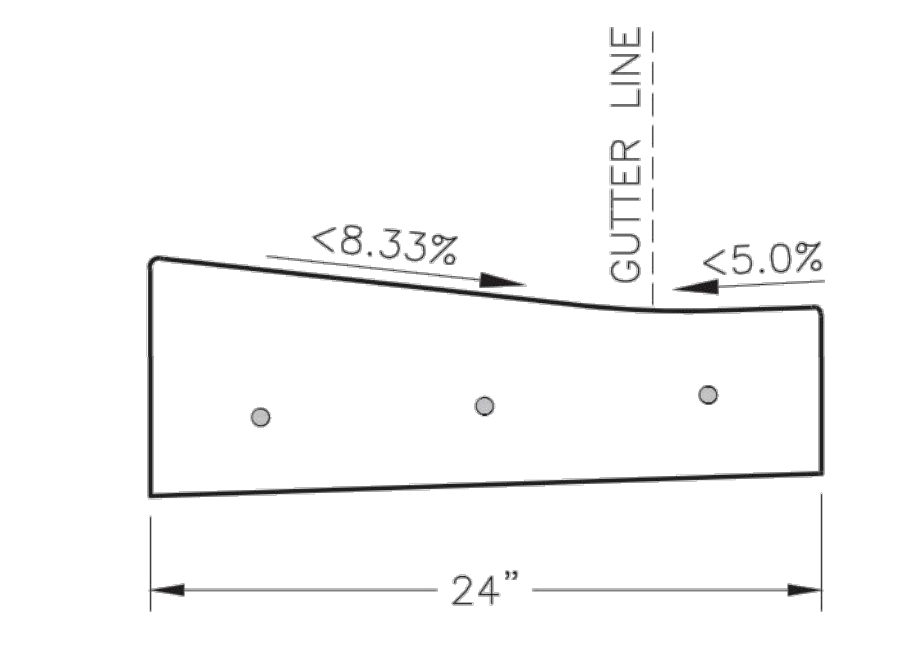
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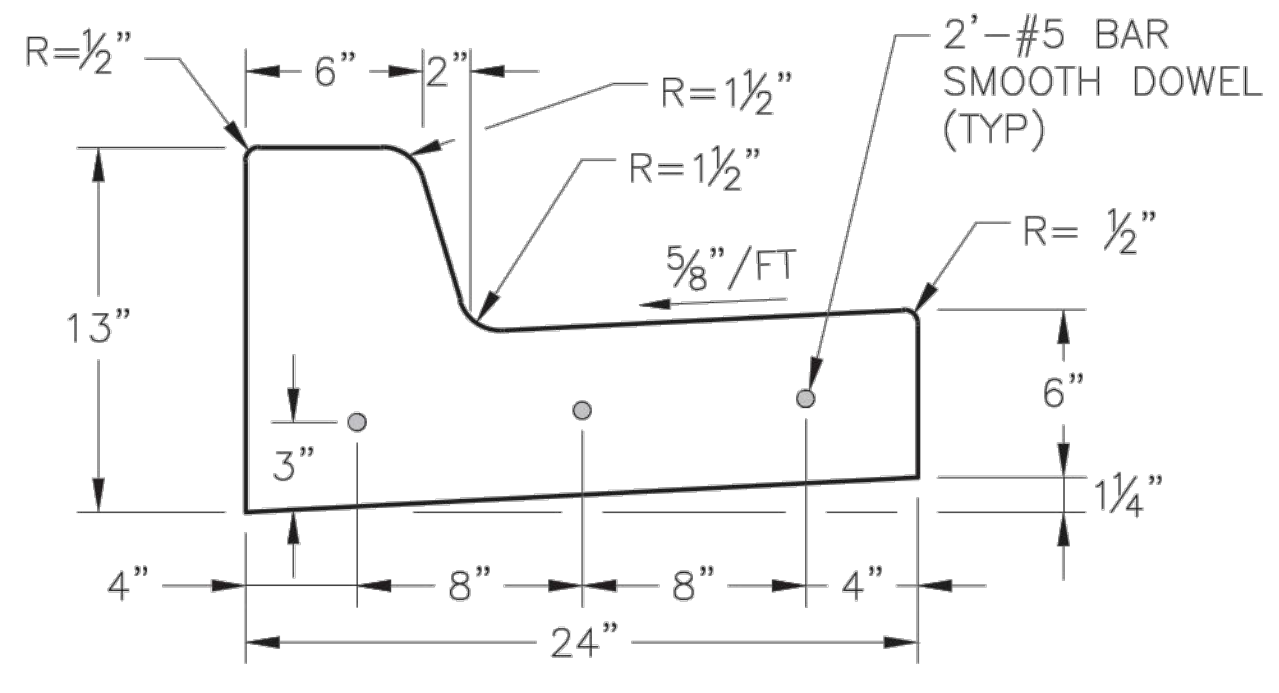
STRAIGHT CURB
(TYPE C-1)



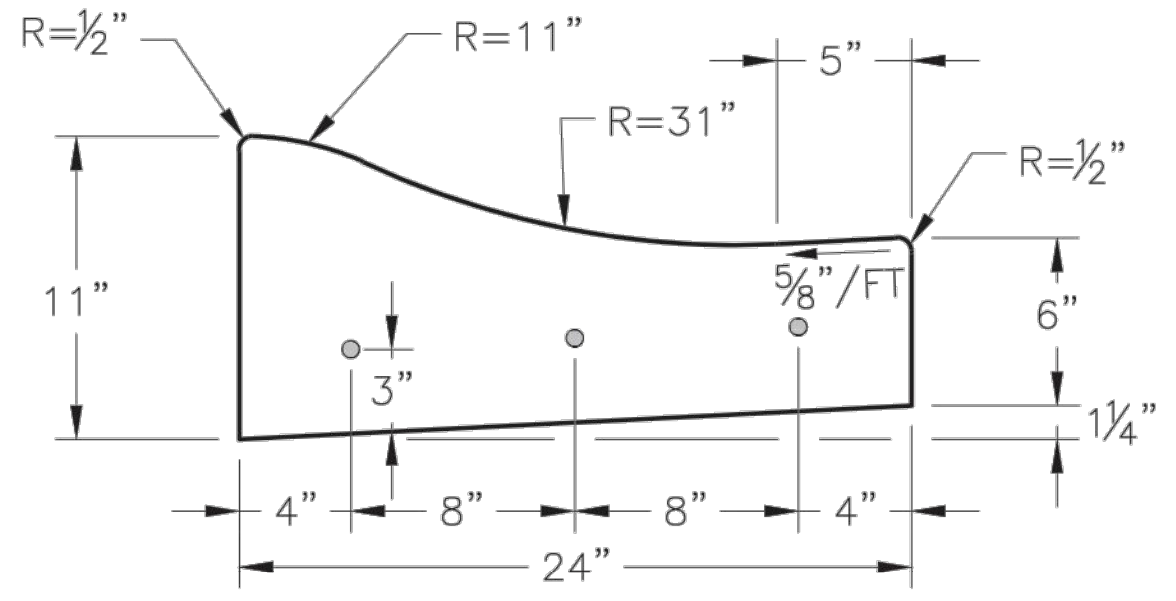
DOWELLED CURB
(TYPE DC)



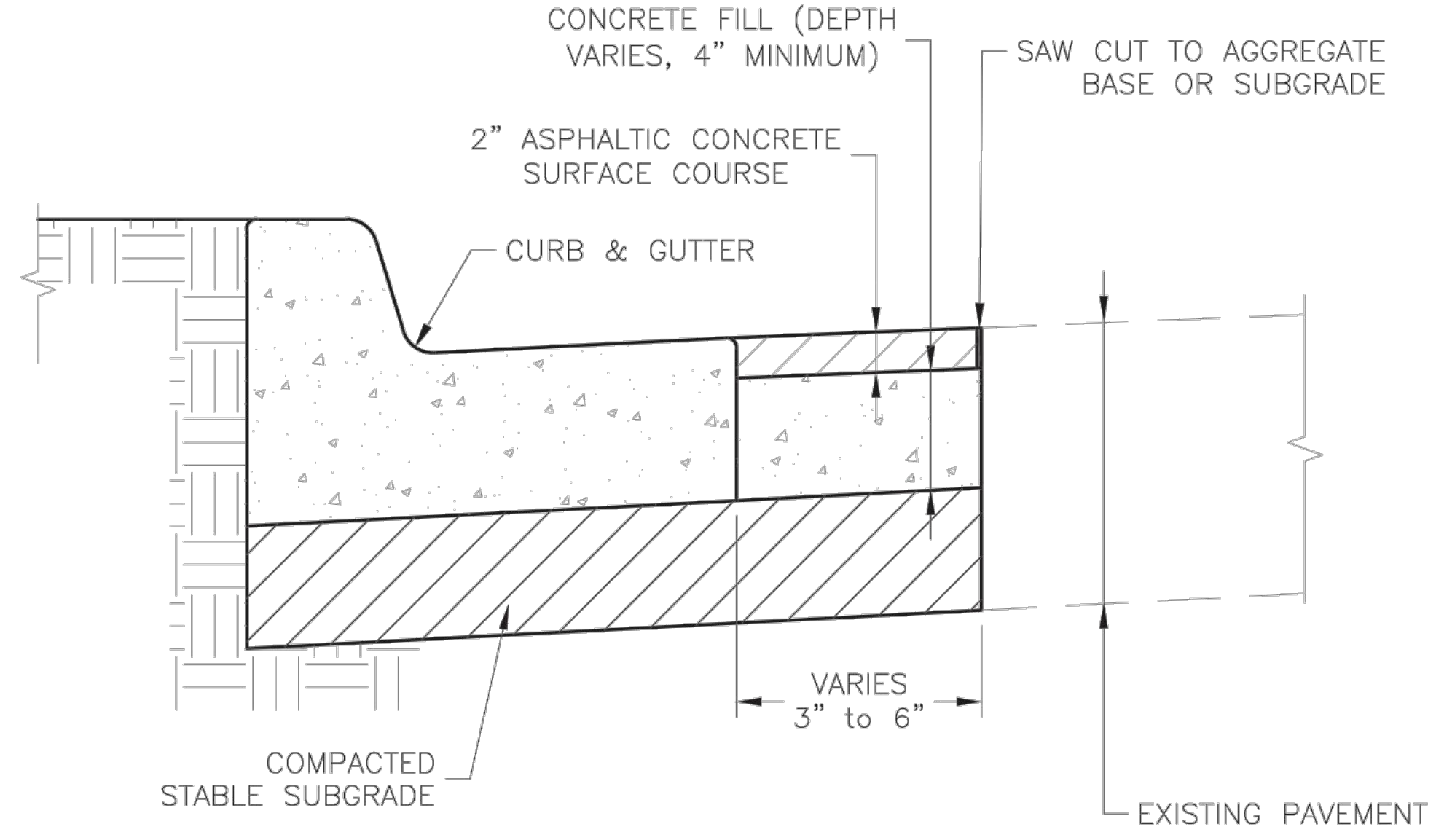
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



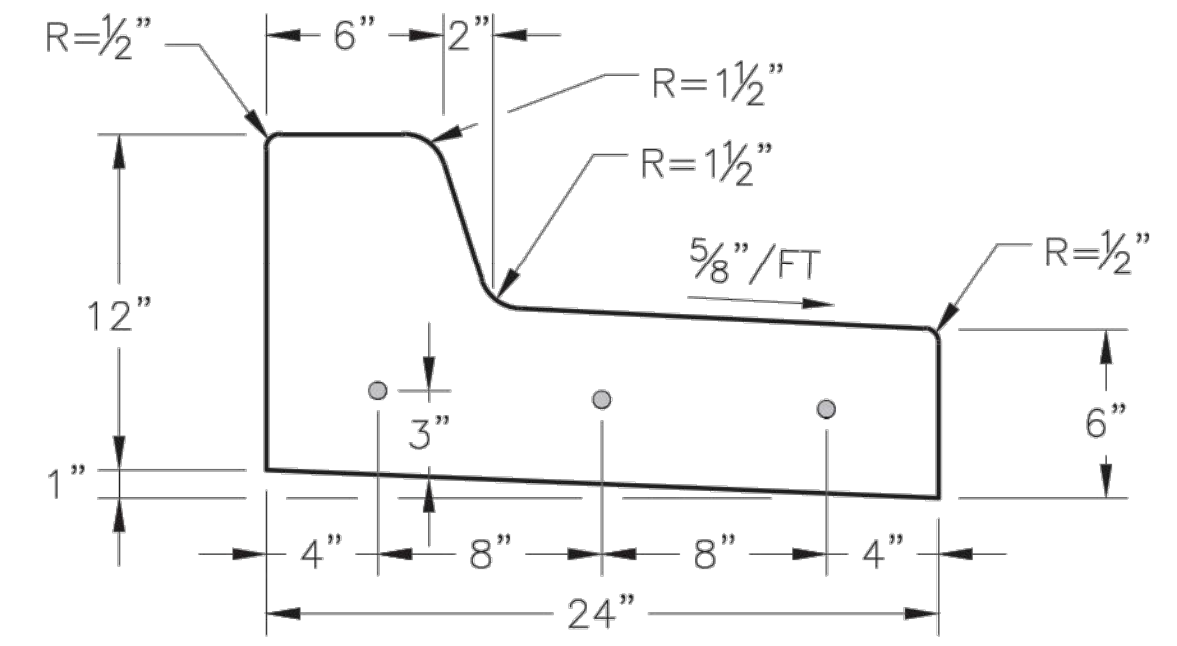
ROLL BACK CURB & GUTTER
(TYPE CG-2)



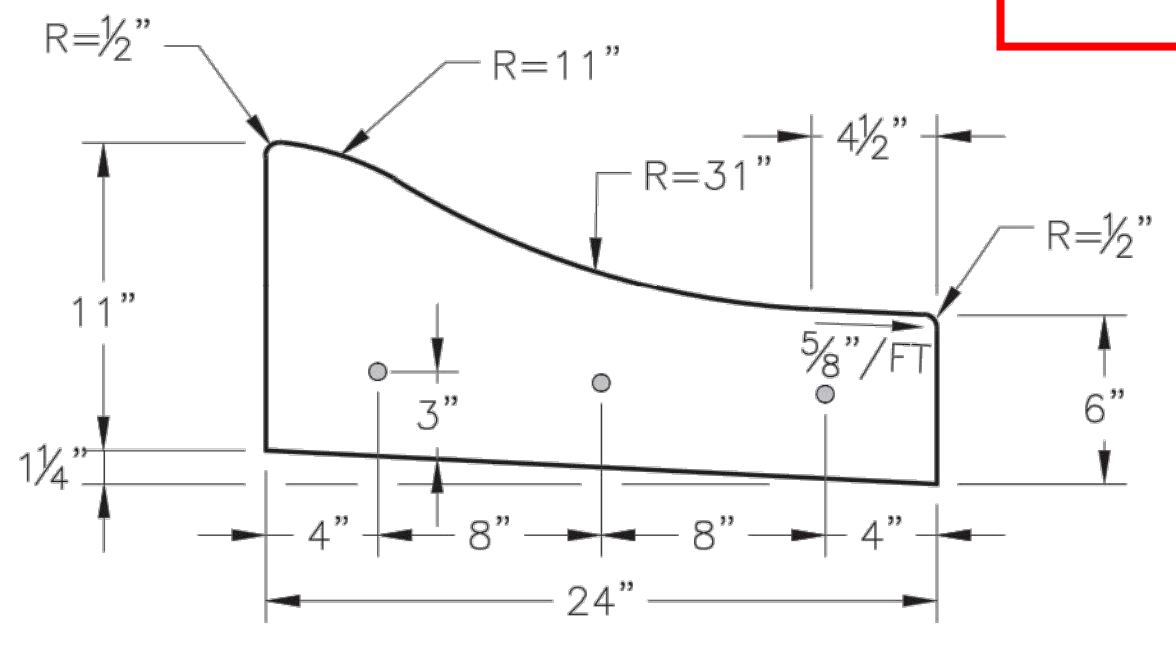
CURB REPLACEMENT DETAIL

GENERAL NOTES

- 3/4" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
- 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
- CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
- KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
- ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
- CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
- WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
- ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.



STRAIGHT BACK DRY CURB & GUTTER
(TYPE CG-1 DRY)



ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)

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As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri
11/07/2023

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64083

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 05/2021
Proj. #:

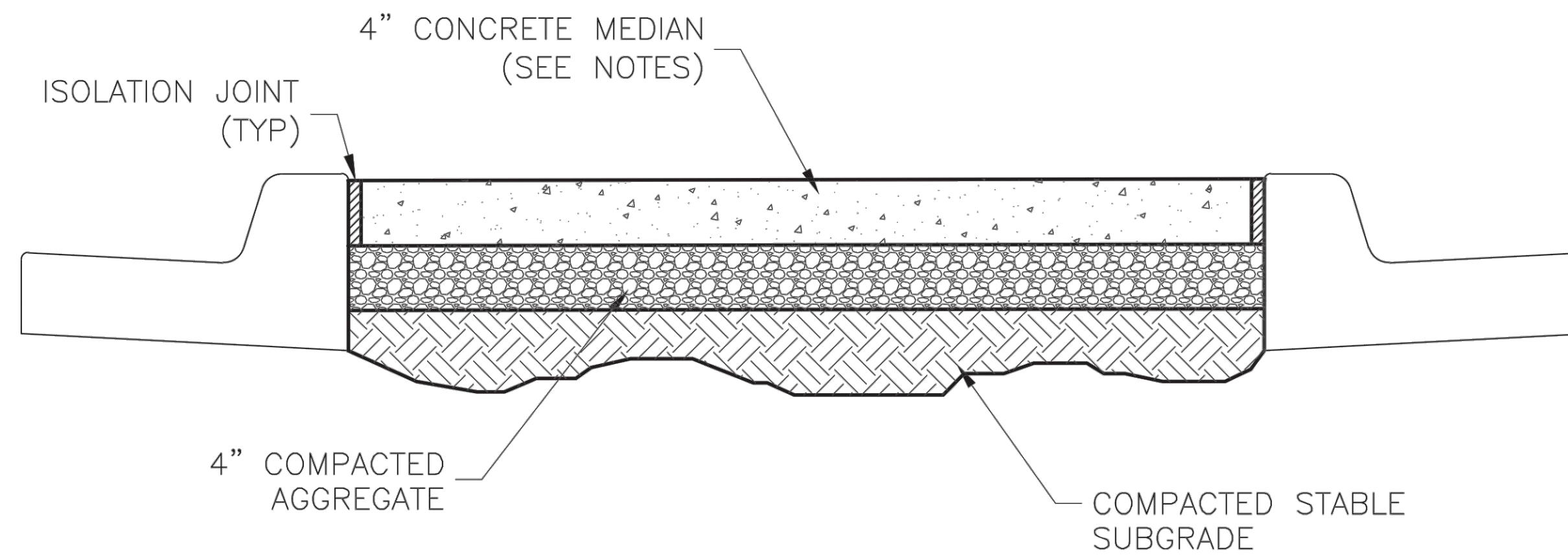
GEN-4



REV. NO.	DATE	REVISIONS DESCRIPTION

STANDARD DETAILS
THE VILLAGE AT DISCOVERY PARK
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
LEE'S SUMMIT, MISSOURI
2023

drawn by: BJW
checked by: KLV
approved by: JFG
QA/QC by: JWW
project no.: 021-04643
drawing no.: T_DETO1_02104643
date: 7/14/2023



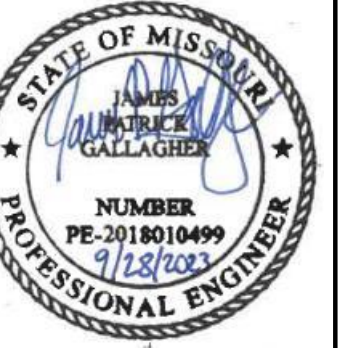
GENERAL NOTES

1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT.
3. KCMMB 4K CONCRETE MIX WITH BRICK DARK RED COLOR IS REQUIRED FOR ALL MEDIANS.
4. ALL MEDIANS SHALL HAVE THE RUNNING BOND PATTERN STAMPED INTO THE CONCRETE.
5. CLEAR CURING COMPOUND SHALL BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

RELEASED FOR CONSTRUCTION
 As Noted on Plan Review
 Development Services Department
 Lee's Summit, Missouri
 11/07/2023

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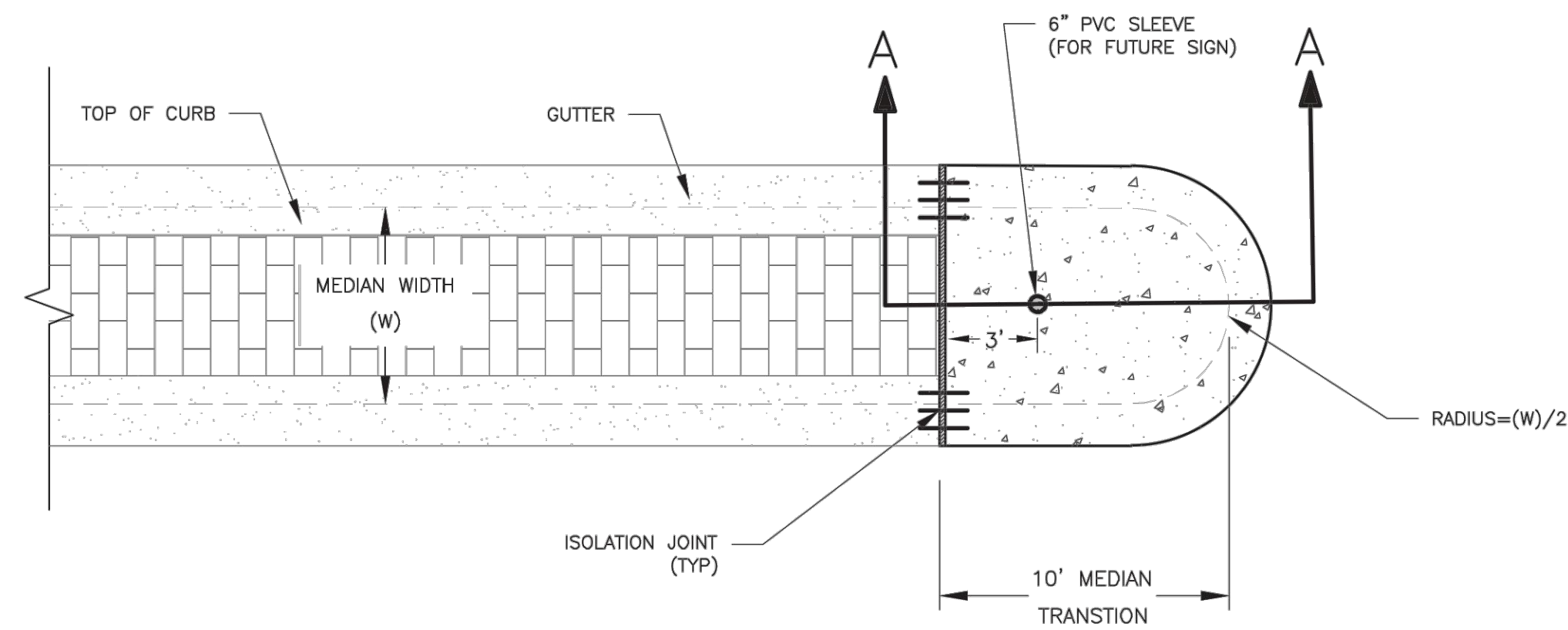


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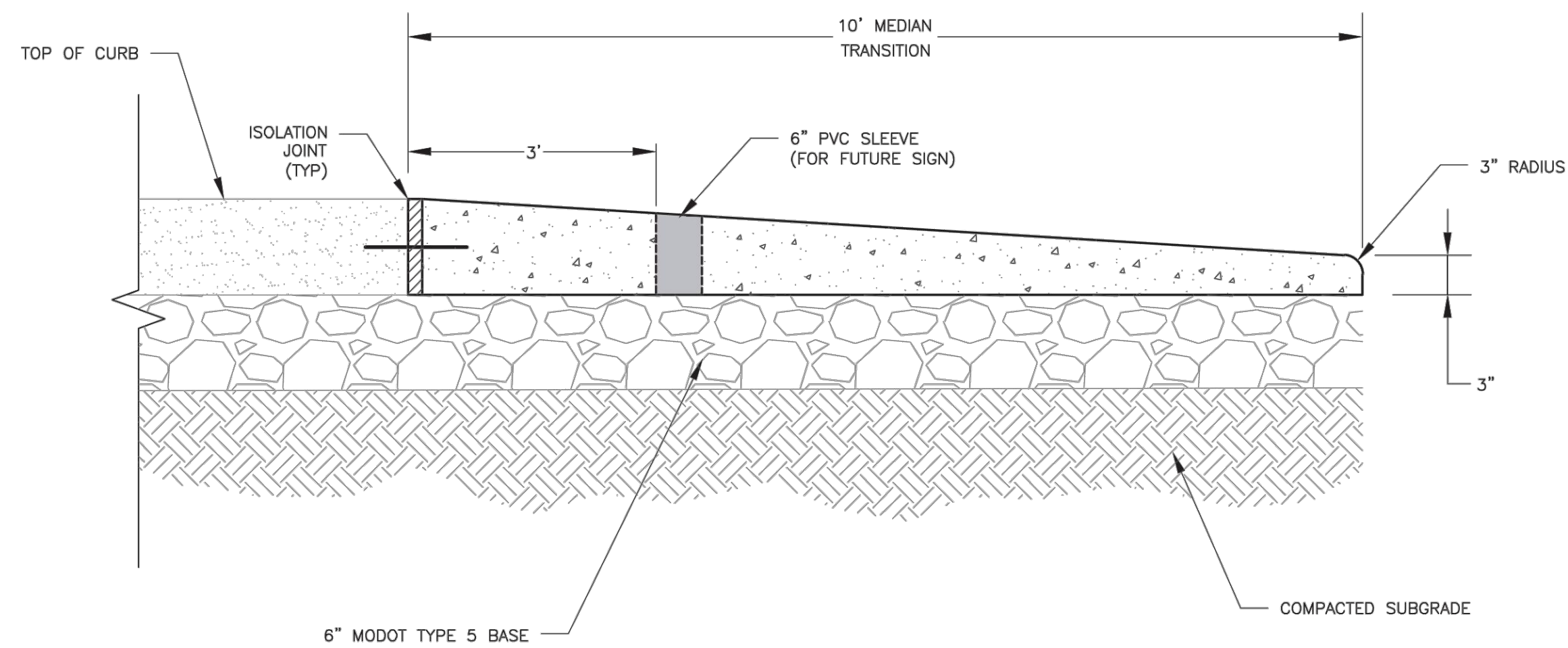
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THE VILLAGE AT DISCOVERY PARK COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	
LEE'S SUMMIT, MISSOURI	
drawn by: <u>BLW</u>	
checked by: <u>KLW</u>	
approved by: <u>JFG</u>	
QA/QC by: <u>JWJ</u>	
project no.: <u>021-04643</u>	
drawing no.: <u>T_DET01_02104643</u>	
date: <u>7/14/2023</u>	

	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	Date: 05/2021 Drawn By: MJF Checked By: MP
	MEDIAN REPLACEMENT DETAIL	GEN-10

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 USER: kwilliams2
 XREFS: T_TBLK_002104643



MEDIAN TRANSITION
PLAN VIEW



MEDIAN TRANSITION
SECTION A-A

NOTES:

1. 3/4" ISOLATION JOINT WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT THE CONNECTION OF THE CURB. THESE DOWEL BARS SHALL BE EPOXY COATED, GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. ALL MEDIAN TRANSITIONS SHALL BE POURED MONOLITHICALLY USING KCMMB 4K CONCRETE.
3. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 6" COMPACTED, DENSE GRADED AGGREGATE BASE.
4. WHITE CURING COMPOUND SHALL BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.



**LEE'S SUMMIT
MISSOURI**

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

MEDIAN TRANSITION DETAIL

Date: 05/2021

Drawn By: MJF

Checked By: MP

GEN-11

RELEASED FOR CONSTRUCTION
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Development Services Department
Lee's Summit, Missouri

11/07/2023



REVISIONS DESCRIPTION

DATE

REV. NO.

STANDARD DETAILS

THE VILLAGE AT DISCOVERY PARK
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

2023

LEE'S SUMMIT, MISSOURI

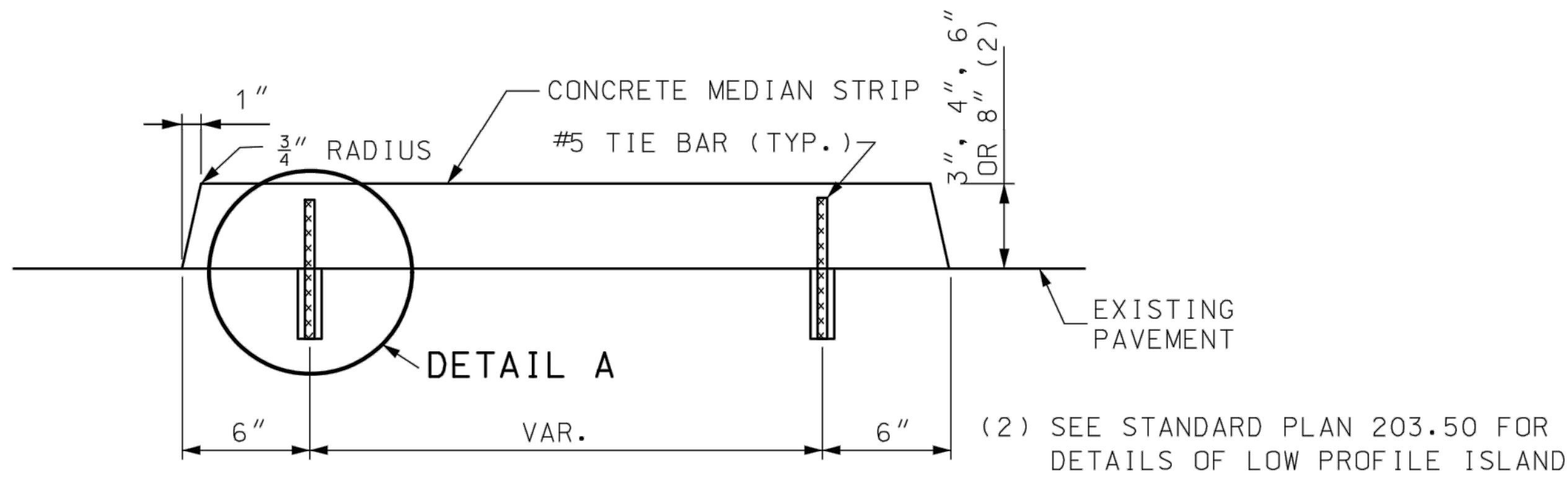
drawn by: BJW
 checked by: KLV
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 drawing no.: T_DET01_02104643
 date: 7/14/2023

SHEET
35 OF 86

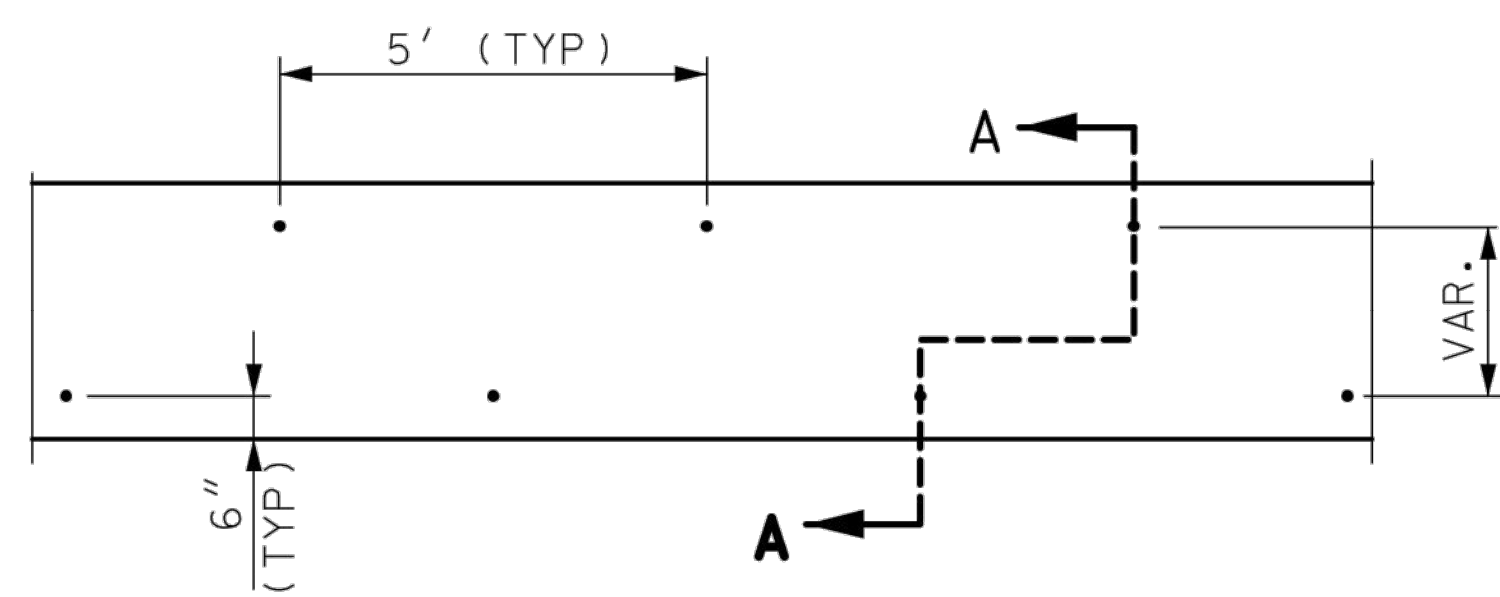
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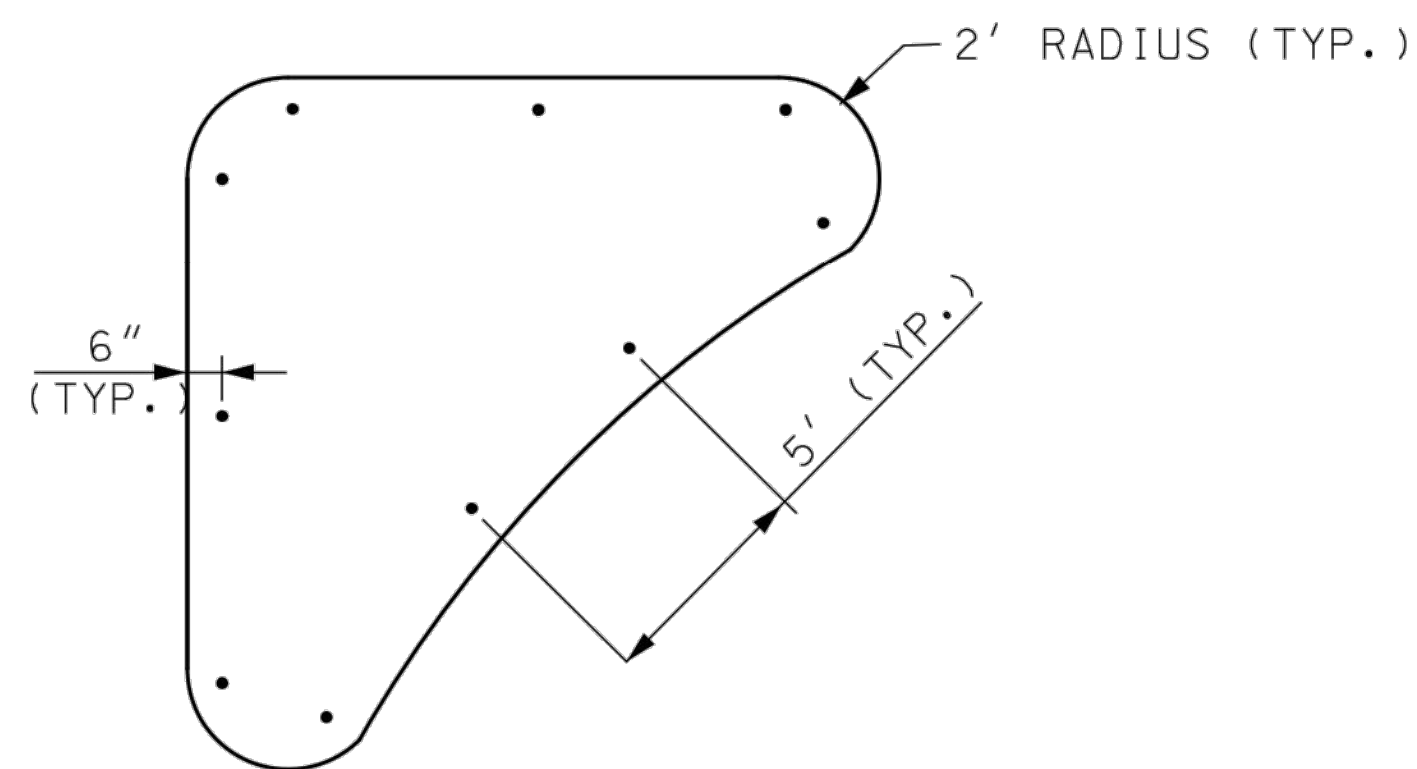
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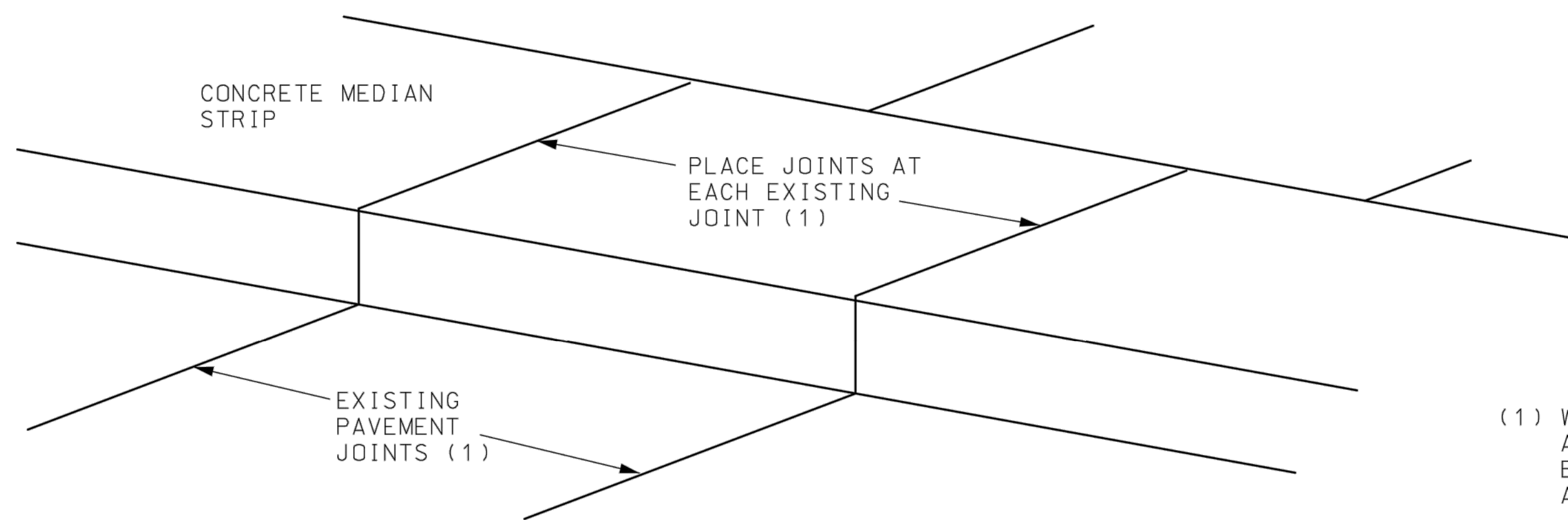
SECTION A-A
CONCRETE MEDIAN STRIP



TIE BAR LOCATIONS FOR
CONCRETE MEDIAN STRIP



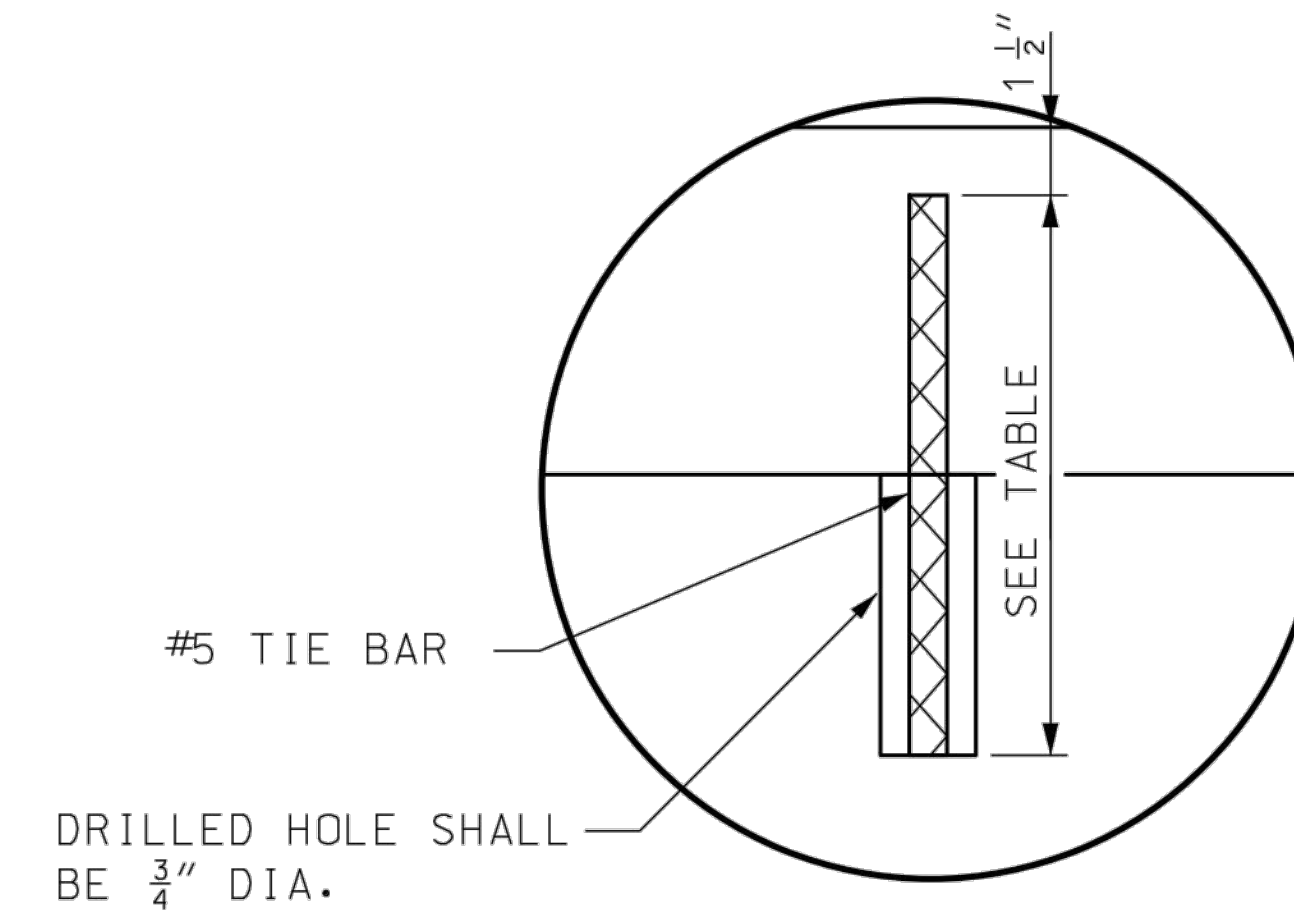
TIE BAR LOCATIONS FOR
CONCRETE MEDIAN STRIP (ISLAND)



CONCRETE MEDIAN STRIP JOINT LOCATION

(1) WHEN THERE ARE NO VISIBLE JOINTS IN THE ADJACENT PAVEMENT, THE JOINT SPACING WILL BE EQUAL TO THE MEDIAN STRIP WIDTH, WITH A MINIMUM SPACING OF 10'.

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 As Noted on Plan Review
 Development Services Department
 Lee's Summit, Missouri
 11/07/2023



DETAIL A

MEDIAN HEIGHT	BAR LENGTH
3"	8"
4"	9"
6"	11"
8"	13"

GENERAL NOTES:

TIE BARS SHALL BE EPOXY COATED, DEFORMED REINFORCING BARS MEETING THE REQUIREMENTS OF SECTION 710 AND 1057.

BONDING FOR TIE BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS AS SPECIFIED IN SECTION 1039.

THE FACE OF THE MEDIAN MAY BE CONSTRUCTED WITHOUT BATTER WHEN CONSTRUCTED ON A RADIUS OF 6' OR LESS.

WHEN CONCRETE MEDIANS ARE CONSTRUCTED DIRECTLY BENEATH GUARDRAIL, THE MEDIAN HEIGHT WILL BE 4".

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
 105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

TRAVIS D. KOESTNER
 NUMBER PE-30042
 PROFESSIONAL ENGINEER

CONCRETE MEDIAN STRIP

DATE EFFECTIVE: 10/01/2020
 DATE PREPARED: 7/21/2020
608.30A
 SHEET NO. 1 OF 1



REV. NO.	DATE	REVISIONS DESCRIPTION

STANDARD DETAILS
 THE VILLAGE AT DISCOVERY PARK
 COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI
 2023

DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final Plans\Sheets\RDWP\T_STMCLC01_D02104643.dwg USER: kwilliams2
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 Development Services Department
 Lee's Summit, Missouri

 11/07/2023

10-YEAR STORM INLET CALCULATIONS																								
Label	Inlet	Inlet Location	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Inlet C	Inlet Drainage Area (acres)	Carryover CA (acres)	Total Inlet Tc (min)	Local Intensity (in/h)	System Intensity (in/h)	Curb Opening Length (ft)	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Capture Efficiency (Calculated) (%)	Bypass Target	Bypassed CA (acres)	Spread / Top Width (ft)	Depth (Gutter) (in)	Headloss Method	Headloss Coefficient (Standard)	Headloss (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Notes
A1	CURB INLET - 8x3	On Grade	971.73	963.91	0.73	0.58	0.00	7.0	6.79	6.58	8.0	2.73	0.19	93.60	B1	0.03	7.9	2.4	Standard	0.30	0.24	965.71	965.47	
B1	CURB INLET - 8x3	In Sag	968.38	964.35	0.71	0.49	0.03	5.0	7.35	7.35	6.4	2.77	0.00	100.00		0.00	13.0	12.1	Standard	0.40	0.11	965.13	965.02	
B2	CURB INLET - 4x3	On Grade	969.07	963.37	0.74	0.16	0.01	5.0	7.35	7.35	4.0	0.89	0.00	99.80	B1	0.00	5.9	1.9	Standard	0.40	0.03	963.85	963.81	
C1	CURB INLET - 6x3	On Grade	960.00	952.00	0.75	0.57	0.00	7.0	6.79	6.79	6.0	2.28	0.64	78.10	C2	0.09	7.8	2.4	Standard	0.30	0.07	952.67	952.60	
C2	CURB INLET - 4x3	On Grade	956.16	944.00	0.50	0.26	0.09	5.0	7.35	6.64	4.0	1.49	0.17	90.00	D2	0.022	8.3	2.5	Standard	0.15	0.05	944.81	944.76	
D1	CURB INLET - 6x3	On Grade	958.06	952.00	0.81	0.42	0.00	7.2	6.74	6.74	6.0	2.00	0.27	88.00	D2	0.04	7.3	2.3	Standard	1.00	0.22	952.78	952.56	
D2	CURB INLET - 8x3	In Sag	955.97	945.00	0.68	0.35	0.06	5.0	7.35	6.59	6.4	2.21	0.00	100.00		0.00	11.2	11.6	Standard	0.30	0.10	945.91	945.80	

50-YEAR STORM PIPE CALCULATIONS																									
Label	Start Node	Stop Node	Upstream Inlet Area (acres)	Upstream Inlet C	Upstream Inlet Tc (min)	System CA (acres)	Time (Pipe Flow) (min)	System Flow Time (min)	System Rational Flow (cfs)	Invert (Start) (ft)	Invert (Stop) (ft)	Slope (Calculated) (%)	Length (Scaled) (ft)	Section Type	Material	Diameter (in)	Flow (cfs)	Velocity (ft/s)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Notes
P-B1	B1	Exist. Inlet B1A	0.49	0.71	5.0	0.45	0.03	5.00	5.09	964.35	964.26	1.00	11.00	Circle	Concrete	15	5.09	4.14	6.46	78.7	967.24	967.18	967.51	967.45	
P-B2	B2	Exist. Inlet B2A	0.16	0.74	5.0	0.12	0.02	5.00	1.40	963.37	963.07	3.44	10.20	Circle	Concrete	15	1.40	1.14	11.99	11.7	966.08	966.08	966.10	966.10	
P-C1	C1	C2	0.57	0.75	7.0	0.28	0.56	6.95	2.89	952.00	949.00	1.50	200.00	Circle	Concrete	15	2.89	5.95	7.91	36.6	952.68	949.52	952.96	950.07	
P-C2	C2	Exist. RCB	0.26	0.50	5.0	0.47	0.01	7.51	4.85	944.00	943.50	5.93	14.90	Circle	Concrete	15	4.85	11.30	15.73	30.8	944.89	944.95	945.31	945.20	
P-D1	D1	D2	0.42	0.81	7.2	0.25	0.65	7.16	2.60	952.00	949.00	1.38	218.20	Circle	Concrete	15	2.60	5.59	7.57	34.3	952.65	949.50	952.90	949.99	
P-D2	D2	Exist. RCB	0.35	0.68	5.0	0.66	0.02	7.81	6.74	945.00	944.50	3.56	20.50	Circle	Concrete	15	6.72	10.17	12.18	55.2	946.04	945.27	946.63	946.38	



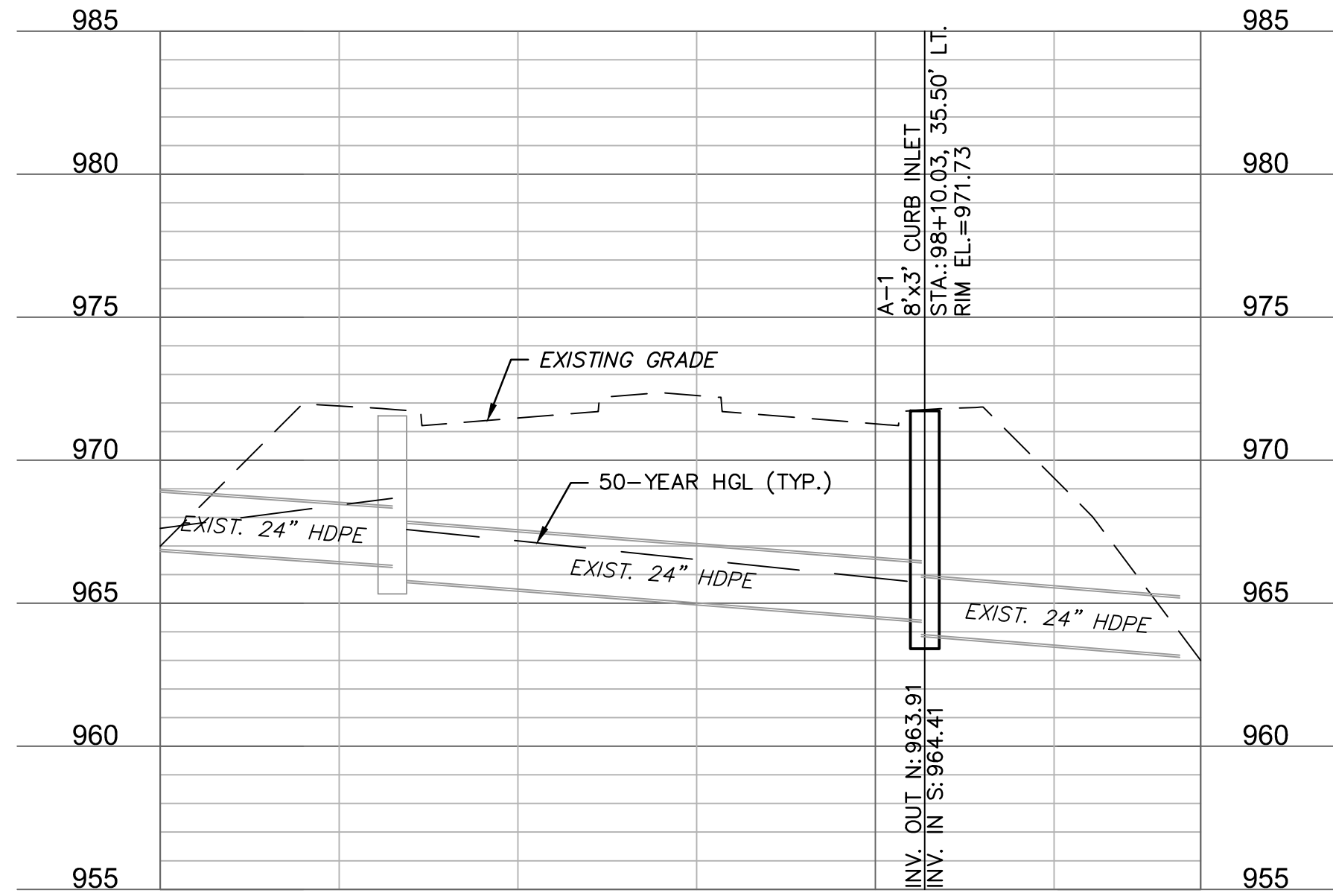
REV. NO.	DATE	REVISIONS DESCRIPTION
1	10/18/2023	CITY COMMENTS ON 10/05/2023

STORM SEWER DRAINAGE CALCULATIONS

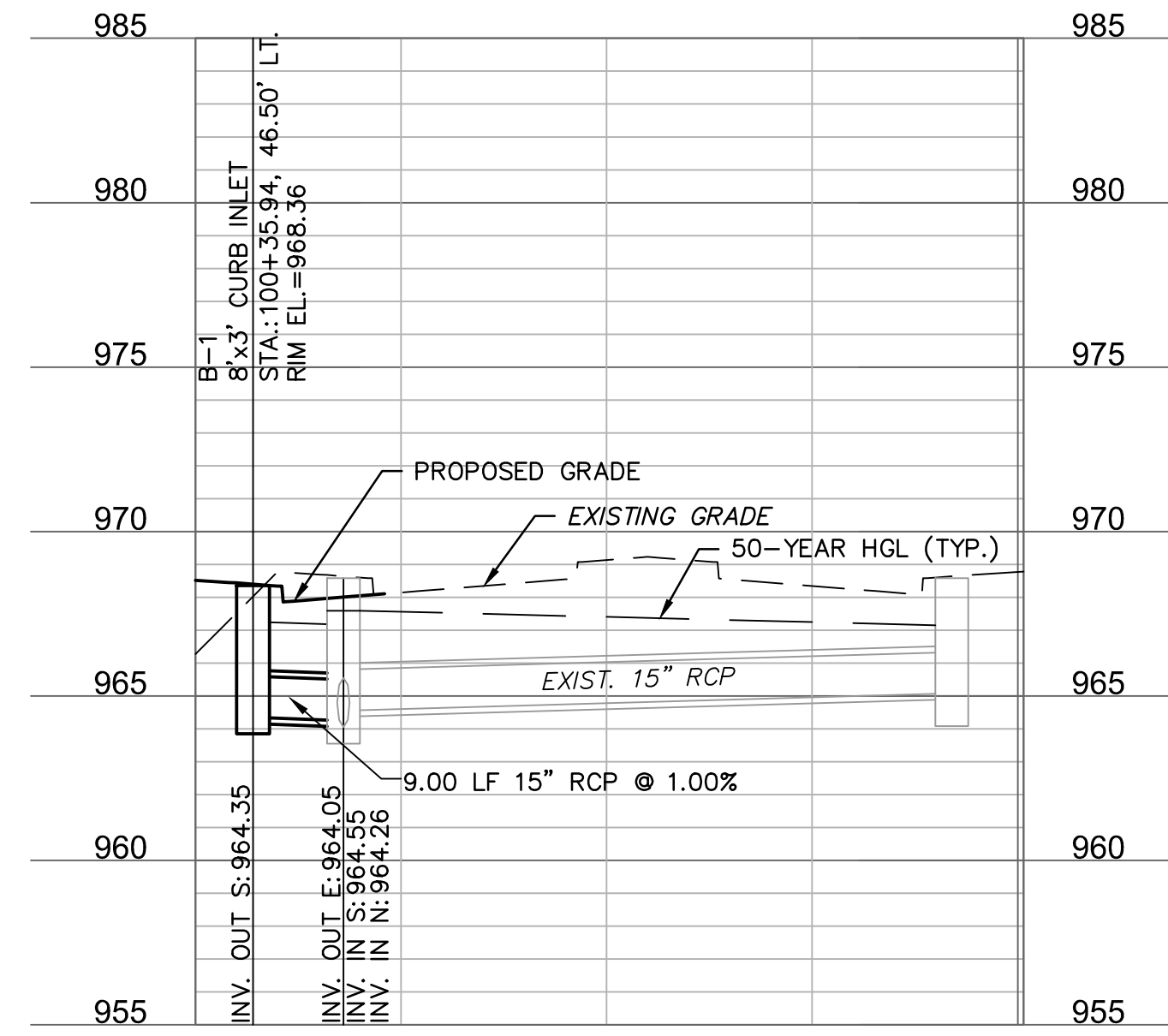
 THE VILLAGE AT DISCOVERY PARK
 COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

drawn by: BJW
 checked by: KLW
 approved by: JPG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: STMCLC01_D02104643
 date: 11/14/2023

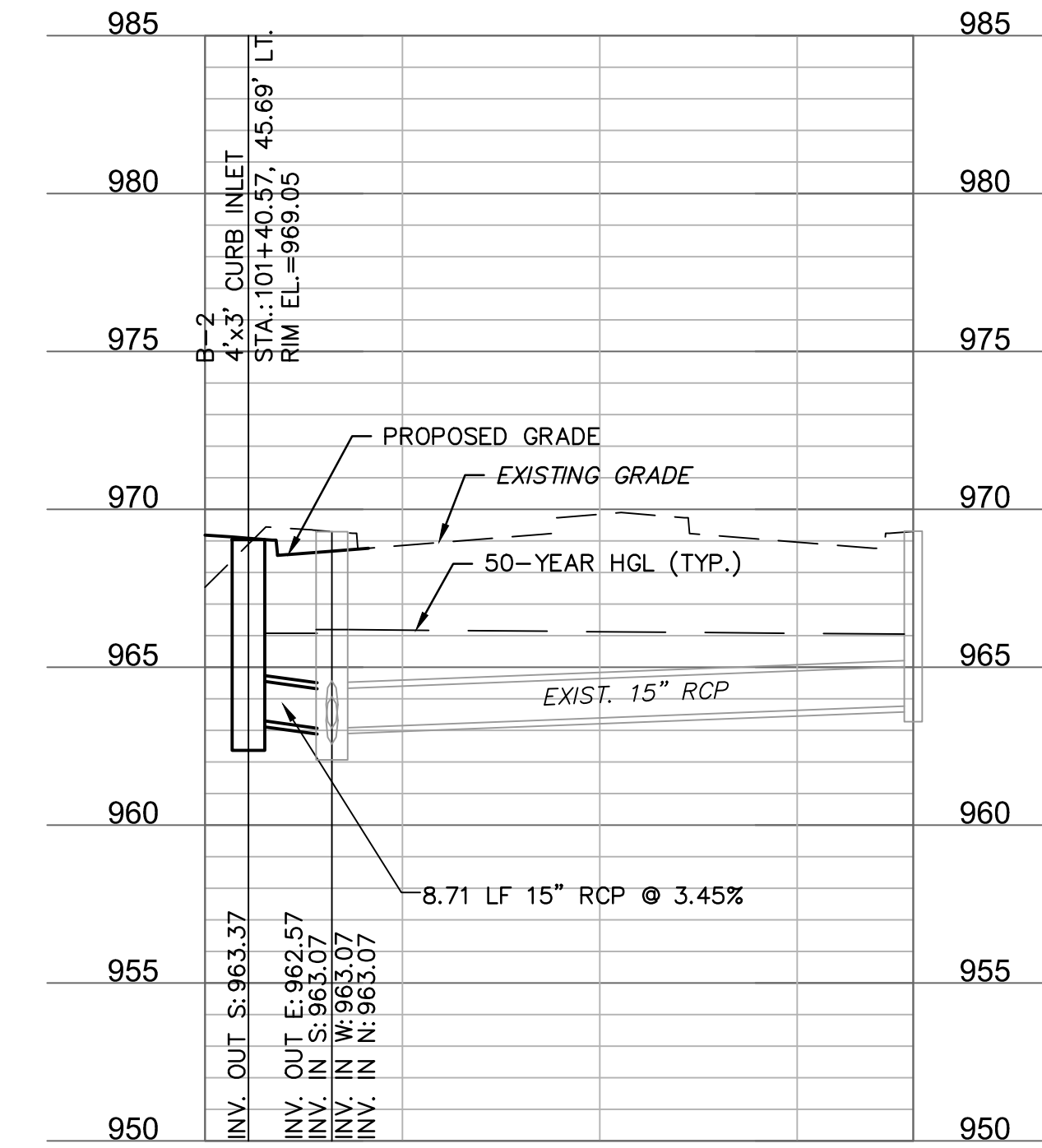
STORMLINE A



STORMLINE B1

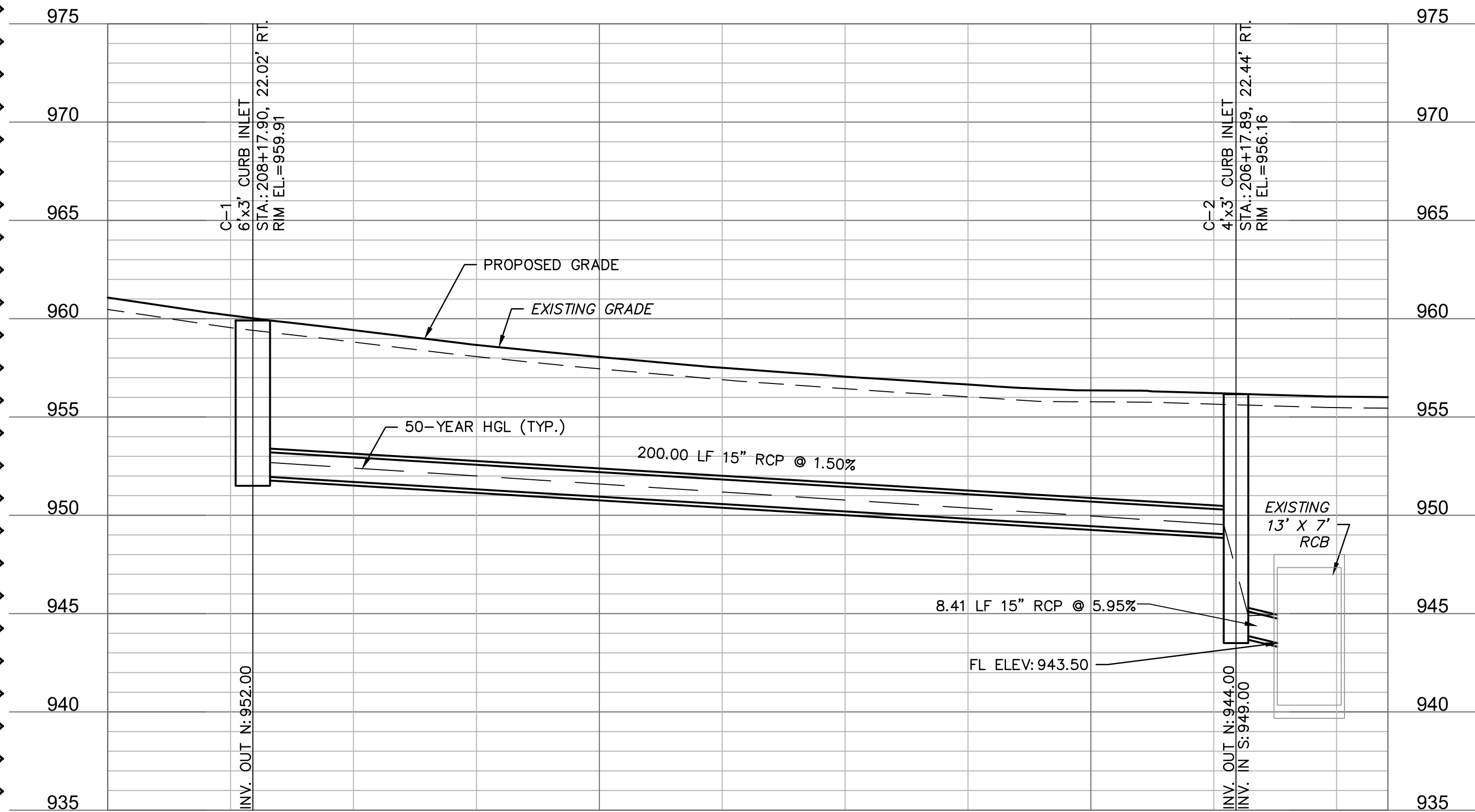


STORMLINE B2

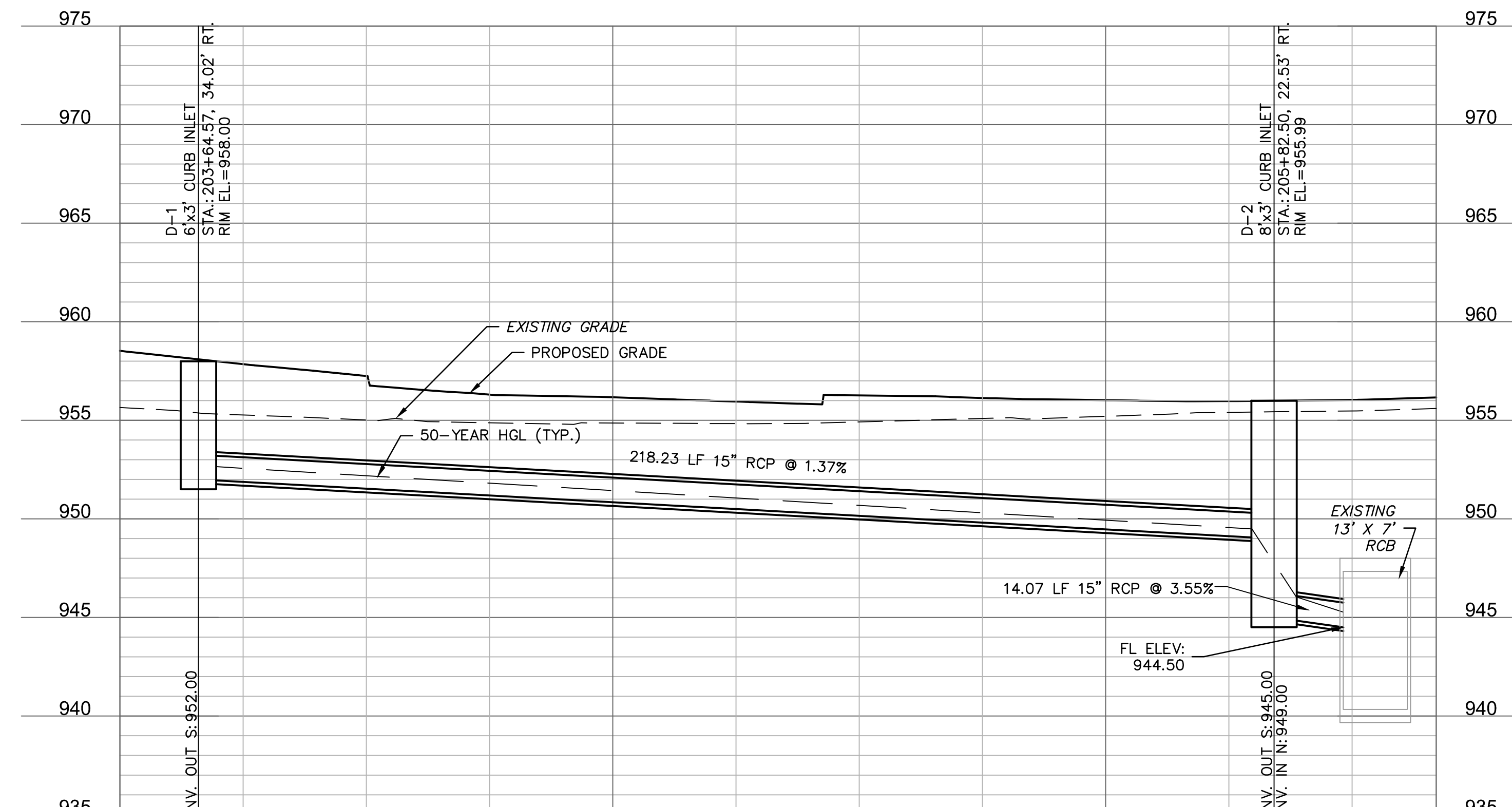


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 Development Services Department
 Lee's Summit, Missouri
 11/07/2023

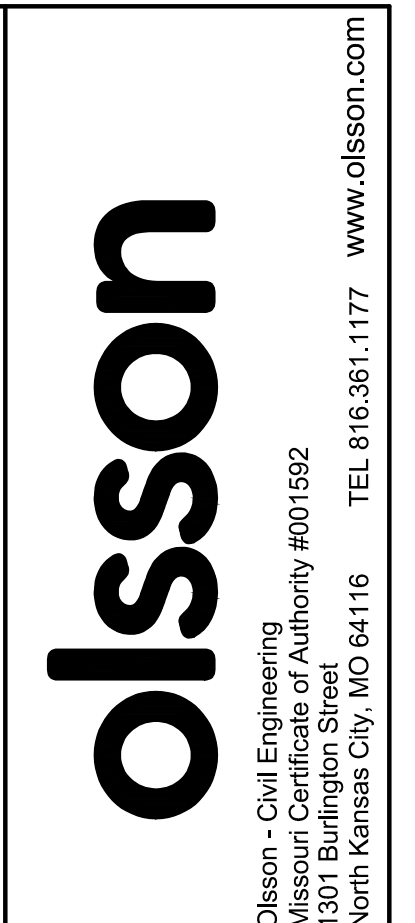
STORMLINE C



STORMLINE D



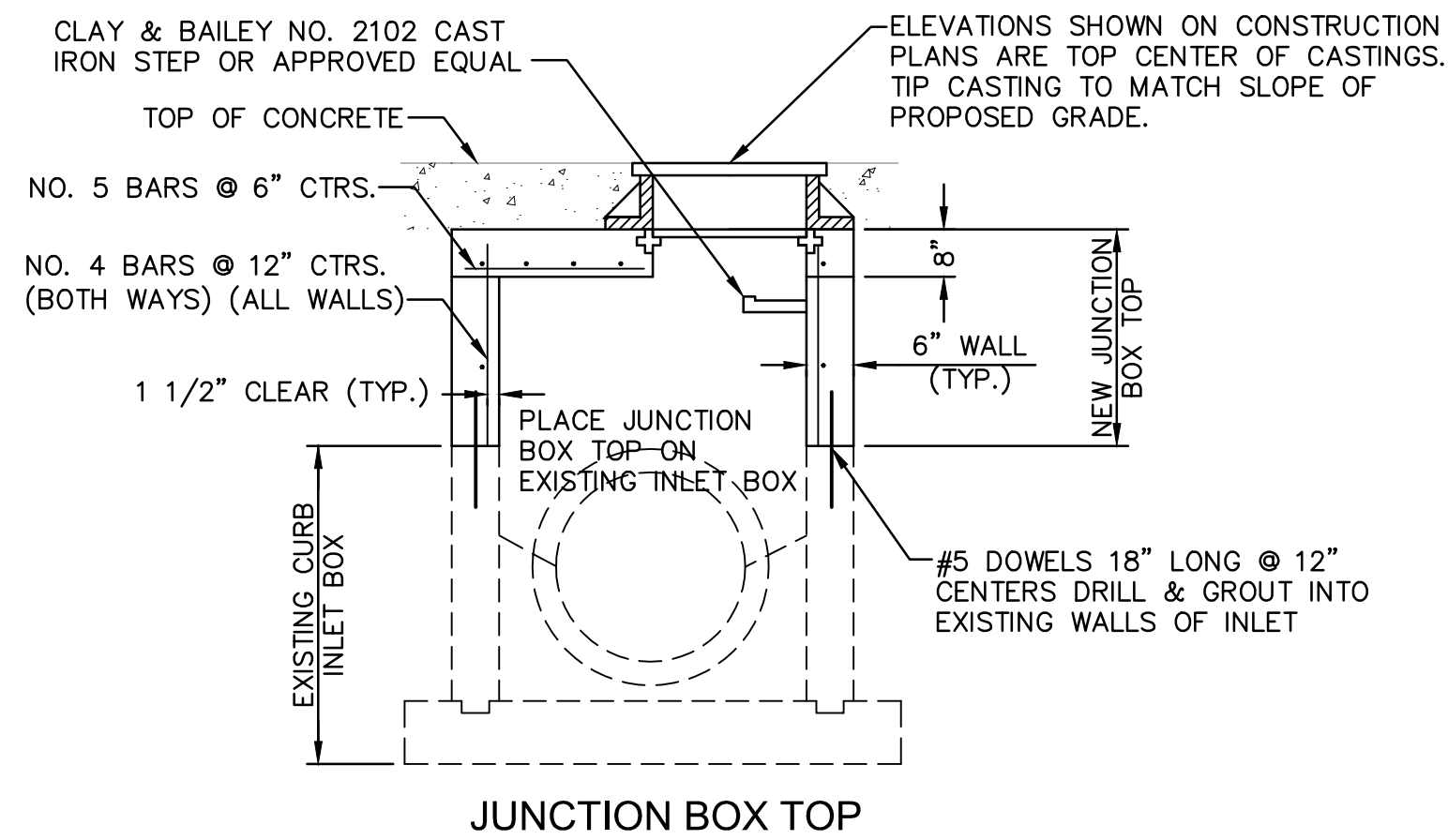
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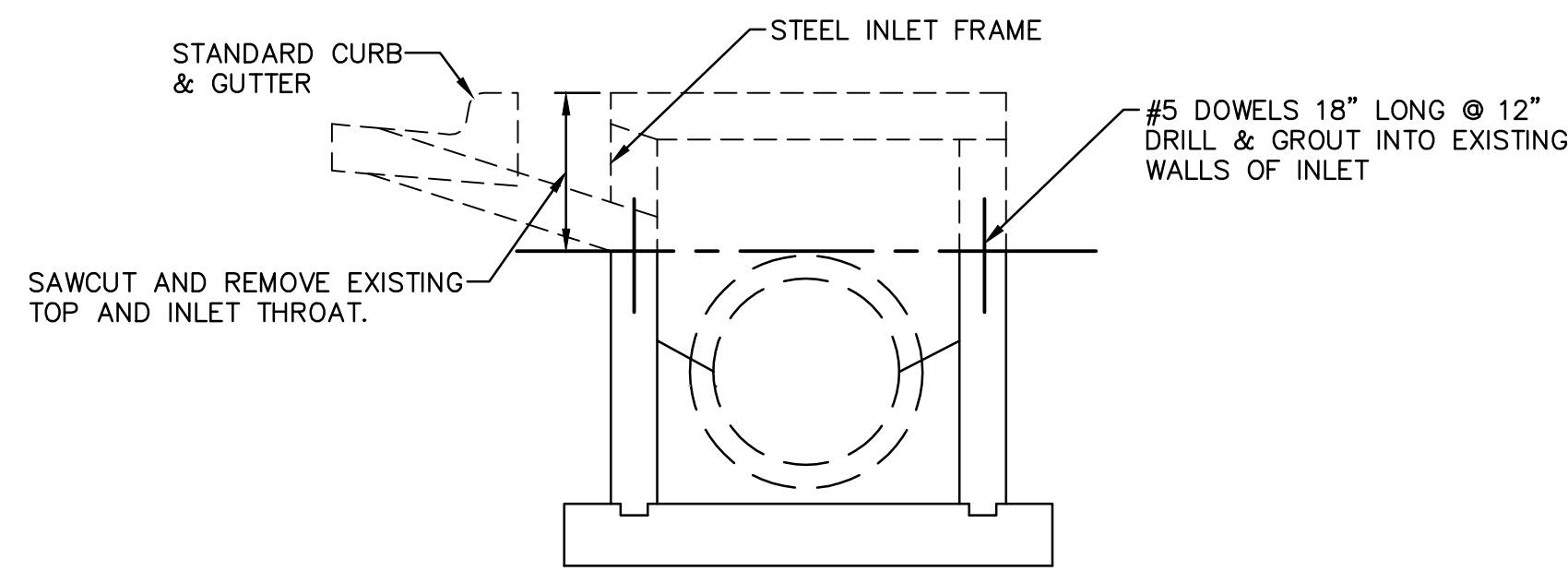
REV. NO.	DATE	REVISIONS DESCRIPTION
1	10/18/2023	CITY COMMENTS ON 10/05/2023

STORM SEWER PLAN AND PROFILE
 THE VILLAGE AT DISCOVERY PARK
 COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI
 2023

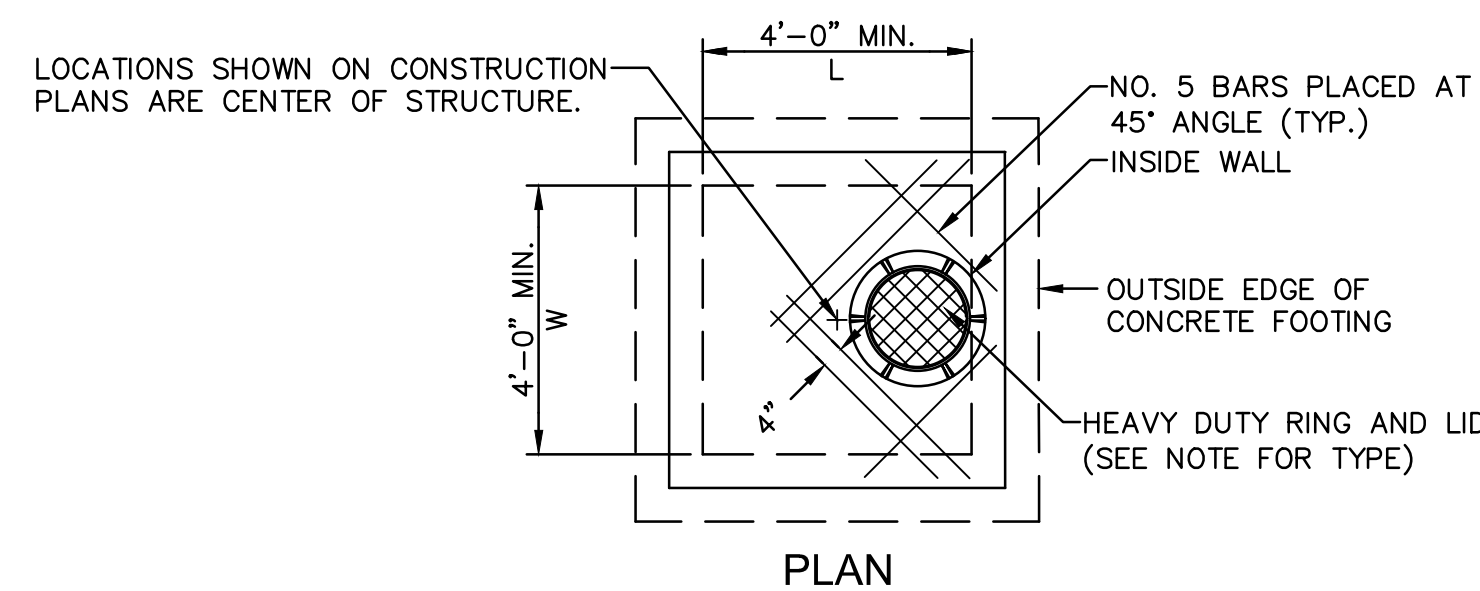
drawn by: BJW
 checked by: KLW
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: STM01_D02104643
 date: 11/14/2023



JUNCTION BOX TOP



EXISTING CURB INLET



JUNCTION BOX CONVERSION DETAIL

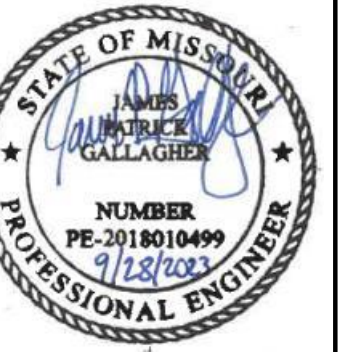
NOT TO SCALE

1. REINFORCING STEEL SHALL BE NEW BILLET, MINIMUM GRADE 40 AS PER ASTM A615, AND SHALL BE BENT COLD.
2. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. 2" CLEARANCE SHALL BE PROVIDED THROUGHOUT UNLESS NOTED OTHERWISE. TOLERANCE OF $\pm 1/8"$ SHALL BE PERMITTED.
3. ALL LAP SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAMETERS IN LENGTH.
4. ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL BAR SUPPORTS @ 3'-0" MAXIMUM SPACING.
5. FLOOR OF INLET SHALL BE SHAPED WITH INVERT TO PROVIDE SMOOTH FLOW.
6. LOCATE MH RING AND COVER OVER OUTLET. STEPS SHALL BE SPACED AT 1'-4" O.C. VERTICALLY.
7. BEVEL ALL EXPOSED EDGES WITH 3/4" CHAMFER OR 1/2" TOOLED EDGE.
8. MANHOLE RING AND COVER SHALL BE CLAY & BAILEY NO. 2007, NEENAH NO. R-1669, DEETER NO. 1320 OR GCI NO. SM2206 STD.

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 As Noted on Plan Review
 Development Services Department
 Lee's Summit, Missouri
 11/07/2023

olsson

Olsson - Civil Engineering
 Missouri Certificate of Authority #001592
 1301 Burlington Street
 North Kansas City, MO 64116
 TEL 816.361.1177
 www.olsosn.com

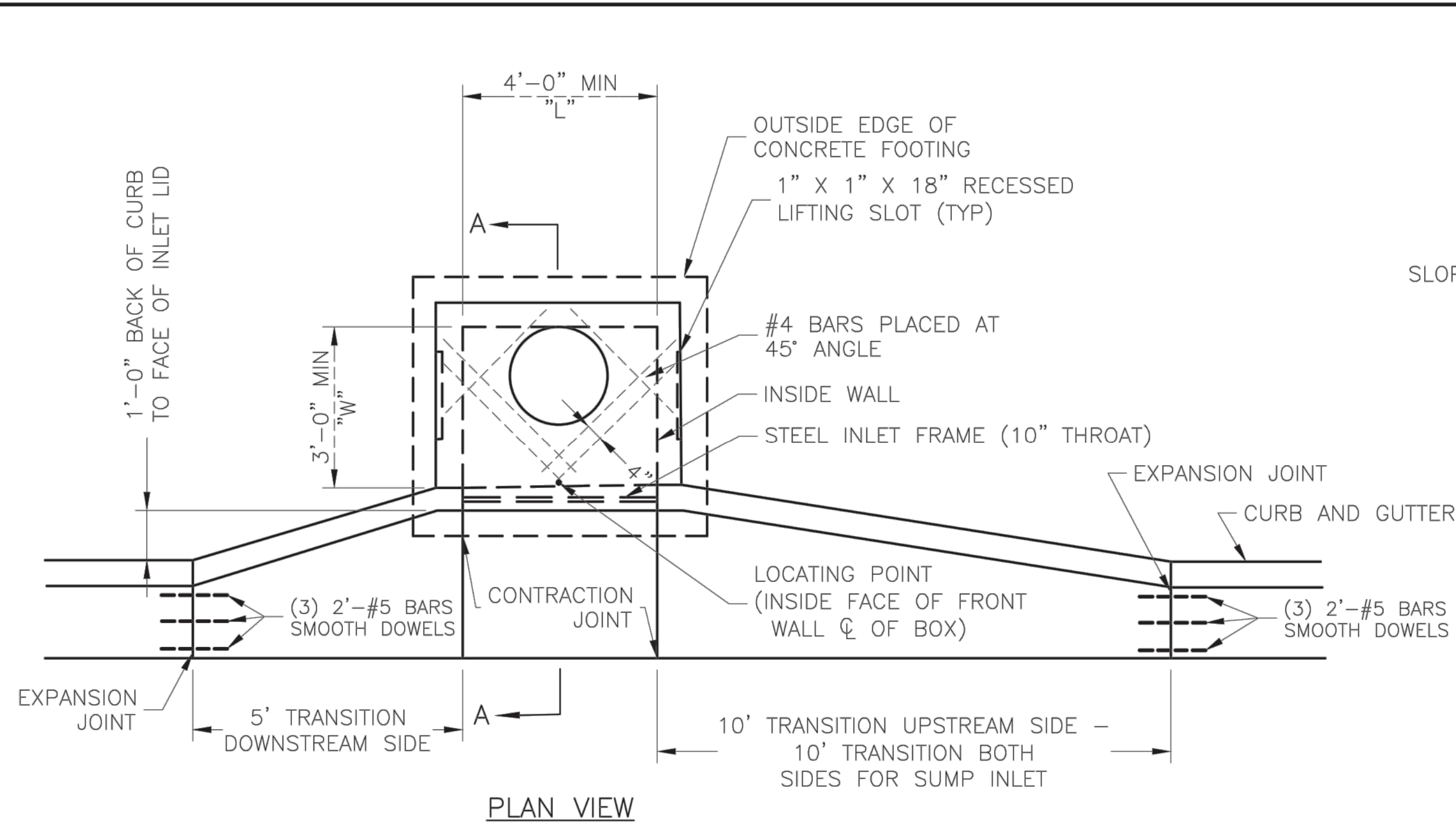


REV. NO.	DATE	REVISIONS DESCRIPTION

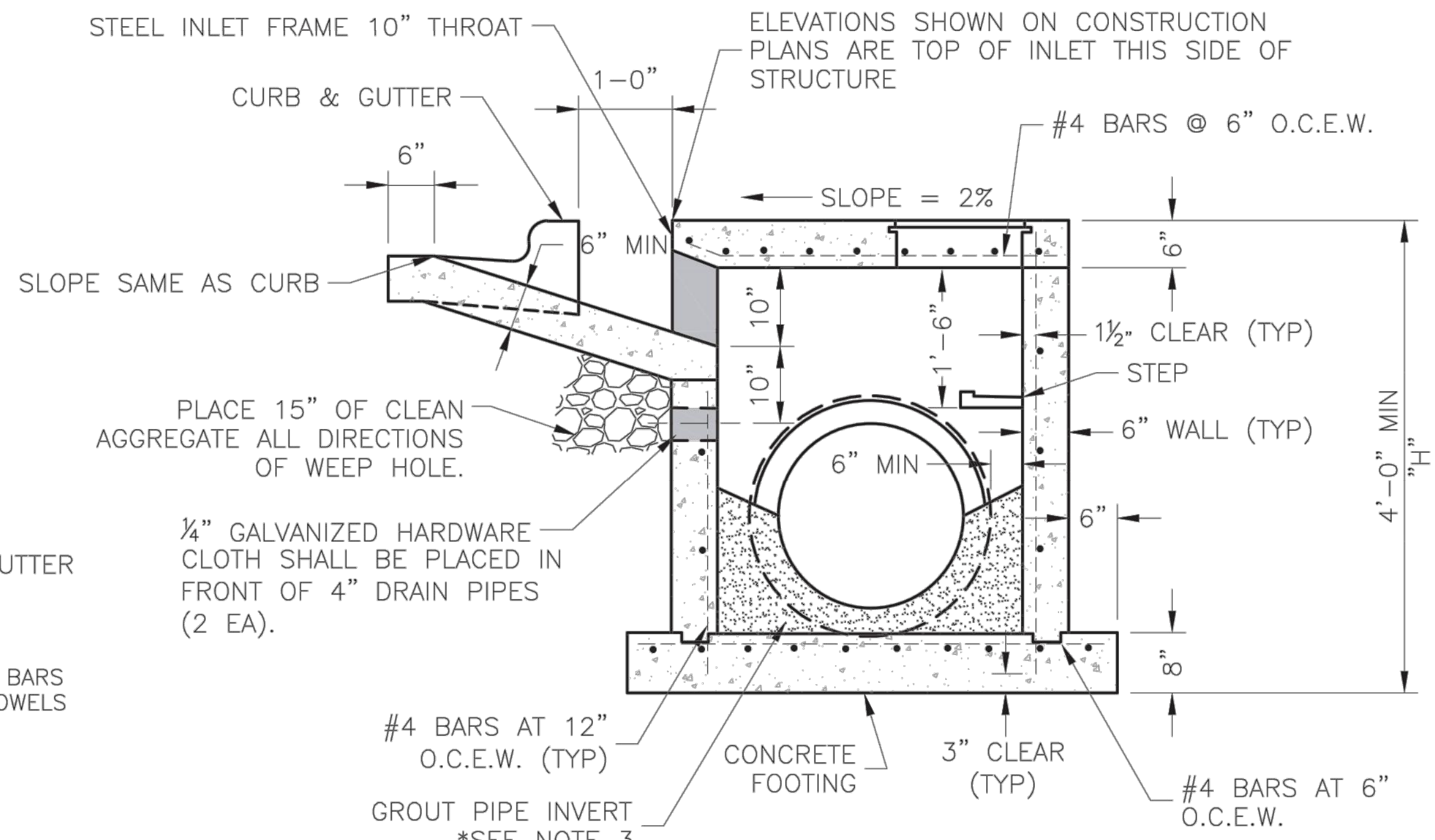
STORM SEWER DETAILS	2023
THE VILLAGE AT DISCOVERY PARK COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS LEE'S SUMMIT, MISSOURI	

drawn by: BJW
 checked by: KLV
 approved by: JFG
 QA/QC by: JWW
 project no.: 021-04643
 drawing no.: STMD01_02104643
 date: 7/14/2023

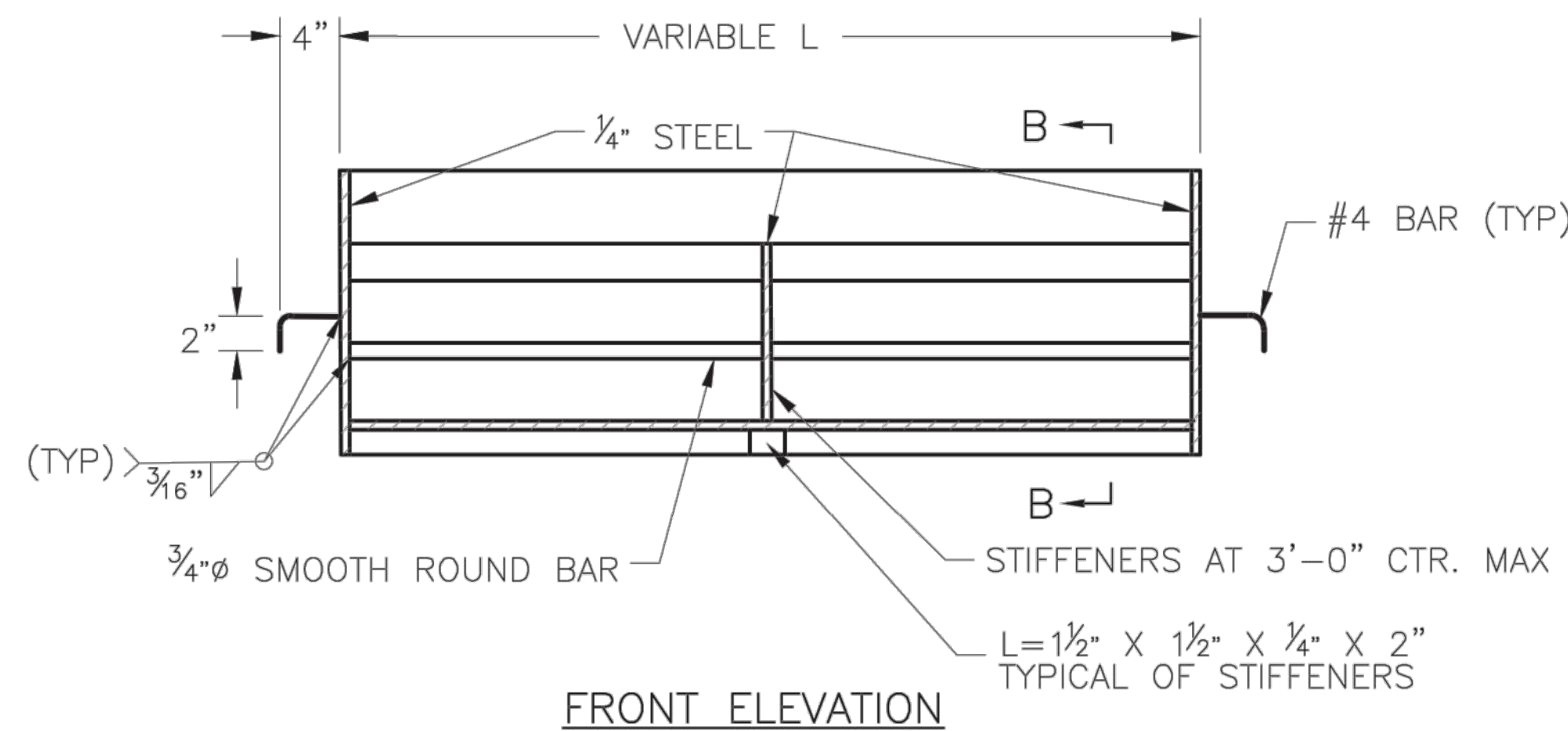
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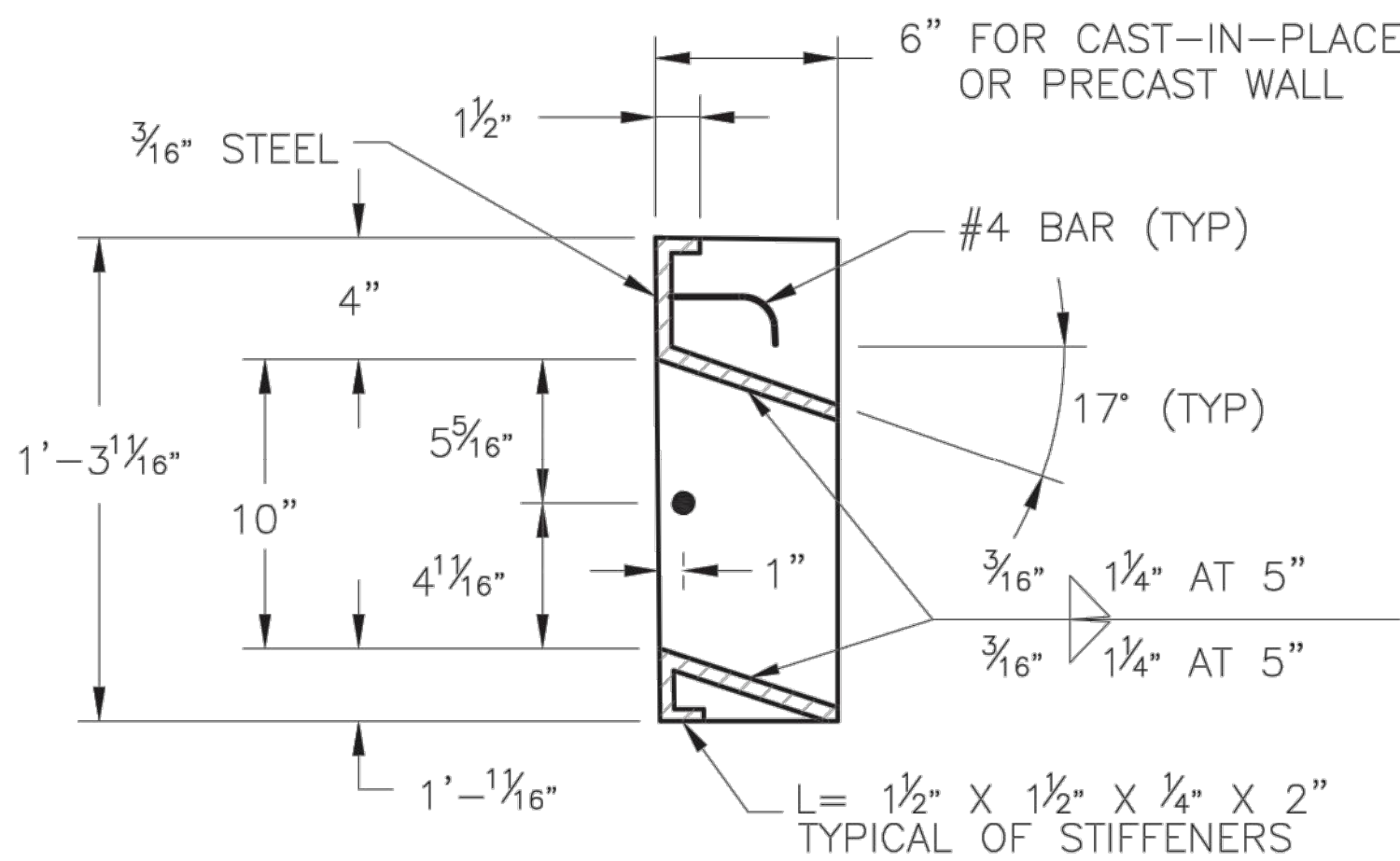
PLAN VIEW



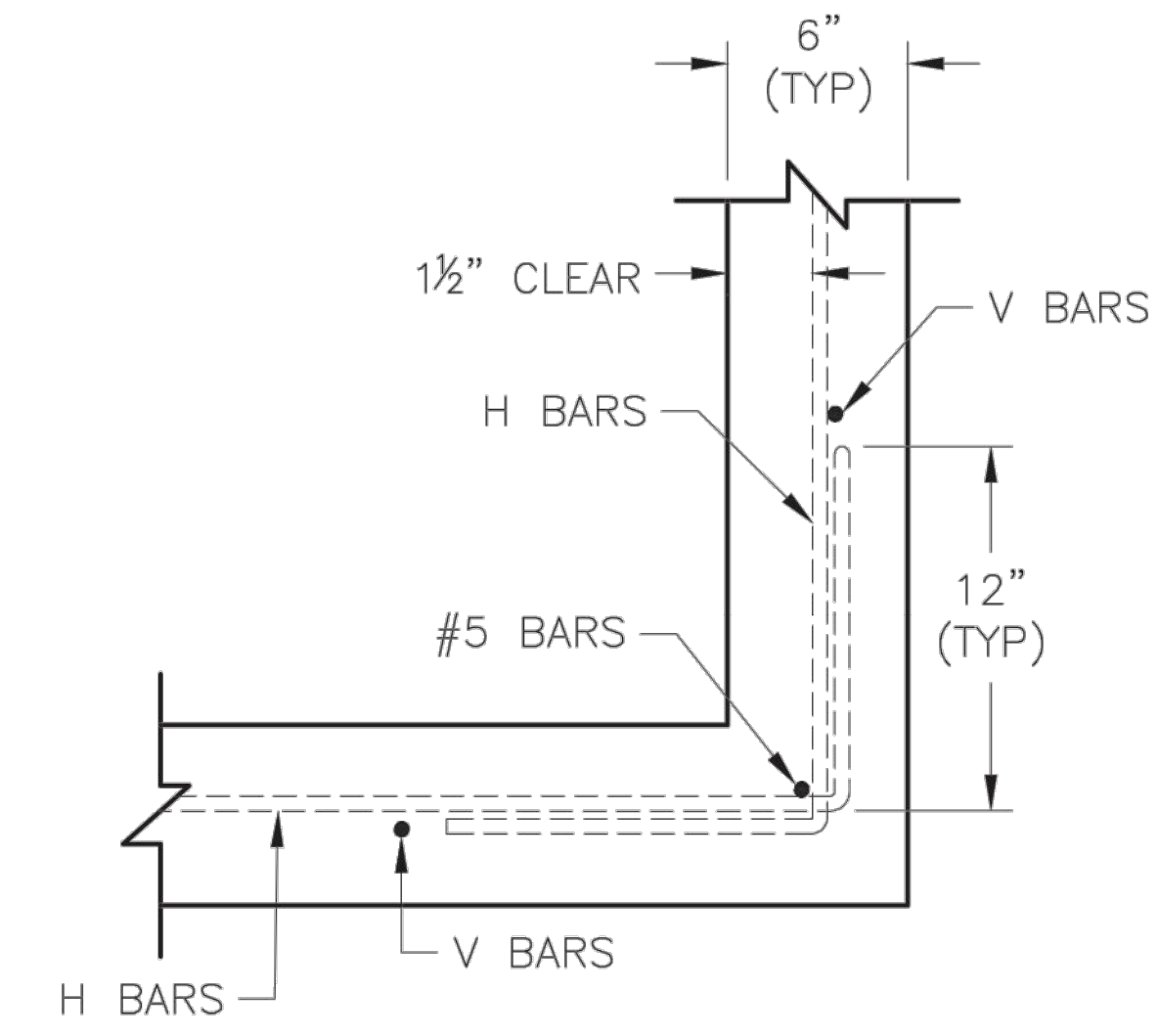
SECTION A-A



FRONT ELEVATION

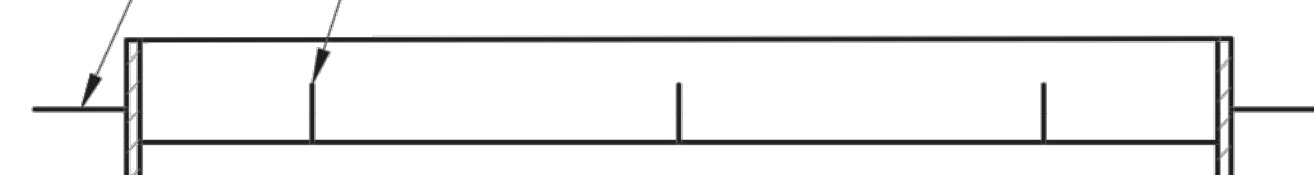


SECTION B-B



WALL CORNER DETAIL

CONCRETE CURB DOWELS (#4 BARS) SHALL BE CENTERED VERTICALLY AND HORIZONTALLY
 CONCRETE TOP SLAB (#4 BARS) AT 1'-0" CENTERS MAX



PLAN VIEW

STEEL FRAME NOTES:

1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM-PRIME #37H-78 PRIMER (GRAY) OR EQUAL.

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Development Services Department
 Lee's Summit, Missouri
 11/07/2023

GENERAL NOTES:

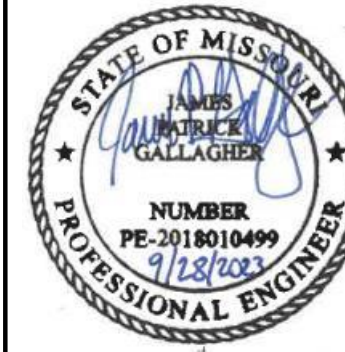
1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
5. STEPS SHALL BE SPACED AT 1'-4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
6. BEVEL ALL EXPOSED EDGES WITH 3/4" CHAMFER OR 1/2" TOOLED EDGE.
7. ON-GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON-SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON-SHRINKABLE GROUT
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

LEE'S SUMMIT MISSOURI
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Project: STANDARD DETAILS
 CITY OF LEE'S SUMMIT, MO
 LEE'S SUMMIT, JACKSON COUNTY, MO
 Sheet Name: CURB INLET DETAIL

Drawn By: MJF
 Checked By: DL
 Date: 05/2021
 Proj. #:

STM-1



REV. NO.	DATE	REVISIONS DESCRIPTION

STORM SEWER DETAILS	REVISIONS
THE VILLAGE AT DISCOVERY PARK COLBORN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	2023
LEE'S SUMMIT, MISSOURI	

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 C_XALTA_B2104643
 USER: kwilliams2
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 F_PTBK_D02104643
 F_PBASE_D02104643
 C_FROAD_D2104643
 C_PBASE_D02104643
 F_LTO-DTL_D2104643

GENERAL NOTES:

- The contractor shall have one (1) signed copy of the plans (approved by the City of Lee's Summit) and one (1) copy of the appropriate Design and Construction Standards and Specification at the job site at all times.
- Construction of the improvements shown or implied by this set of drawings shall not be initiated or any part thereof undertaken until the Director of Public works or his designee is notified of such intent, and all required and properly executed bonds and contract agreements are received and approved by the City. The Contractor shall notify the inspector of the exact construction schedule so that inspections of the street light installation can be made.
- The Construction covered by these plans shall conform to all applicable standards and specifications of the Public Works Department of the City of Lee's Summit, Missouri, in current use. Specifically, but not exclusive to: Street Lighting Specification: Section 2800. Street Lighting Standard Drawings: SL-1 through SL-5.
- All workmanship and materials shall be subject to the inspection and approval of the Public Works Department of the City of Lee's Summit, Missouri.
- All traffic control in conjunction with the street lighting construction shall be in conformance with the Manual on Uniform Traffic Control Devices (MUTCD) and the City's Standard Drawings sheet "Typical Traffic Control for Street Lighting Construction".
- The Contractor shall, by his own investigation, and prior to commencing work, satisfy himself as to the surface and subsurface conditions to be encountered. No additional payments will be made for excavation of rock and backfill materials.
- Existing underground (U/G), overhead (O.H.) utilities, and drainage structures have been plotted from available information and therefore their locations must be considered approximate only. It is the responsibility of the individual Contractor to exactly locate each utility before actual construction, and be fully responsible for any and all damages, which might be occasioned by the Contractor's failure to exactly locate and preserve any and all utilities. In addition, the Contractor shall avoid disruption of services provided by the utilities and shall insure that proper clearances (overhead and underground) are maintained for the duration of construction. See cover sheet for utility company contact information.
- The Contractor shall stake the location of all street lighting poles, power supplies, and junction or pull boxes to be installed. The Engineer or his designee shall inspect the staking prior to any excavation and/or construction. Minor relocation of equipment to avoid conflicts may be allowed with the approval of the Engineer or his designee.
- All street light poles, conduit, junction or pull boxes, and power supplies shall be located within the City's right-of-way or general utility easements.
- Screw-in anchor foundations have been assumed for all areas, unless otherwise noted in the plans. In the event a screw-in anchor may not be installed, then the Contractor may, at his own option, install the screw-in anchor within a pre-drilled hole, or pour a concrete foundation. No change in payment shall be made for foundation substitutions. All pre-drilled holes shall be backfilled with flowable backfill. All conduit trenches shall be backfilled with earth or AB-3 and properly compacted in accordance with the Specifications. The top 4" to 6" of backfill shall be topsoil.
- Factory conduit bends (PVC 90-degree elbows) shall be installed into all pole bases, junction boxes, pull boxes, and power supplies. Couplings shall be used to transition between HDPE and PVC conduits.
- Galvanized Rigid Steel (GRS) conduit is to be used if conduit is to be installed on a structure. All GRS conduits that are to be used shall be cleaned by the Contractor with a mandrel prior to installation of cable.
- Contractor shall install a 2-1/2" PVC (Schedule 40) conduit with pull string to the base of the secondary service point. Contractor shall coordinate secondary service hook-up with the electrical utility company.
- Bracket arms shall be oriented perpendicular to the roadway unless otherwise indicated on the plans.
- All splices to the distribution cable shall be made with junction boxes, pull boxes, or pole bases using required connectors. Splices will only be allowed in junction or pull boxes where a circuit branches. All splices in boxes shall be protected with a waterproof resin splice kit.
- All distribution cables in junction boxes, pull boxes, and power supplies shall be labeled with round aluminum identification tags attached to the cables with copper wire. The power supply and circuit number shall be stamped or engraved on each tag.
- All grounding requirements and National Electric Code requirements shall be met for the street lighting installation to prevent any hazards to the public.
- All existing street lighting equipment to be used in place (U.I.P.) unless otherwise noted. Damage to any existing street lighting equipment due to the construction shall be the responsibility of the Contractor. The equipment shall be replaced or repaired (as directed by the City) with materials equal or better than the existing material.
- The Contractor shall be responsible for coordinating the removal of existing equipment with the respective owner(s). The Contractor shall remove, disassemble, and deliver salvageable equipment per the instructions in the special provisions or as discussed at the pre-construction meeting. The Contractor shall be responsible for any damage or loss of salvageable equipment.
- The Contractor shall take all precautions necessary to minimize the downtime of the existing street lighting systems to be modified.
- All existing curb and gutter, sidewalk, pavement, drainage structures, and irrigation systems damaged during the street lighting construction shall be replaced to meet or exceed the original condition. Unless otherwise directed, grassy areas which were originally sodded shall be re-sodded. All restoration work will be at the Contractor's expense, and shall be acceptable to the Engineer or his designee.
- Any equipment damaged during construction shall be replaced at the contractor's expense.
- The Contractor shall be required to provide and attach street addresses and identification numbers on the power supply cabinets, provide and attach the identification and pole numbers on each street light pole as indicated in the City's Standard Drawings. The address and identification labels/stickers are subsidiary to other items, not separate payment.
- Substantial completion of the street light system shall be defined as all components of the system fully operational. Substantial completion shall allow for testing of the system.
- Final acceptance of the street light system shall be defined as final written approval and acceptance by the City, including completion or correction of all punch list items and the street light system fully operational for a time period of fifteen (15) days, without any problem, as noted in the Specifications. Contractor shall provide marked up as-built plans prior to final acceptance by the City.

PROJECT SPECIFICATION NOTES:

- The center of all pole foundations within the median shall be centered in the median, unless otherwise noted in the plans.

RECAPITULATION OF QUANTITIES

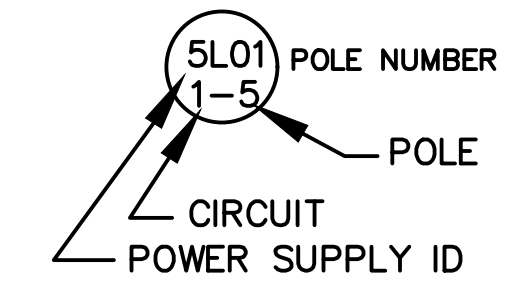
BILL OF MATERIALS (1)		
ITEM	UNIT	QUANTITY
RELOCATION OF EXISTING STREET LIGHT POLE	EACH	2
STREET LIGHT POLE (P25S)	EACH	
6' BRACKET ARMS	EACH	2
15' BRACKET ARMS	EACH	2
B40D SCREW-IN FOUNDATION	EACH	2
COBRA-HEAD LUMINAIRE w/250 WATT H.P.S. EQUIVALENT LED LAMP	EACH	
TYPE I JUNCTION BOX	EACH	
TYPE II JUNCTION BOX	EACH	1
4-CIRCUIT POWER SUPPLY ASSEMBLY	EACH	
POWER SUPPLY FOUNDATION	EACH	
3" SCHEDULE 40 P.V.C. CONDUIT (FROM CONTROL CENTER TO POWER POLE)	LN. FT.	
2" HIGH DENSITY POLYETHYLENE (HDPE) CONDUIT (GRAY)	LN. FT.	500
3-1c No. 2 DISTRIBUTION CABLE	LN. FT.	
3-1c No. 3 DISTRIBUTION CABLE	LN. FT.	540
1-1c#4 TRACER WIRE AND PULL STRING	LN. FT.	
1c No. 10 POLE AND BRACKET CABLE	LN. FT.	
BREAK-AWAY NON-FUSED CONNECTOR KITS	EACH	
BREAK-AWAY FUSED CONNECTOR KITS	EACH	

NOTES:

(1) THESE APPROXIMATE QUANTITIES WERE PREPARED SOLEY FOR THE CONTRACTOR'S CONVENIENCE. IT IS NOT GUARANTEED THAT THIS LIST OF MATERIALS CONSTITUTES ALL ITEMS REQUIRED FOR THE COMPLETION OF THE WORK.

STREET LIGHT LEGEND

- RELOCATED TWIN-HEAD ROADWAY LUMINAIRE
- POLE AND ASSOCIATED HARDWARE
- TYPE 2 JUNCTION BOX
- CLASS 1 PULL BOX
- PAD MOUNTED POWER SUPPLY (SHADED AREA INDICATES PHOTOCELL ORIENTATION (NORTH OR EAST))
- STREET LIGHTING CONDUIT
- CONSTRUCTION NOTE NUMBER
- STEEL POLE
- WOOD POLE
- SIGNAL MAST ARM POLE
- SIGNAL PEDESTAL
- TRAFFIC SIGNAL CONTROLLER CABINET
- SECONDARY SERVICE POINT
- BOX NUMBER
- EXISTING DUAL ARM STREET LIGHT
- STREET LIGHTING CONDUIT



WIRING DIAGRAM

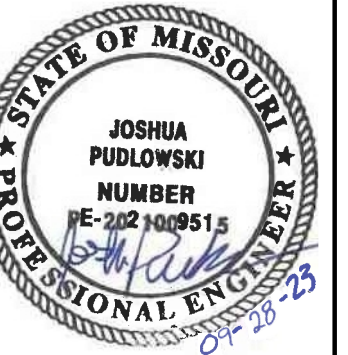
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Lee's Summit, Missouri

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olsson

1301 Burlington Street
North Kansas City, MO 64116
www.olisson.com
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REVISIONS DESCRIPTION

DATE

REV. NO.

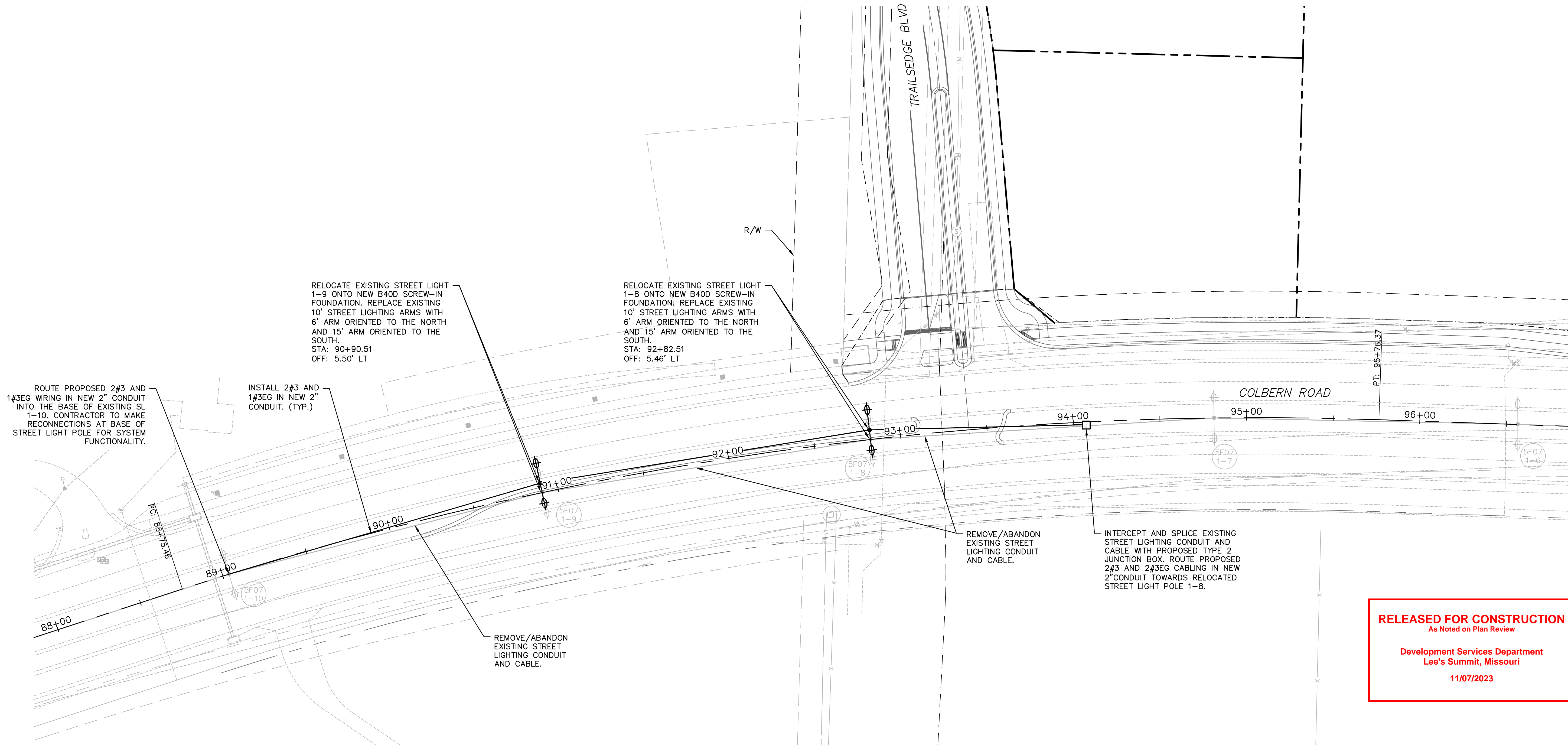
2023

STREET LIGHTING PLAN
GENERAL NOTES & LEGEND

THE VILLAGE AT DISCOVERY PARK
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
LEE'S SUMMIT, MISSOURI

drawn by: SRH
 checked by: JSC
 approved by: JSS
 QA/QC by: SLI
 project no.: 021-04643
 drawing no.: 11/07/2023
 date: 8/27/2023

DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final\Plans\Sheets\JTTC\LIGHTING\PLAN\PLN_V_LGT_D2104643.dwg
 DATE: Sep 27, 2023 4:53pm
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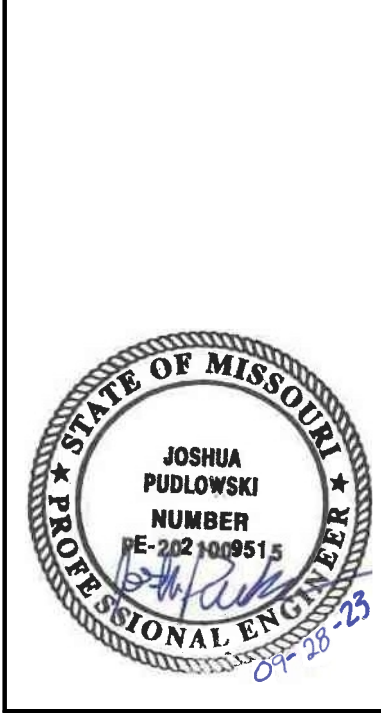
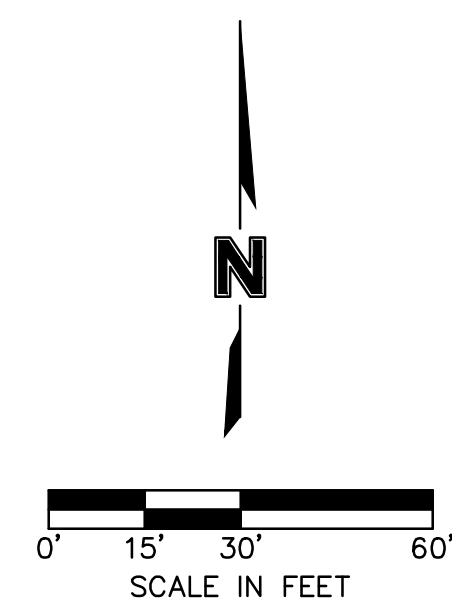


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 Lee's Summit, Missouri
 11/07/2023

LIGHTING POLE SCHEDULE								
POLE NO	STATION	OFFSET	POLE TYPE	BRACKET ARM LEFT	BRACKET ARM RIGHT	LED LUMINAIRE	DISTRIBUTION	BASE
1-8	92+82.51	5.46' LT	EXISTING	6'	15'	EXISTING	TYPE II	B40D
1-9	90+90.51	5.50' LT	EXISTING	6'	15'	EXISTING	TYPE II	B40D

* POLES SHALL BE INSTALLED IN CENTER OF MEDIAN
 NOTE: THE CONTRACTOR SHALL COORDINATE WITH THE CITY TO OBTAIN CABINET AND POWER SUPPLY ADDRESS INFORMATION PRIOR TO INSTALLATION.

JUNCTION BOXES		
JUNCTION NUMBER	ALIGNMENT	STATION OFFSET
J1	COLBERN ROAD	94+07.32 ; 1.83' RT

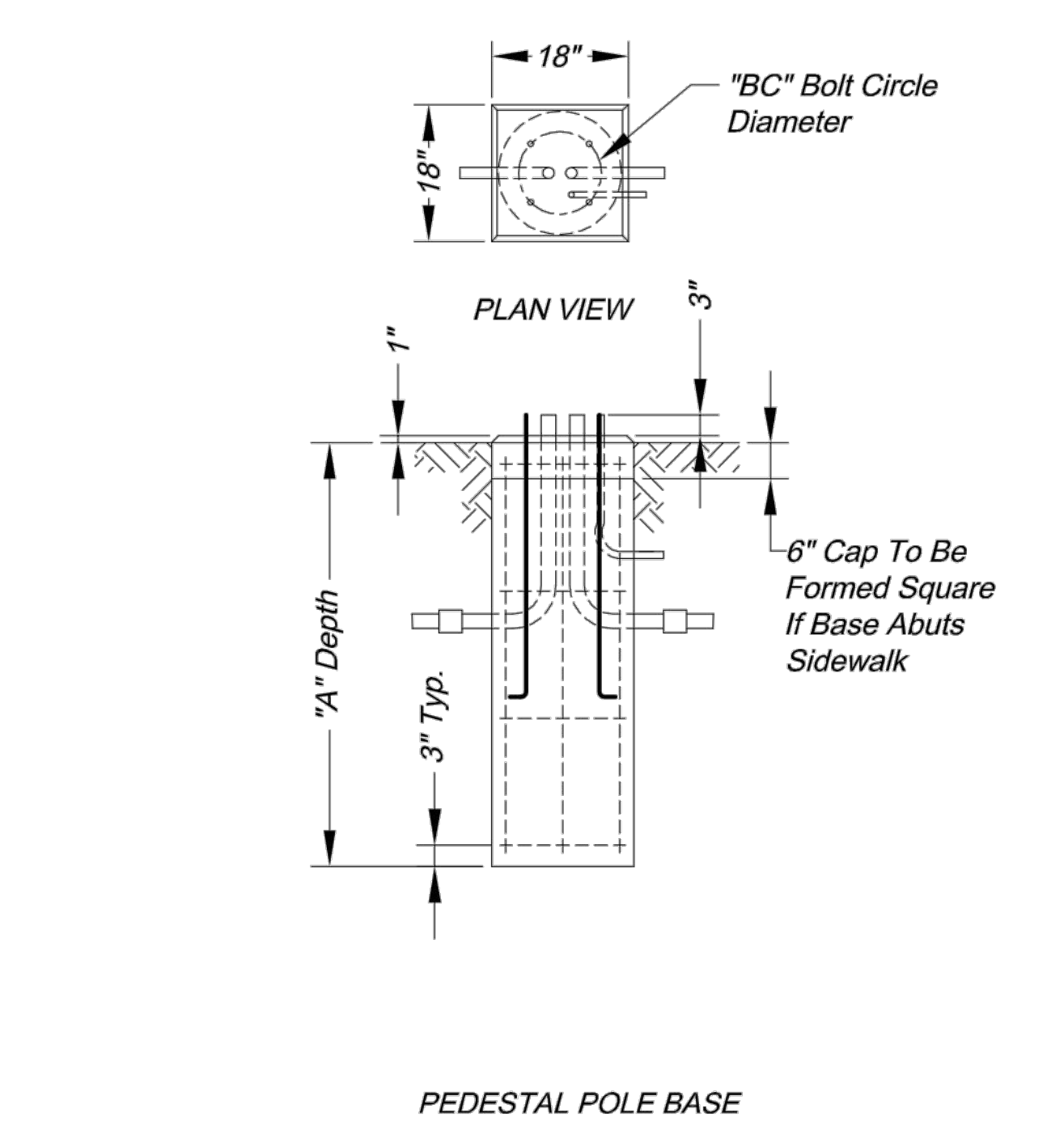
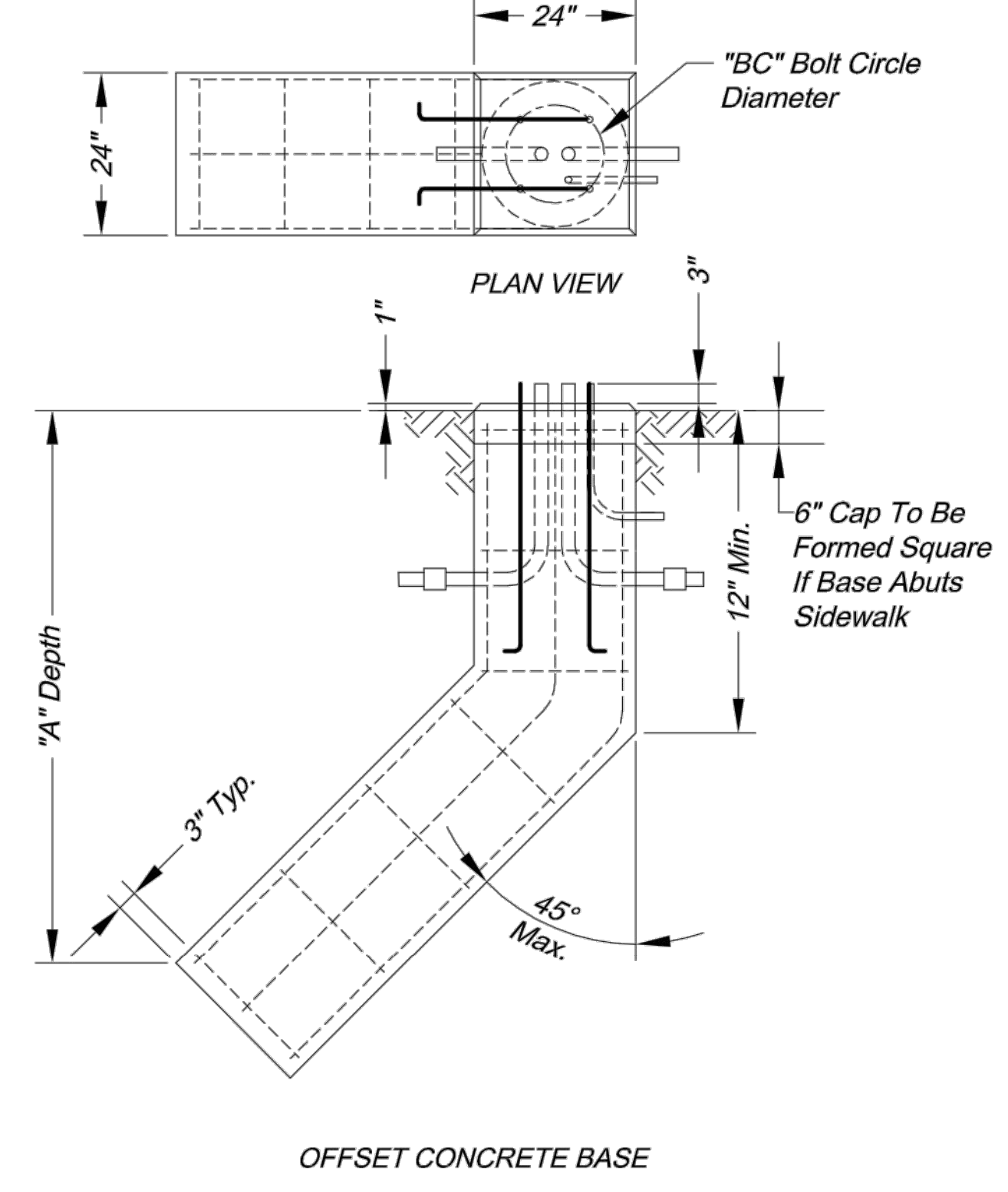
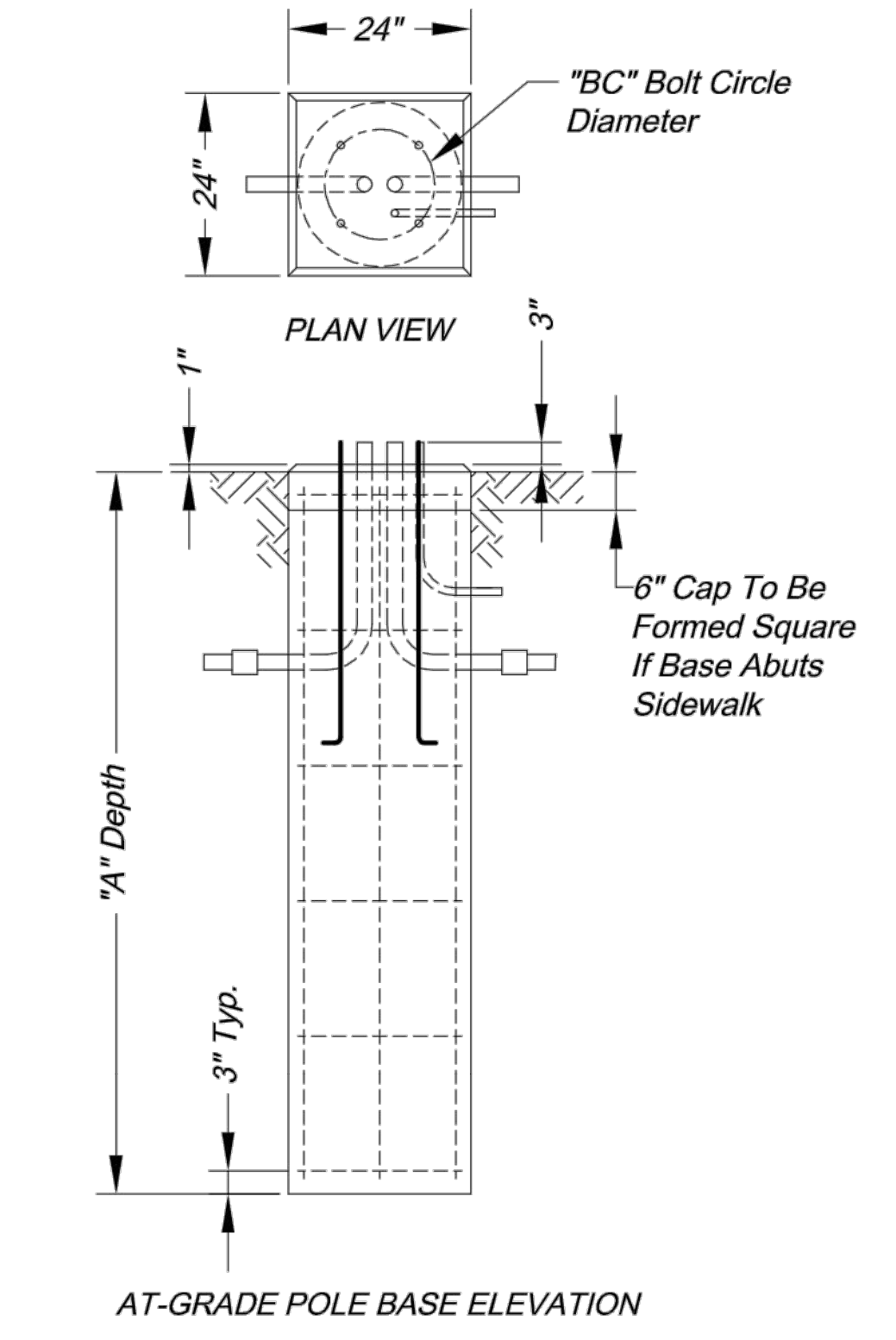
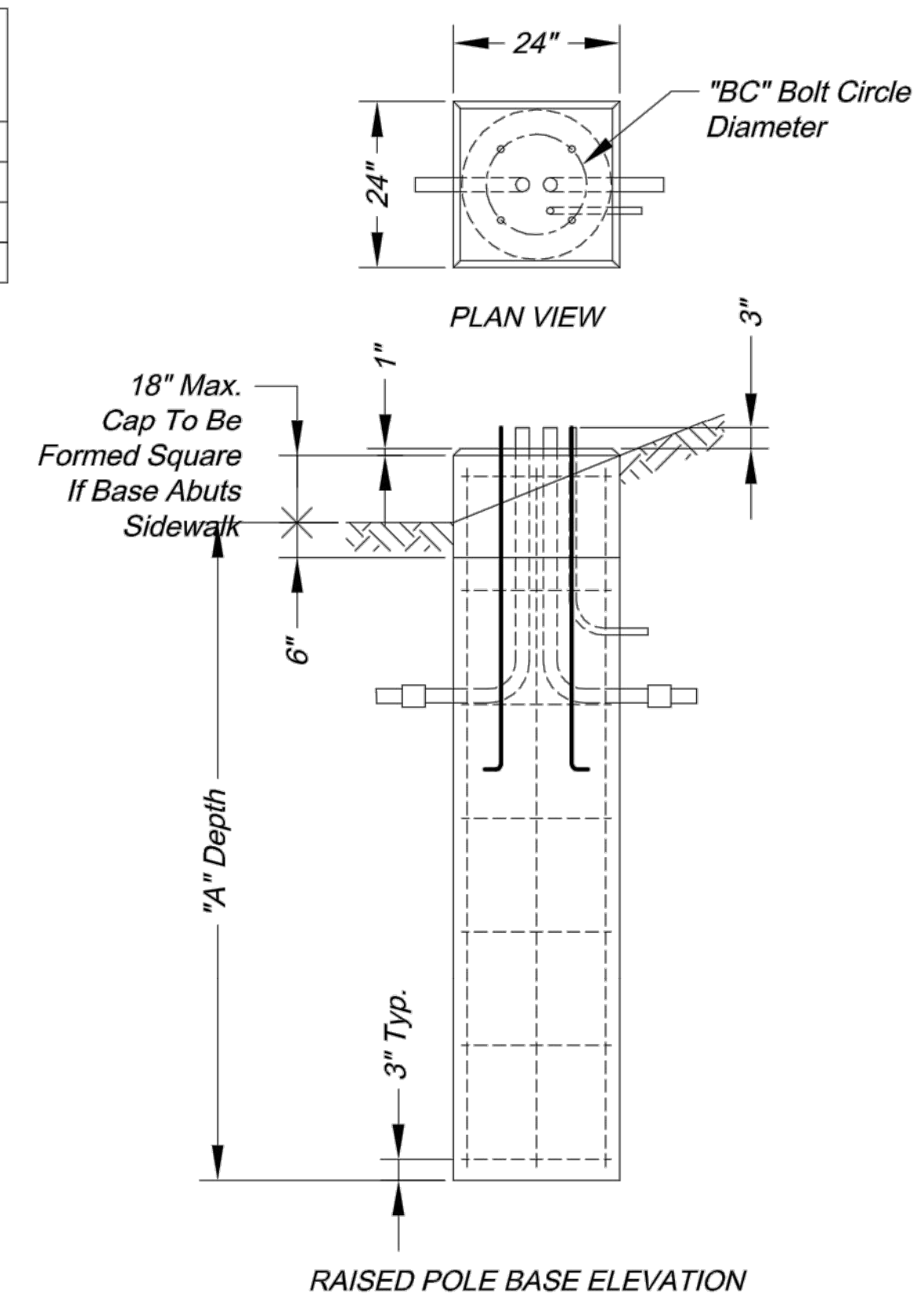
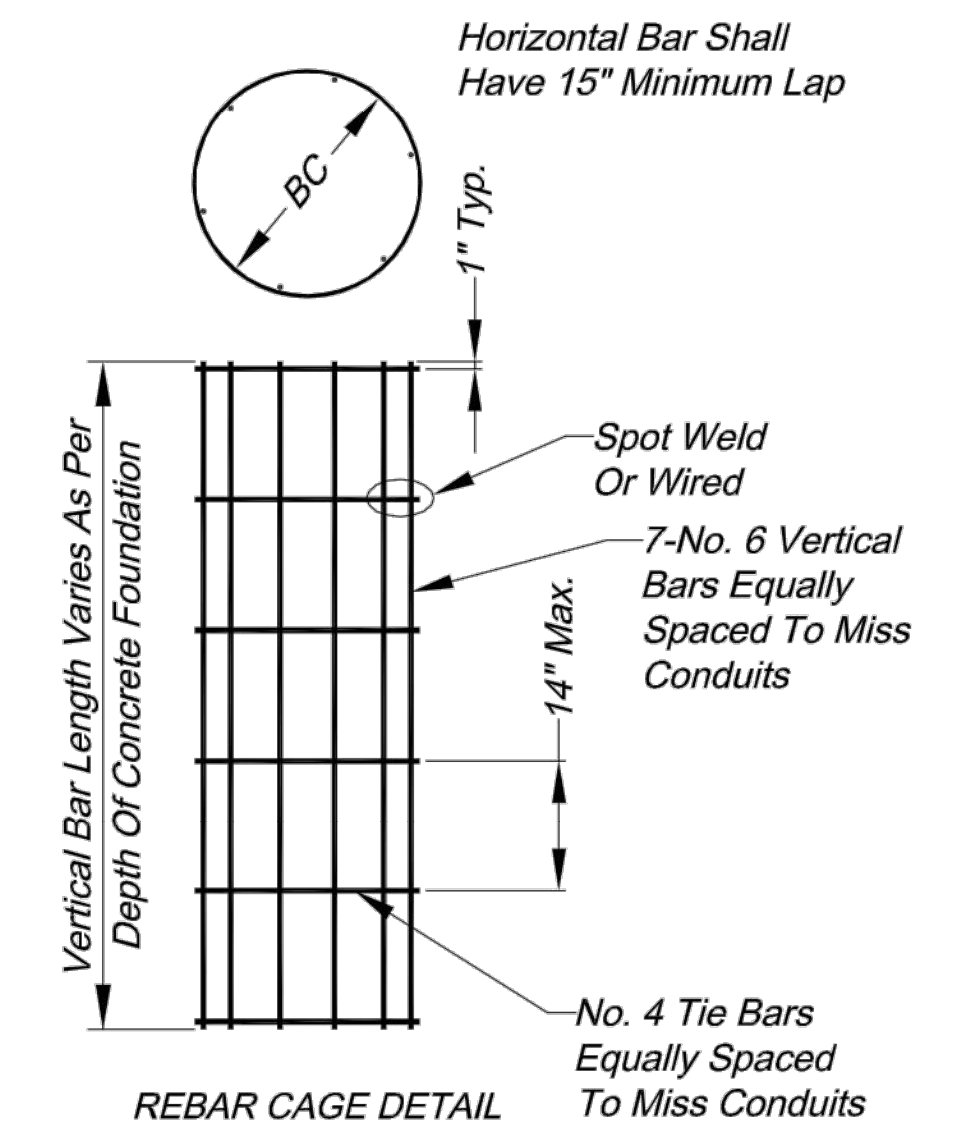


REV. NO.	DATE	REVISIONS DESCRIPTION

LIGHTING RELOCATION
 COLBERN ROAD
 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

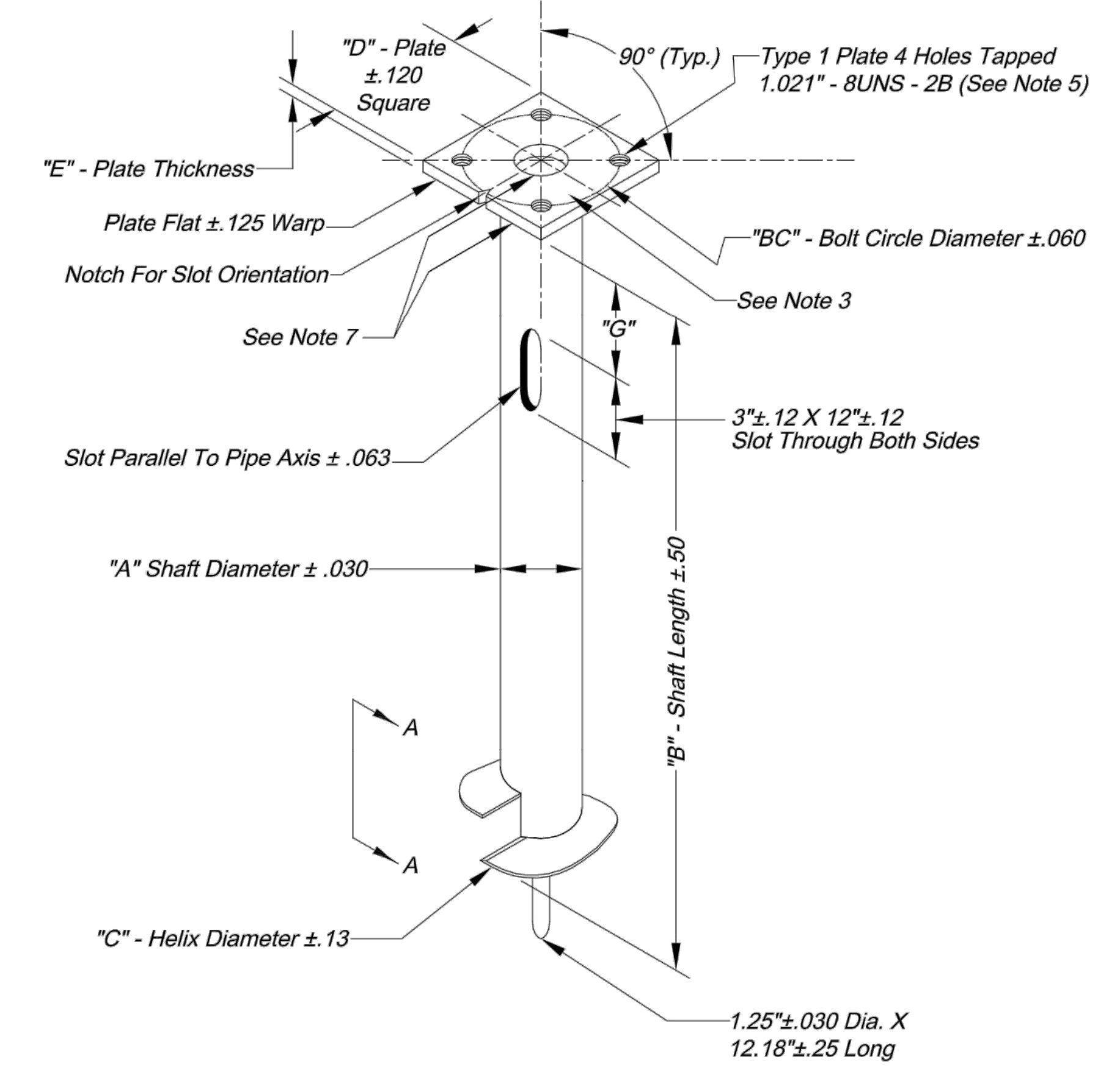
drawn by: SRH
 checked by: JSC
 approved by: JSS
 QA/QC by: SLI
 project no.: 021-04643
 drawing no.: 43 OF 86
 date: 9/27/2023

POLE TYPE	BRACKET ARM	DEPTH (A)	BOLT CIRCLE (BC)
P14	---	48"	9.5"
P30S or P30D	Single or Dual	72"	11.0"
P40S	Single	94"	11.5"
P40D	Dual	94"	14.5"

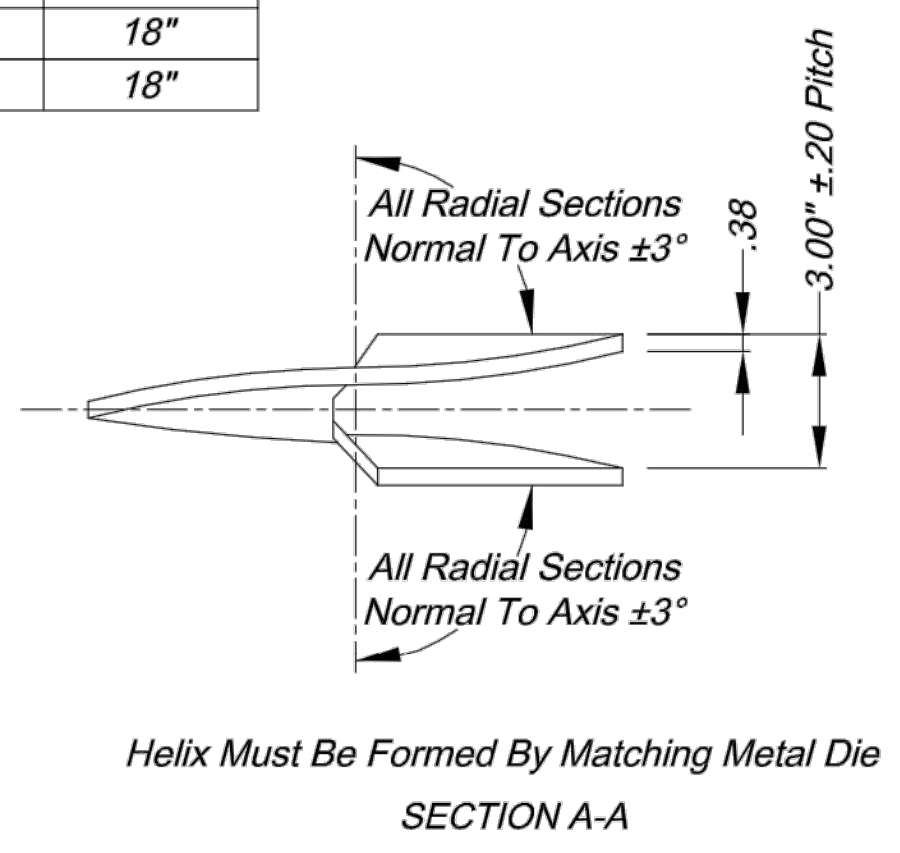


CONCRETE BASE DETAILS

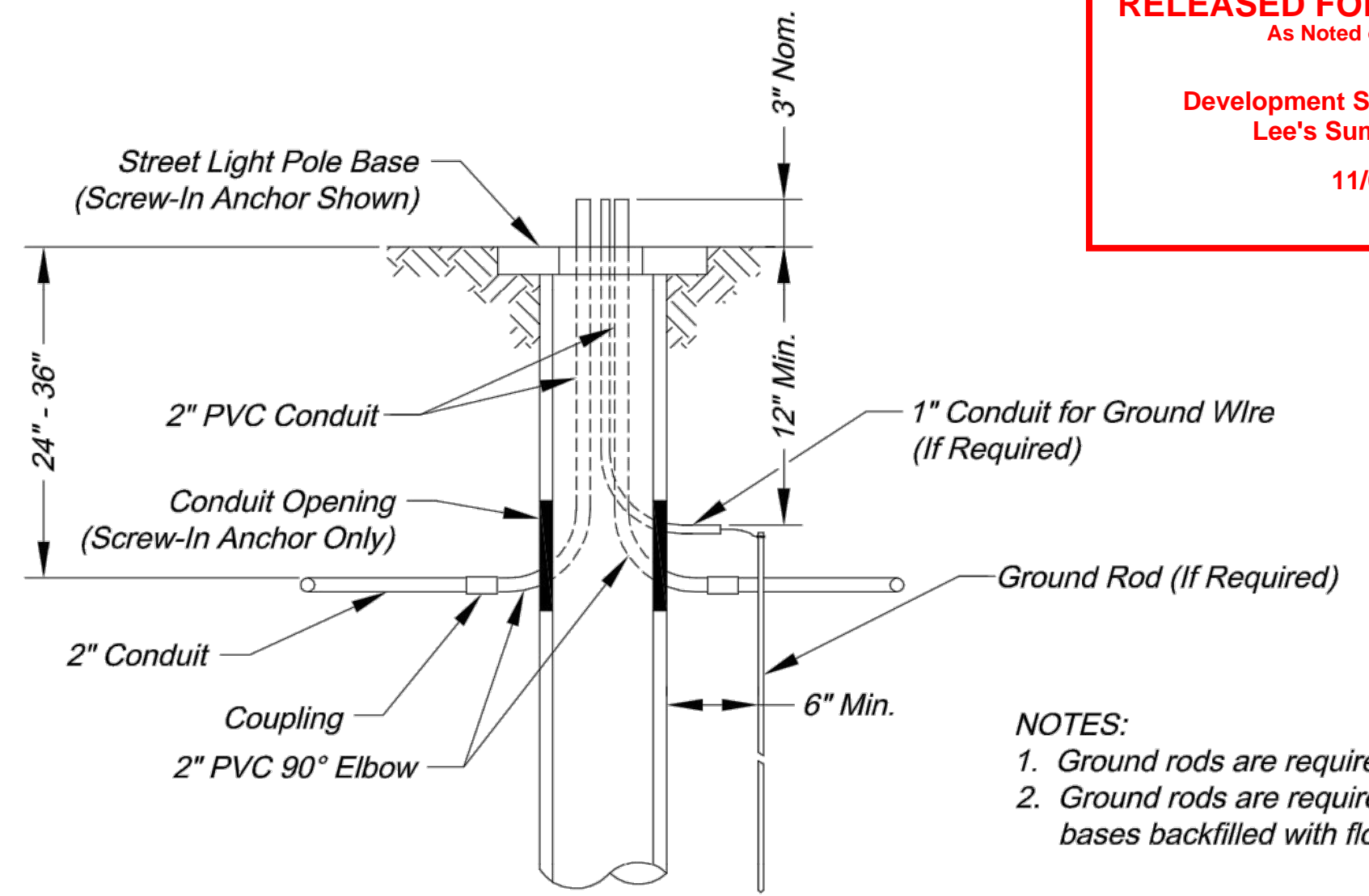
BASE TYPE	POLE TYPE	MINIMUM TORQUE RATING (lbs. ft.)	MAXIMUM TORQUE RATING (lbs. ft.)	SHAFT DIA. (A)	SHAFT LENGTH (B)	HELIX DIA. (C)	PLATE SIZE (D)	PLATE THICKNESS (E)	BOLT CIRCLE (BC)	SLOT LOCATION (G)
B14	P14	2,000	15,000	6"	48"	12"	10"	0.75"	9.5"	12"
B30	P30S & P30D	2,000	15,000	6"	60"	12"	12"	1.0"	11.0"	18"
B40S	P40S	2,000	20,000	8"	60"	14"	12"	1.0"	11.5"	18"
B40D	P40D	2,000	20,000	8"	60"	14"	15"	1.25"	14.5"	18"



- NOTES:**
- Finish: Hot dip galvanize per ASTM-A153 (latest revision).
 - Baseplate to be perpendicular to shaft axis ($\pm 1^\circ$) and hole and concentric (± 188 I.D. Fim) to shaft axis.
 - All bases shall be identified by the manufacturer's initials and the anchor type (1 or 2) permanently stamped into the top plate with 1/2" letters., the Julian date of manufacture shall be permanently stamped in 1/4" numerals.
 - Pilot point and shaft axes to be concentric (± 125 Fim) and in line ($\pm 2^\circ$).
 - Tap 1" holes on the specified bolt circle perpendicular to the baseplate. Clean and chase the threads after hot-dip galvanizing so that a bolt may be installed.
 - Preheat (room temperature 70°F), tumbleblast, handgrind, and clean baseplate, helix, and core on all weld areas.
 - Flame cut irregularities permissible:
 - Valleys not to exceed 3/32 in. below nominal surface level.
 - Peaks or positive irregularities not to exceed 1/32 in. above nominal surface level or intersections of nominal surfaces.
 - Manufacturer to have in effect industry recognized written quality control for all materials and manufacturing processes.
 - All material is to be new, unused and mill traceable meeting the following specifications:
 - Baseplate: ASTM A36-(latest revision) hot rolled steel plate (conform to AASHTO technical bul. #270).
 - Shaft: Steel pipe piles, seamless or straight welded, grade 2 per ASTM A252. Alternate material: pipe type E or S, grade B per ASTM A53.
 - Helix: ASTM A635-(latest revision) hot rolled steel plate
 - Pilot Point: ASTM A575-(latest revision) hot rolled steel
 - Bolt: ASTM A325 or Grade 5 SAE J429 - 1" diameter hot dip galvanized hex head bolt. Bolt shall include one each lock and flat washer.
 - The design and performance integrity of the foundation shall be verified by full-scale tests by qualified engineers independent of the manufacturer. Certified test reports shall be provided upon request.
 - Flame cut notch or projection will be on the base plate to indicate slot orientation.

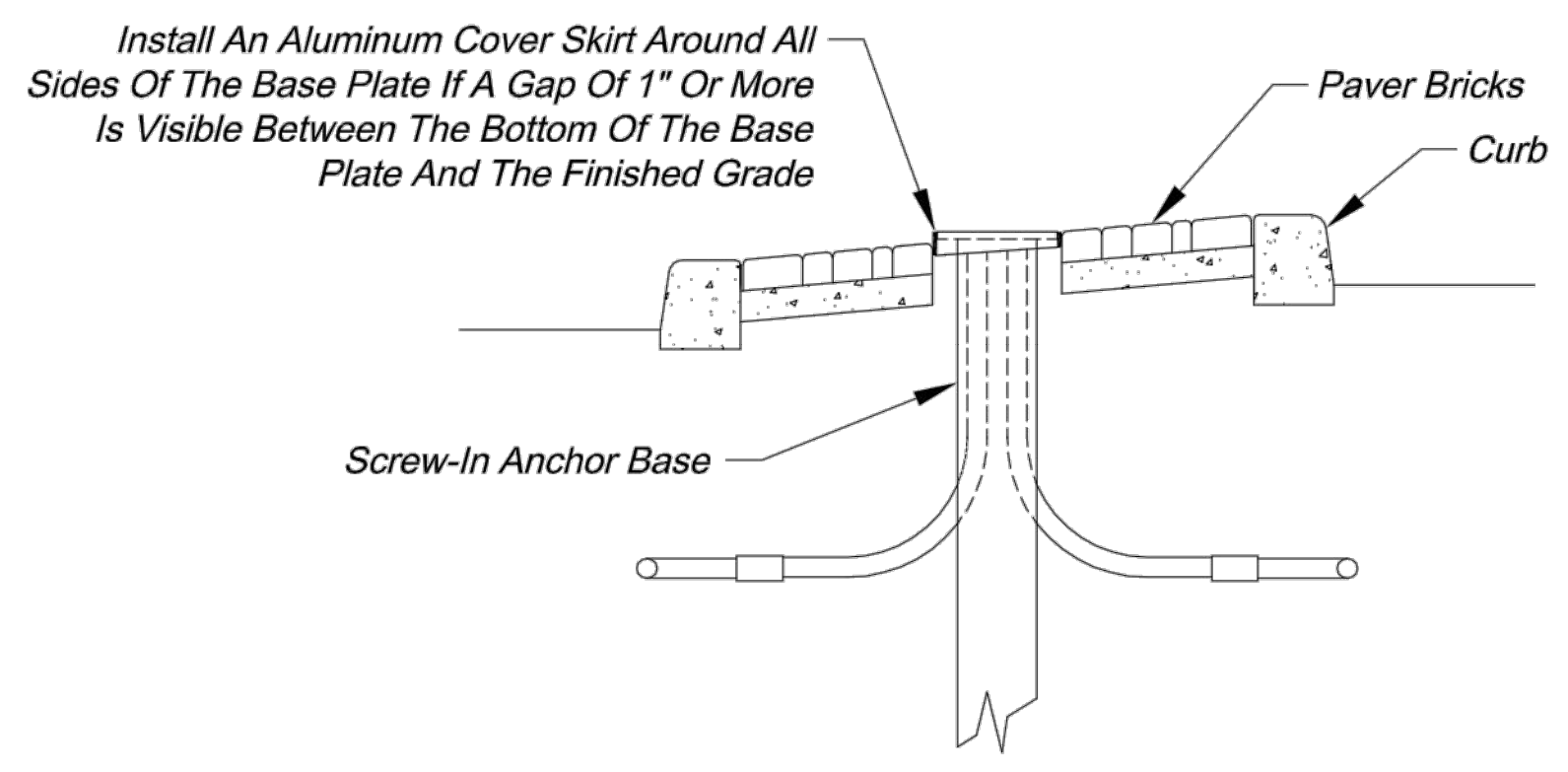


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CONDUIT ENTRANCE AND GROUNDING

- NOTES:**
- Ground rods are required for all concrete bases.
 - Ground rods are required for screw-in anchor bases backfilled with flowable fill or concrete.



COVERSKIRT REQUIREMENTS

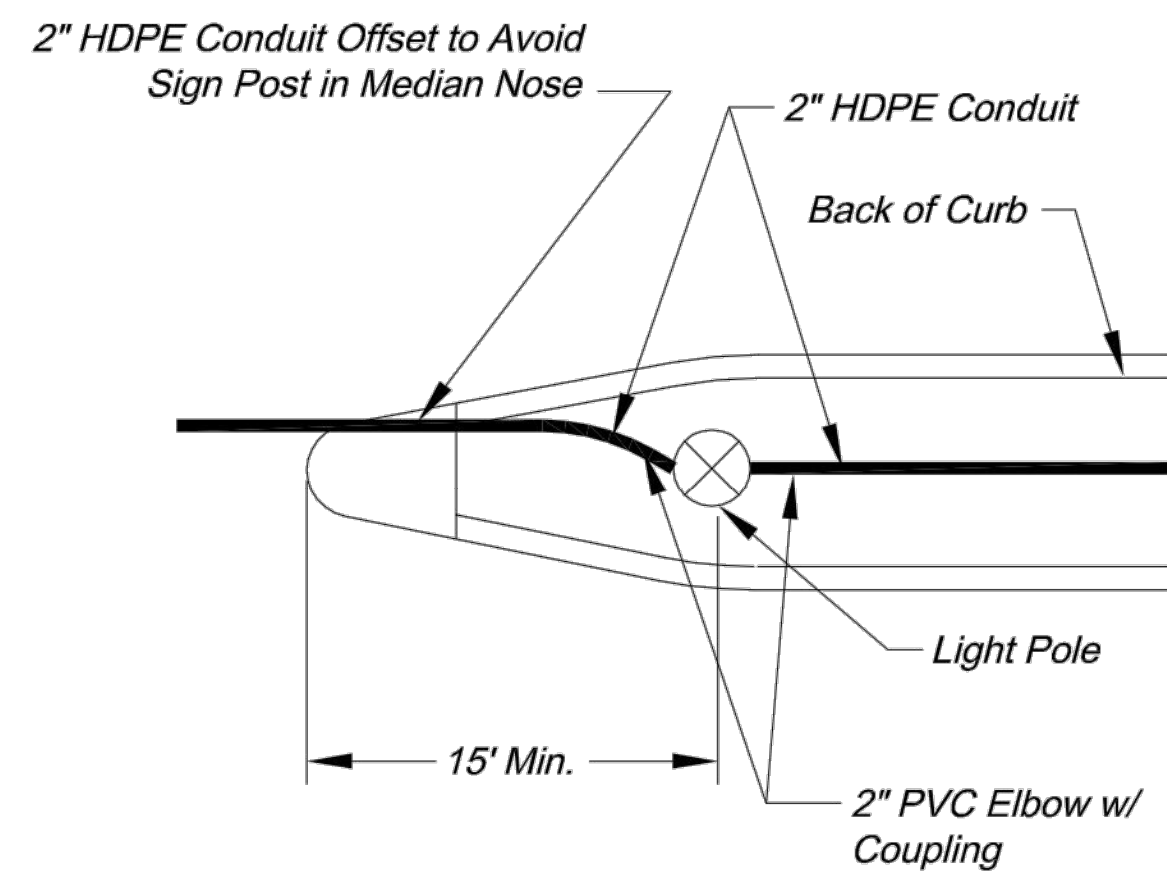
CITY OF LEE'S SUMMIT
 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION
 220 SE GREEN STREET
 LEE'S SUMMIT, MISSOURI 64063
 PHONE: (816) 969-1800 FAX: (816) 969-1809



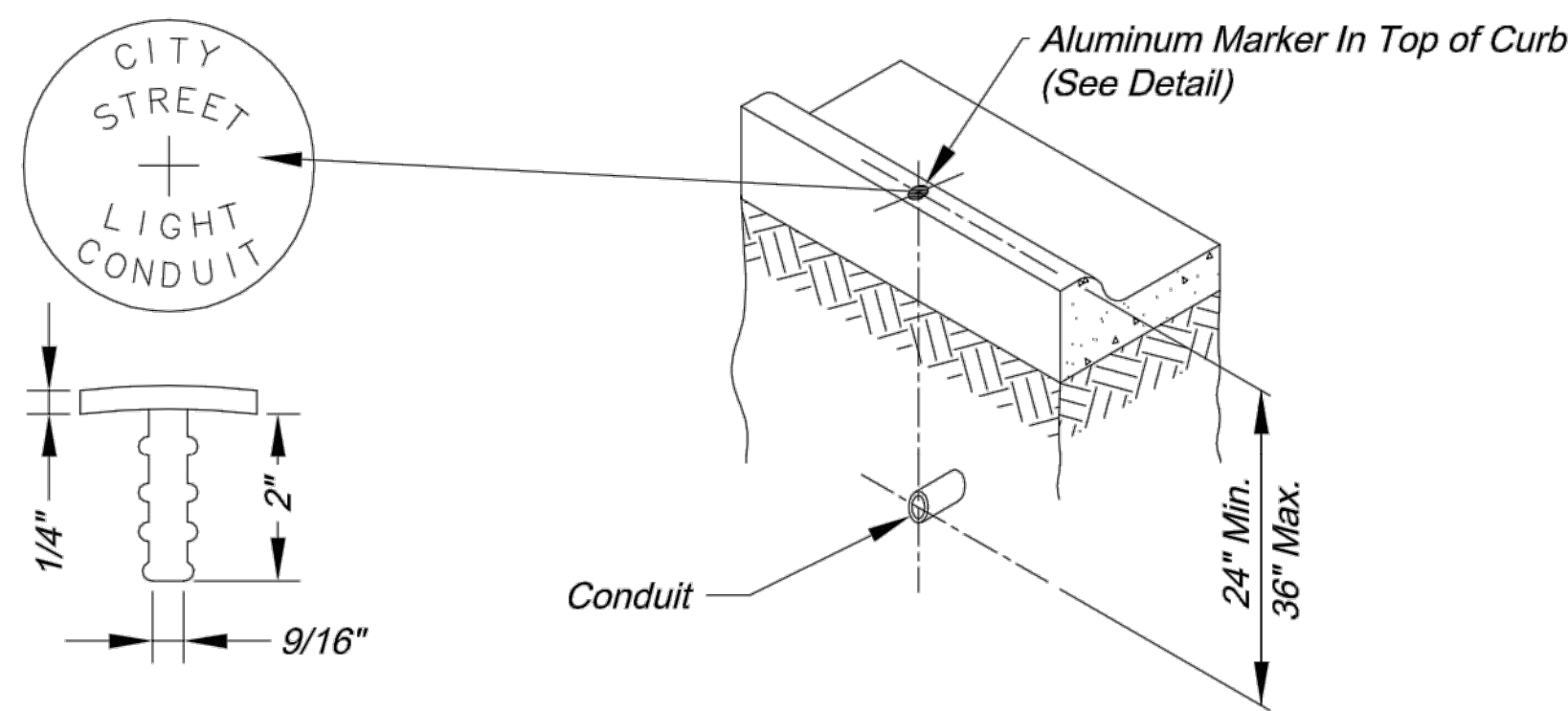
COLBERN ROAD
 POLE BASE DETAILS
 STANDARD DRAWING SL-2

Project:
 Drawn By: JH
 Checked By: JW
 Date: 08/21/2009

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11/07/2023



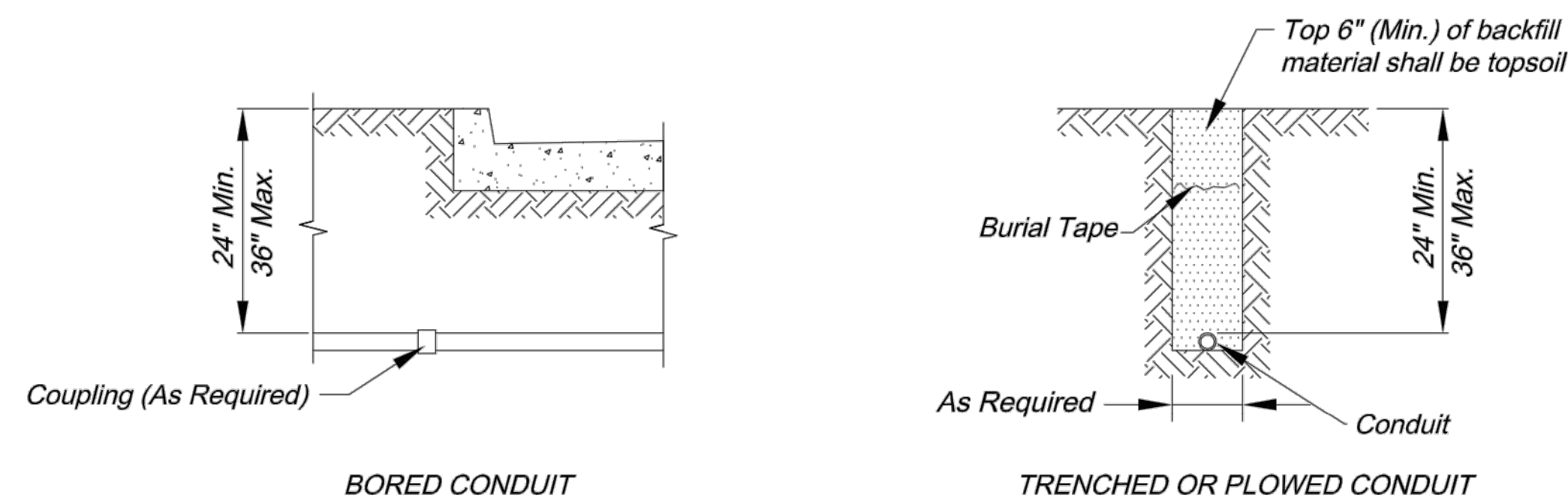
**STREET LIGHT POLE
IN MEDIAN**



CONDUIT MARKING DETAIL

NOTES:

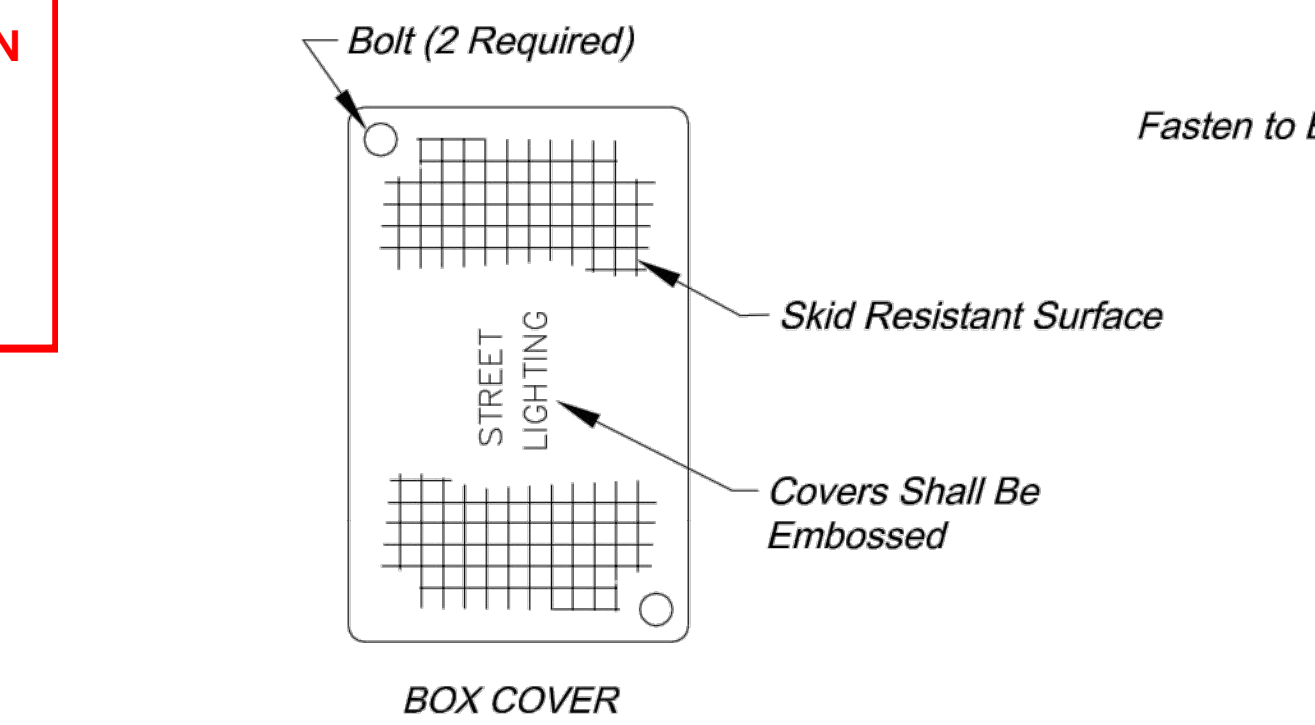
1. An aluminum marker shall be placed in the top of the curb directly over the conduit.
2. Markers shall be installed by drilling the curb and epoxying the marker in place. If installed in a sidewalk or curb ramp, the top of the marker shall be flush with the concrete surface.
3. No direct payment shall be made for conduit markers; they are subsidiary to the installation of conduit.



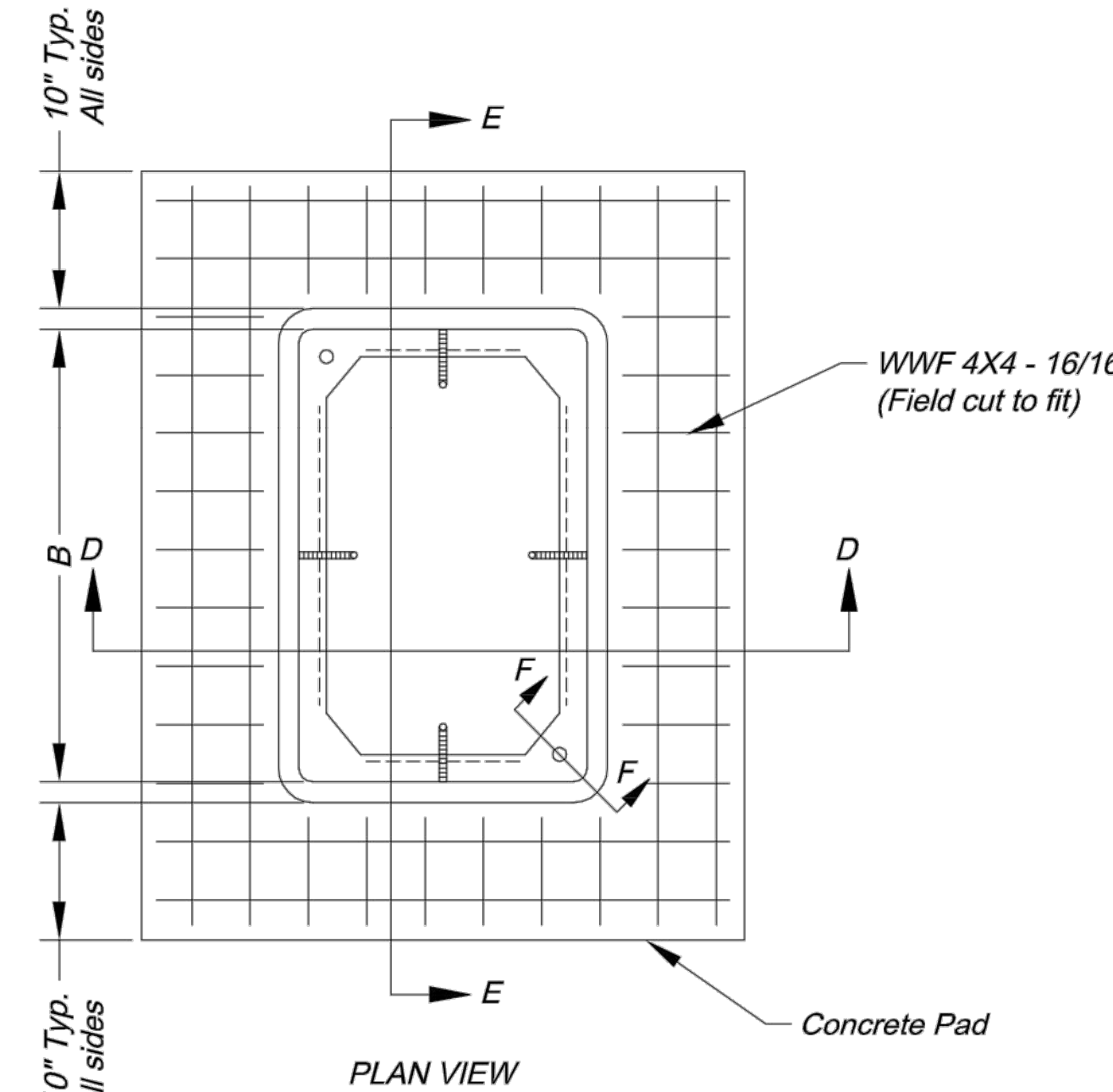
CONDUIT LOCATIONS

NOTES:

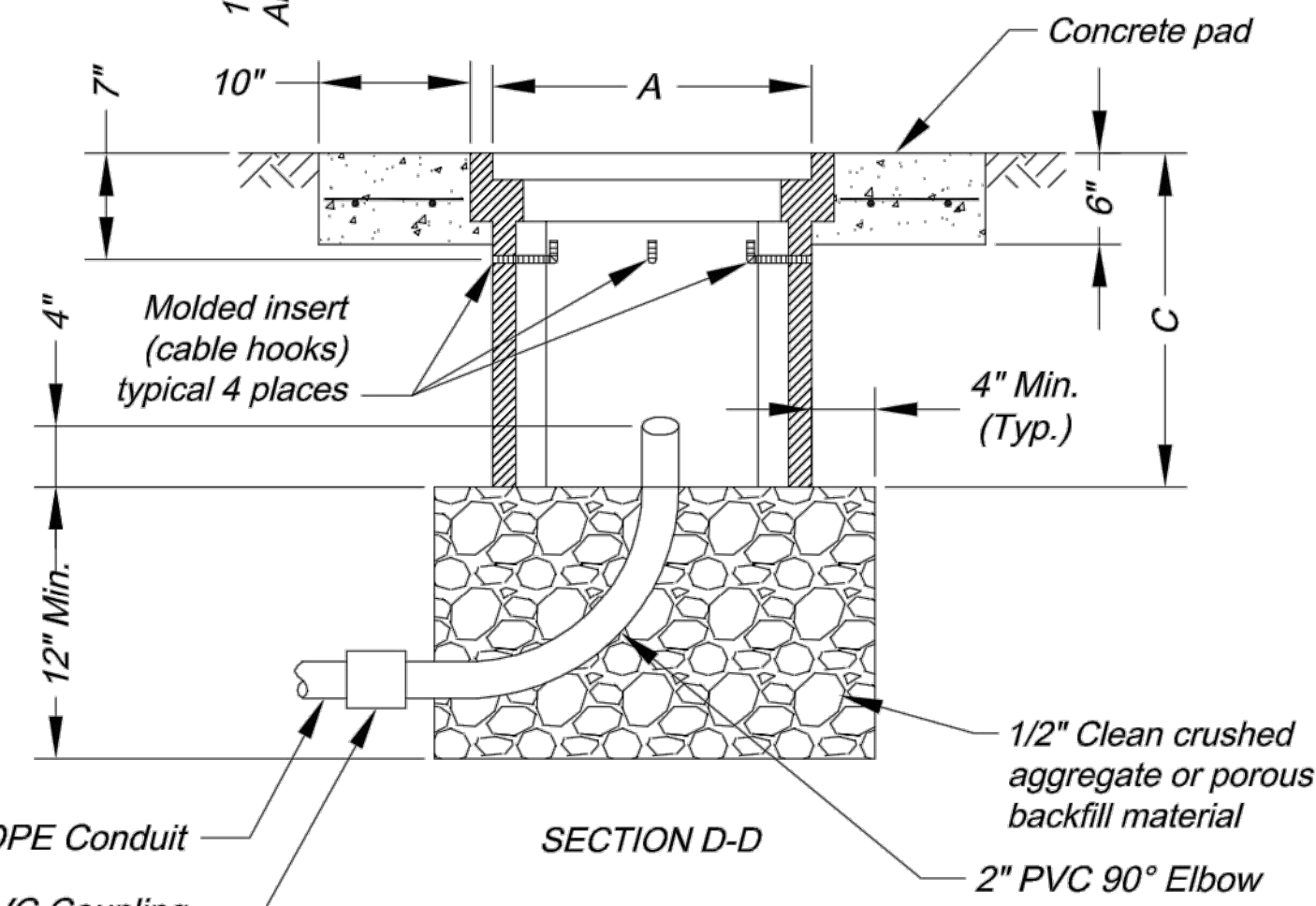
1. Backfill under paved surfaces shall be flowable fill.
2. The conduit shall not be covered unless inspected and approved by the City Engineer, so as to ensure proper depth, correct conduit material, and proper conduit end treatment.



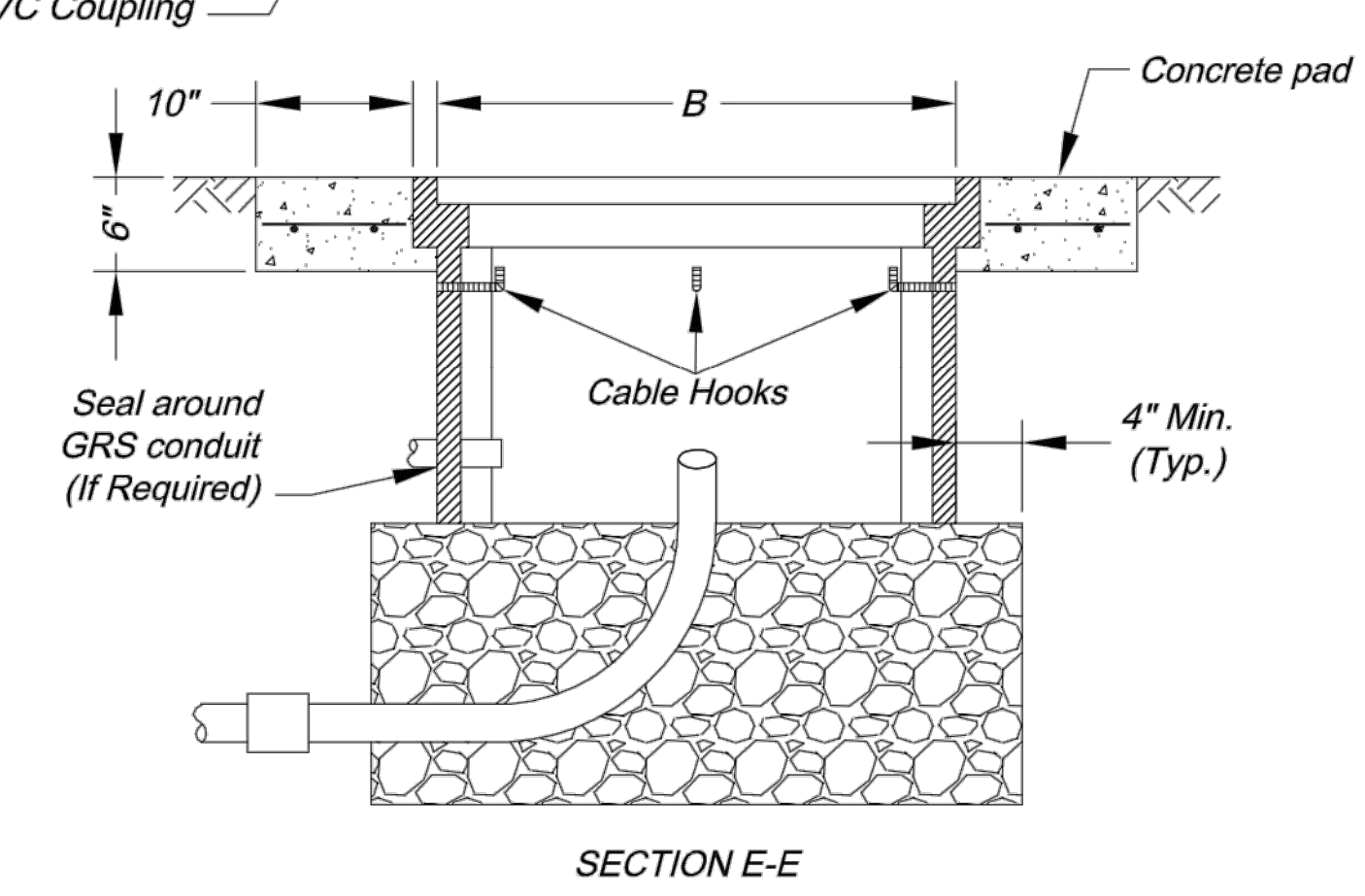
BOX COVER



PLAN VIEW

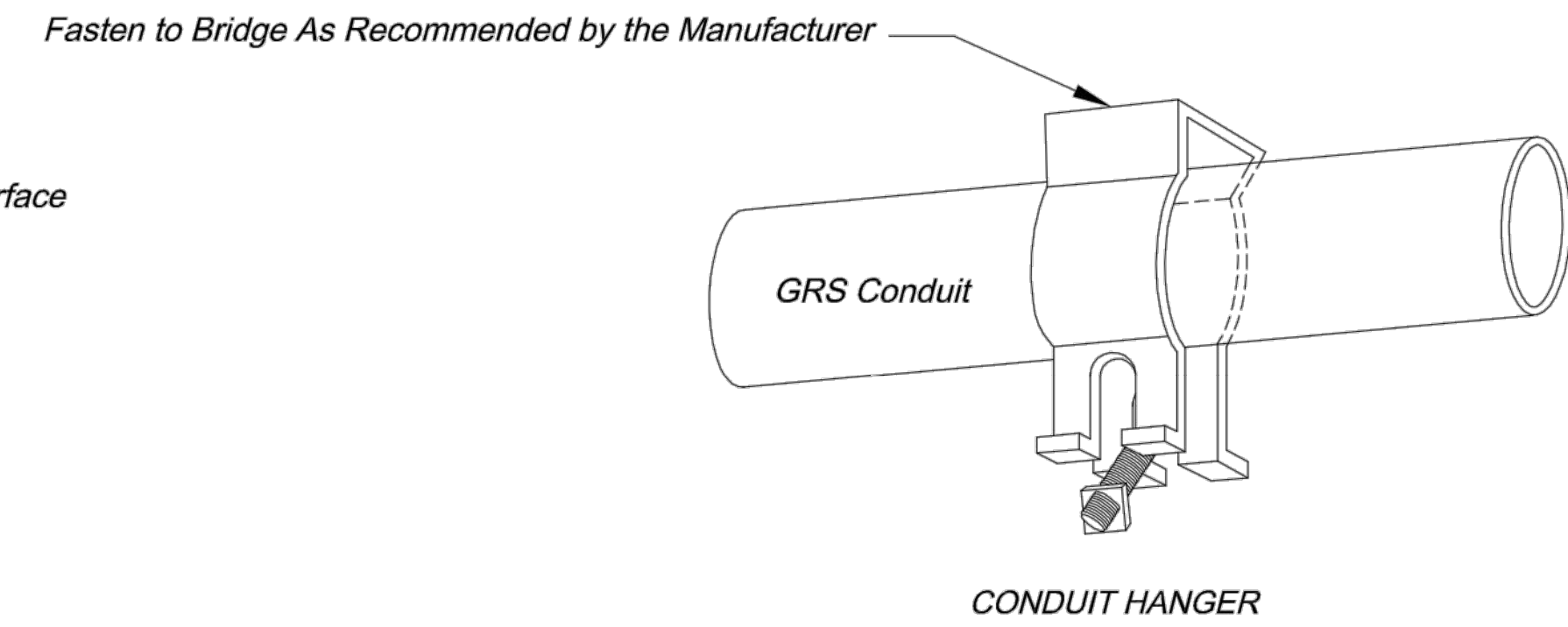


SECTION D-D

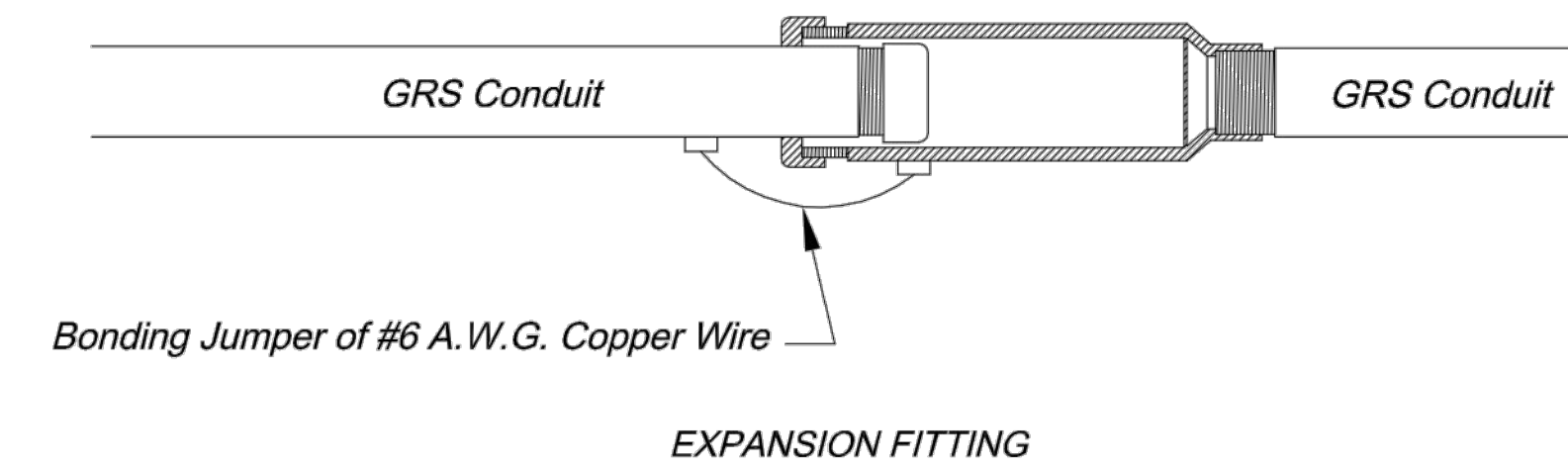


SECTION E-E

PULL OR JUNCTION BOX DETAILS



CONDUIT HANGER



EXPANSION FITTING

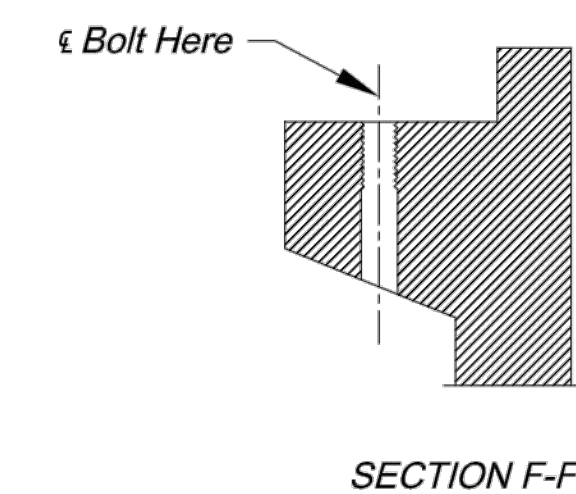
GRS CONDUIT DETAILS

NOTES:

1. All conduits installed above ground shall be GRS.
2. Conduit attached to bridges shall have expansion fittings installed at each end of the bridge and at each expansion joint on the bridge.
3. All GRS conduits shall be electrically bonded by a grounding bushing and ground wire as detailed.
4. Install the conduit and connector assembly to permit a 1/2 inch minimum longitudinal travel in either direction.

Number of Entering/Exiting Conduits	Box Type	Minimum Box Dimensions		
		A	B	C
1 - 2	Type 1 Junction Box	12"	12"	12"
3 - 4	Type 2 Junction Box	12"	18"	12"
> 4	Class 1 Pull Box	17"	30"	22"

All dimensions shown are nominal



SECTION F-F

NOTES:

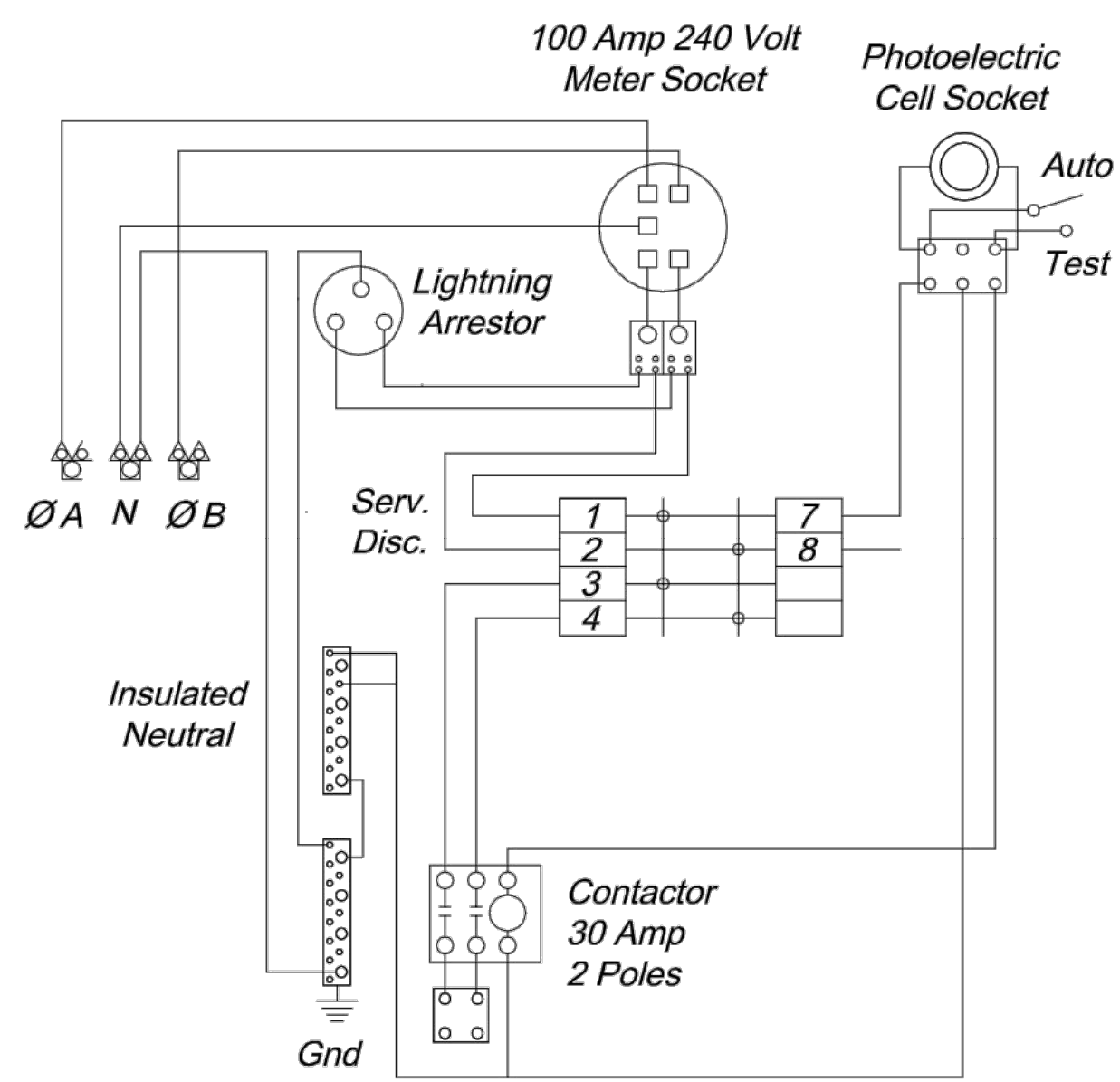
1. Lift opening required on all covers.
2. Preformed box walls may be either flared or vertical. The bottom of boxes shall be open to below.
3. If an extension is used with a preformed box, the lip of the extension may be interior or exterior. The extension shall be compatible and from the same manufacturer.
4. Cable hooks are to be included with Class 1 Pull Boxes only.
5. A Class 1 Pull Box shall be installed adjacent to each 4-Circuit Power Supply.

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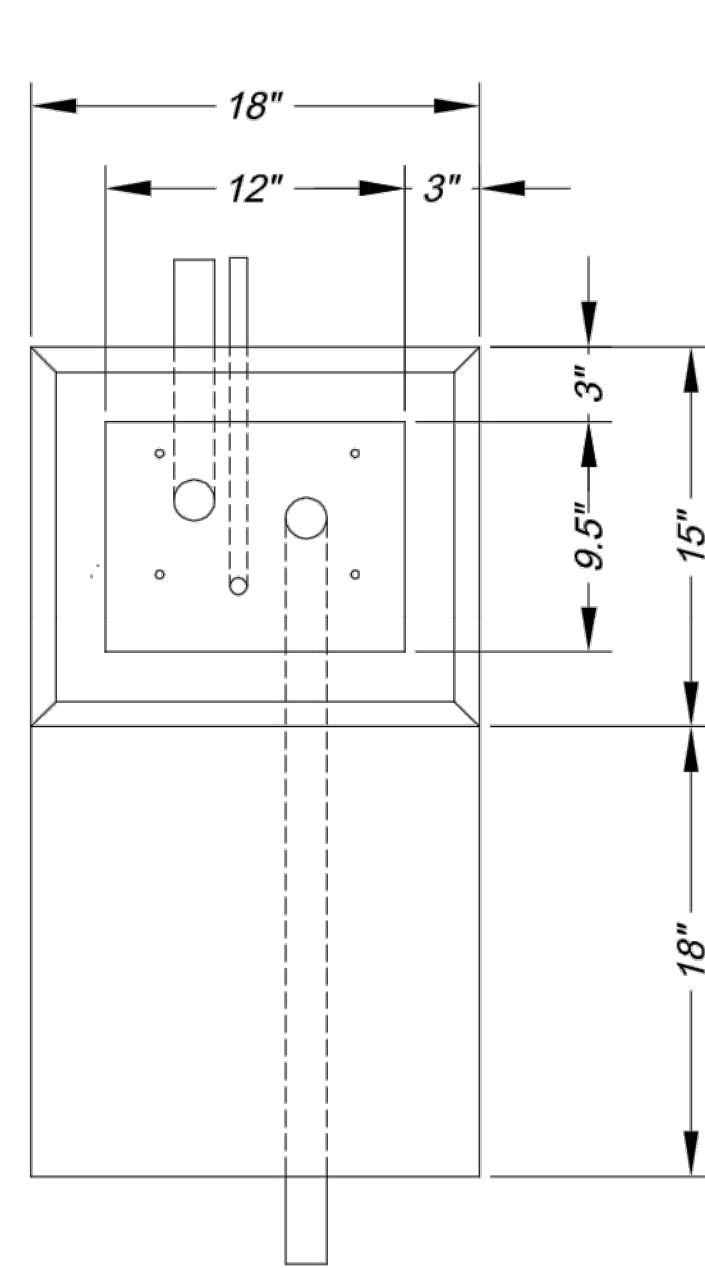


Project: COLBERN ROAD
 BOX AND CONDUIT DETAILS
 Sheet Name: STANDARD DRAWING SL-3

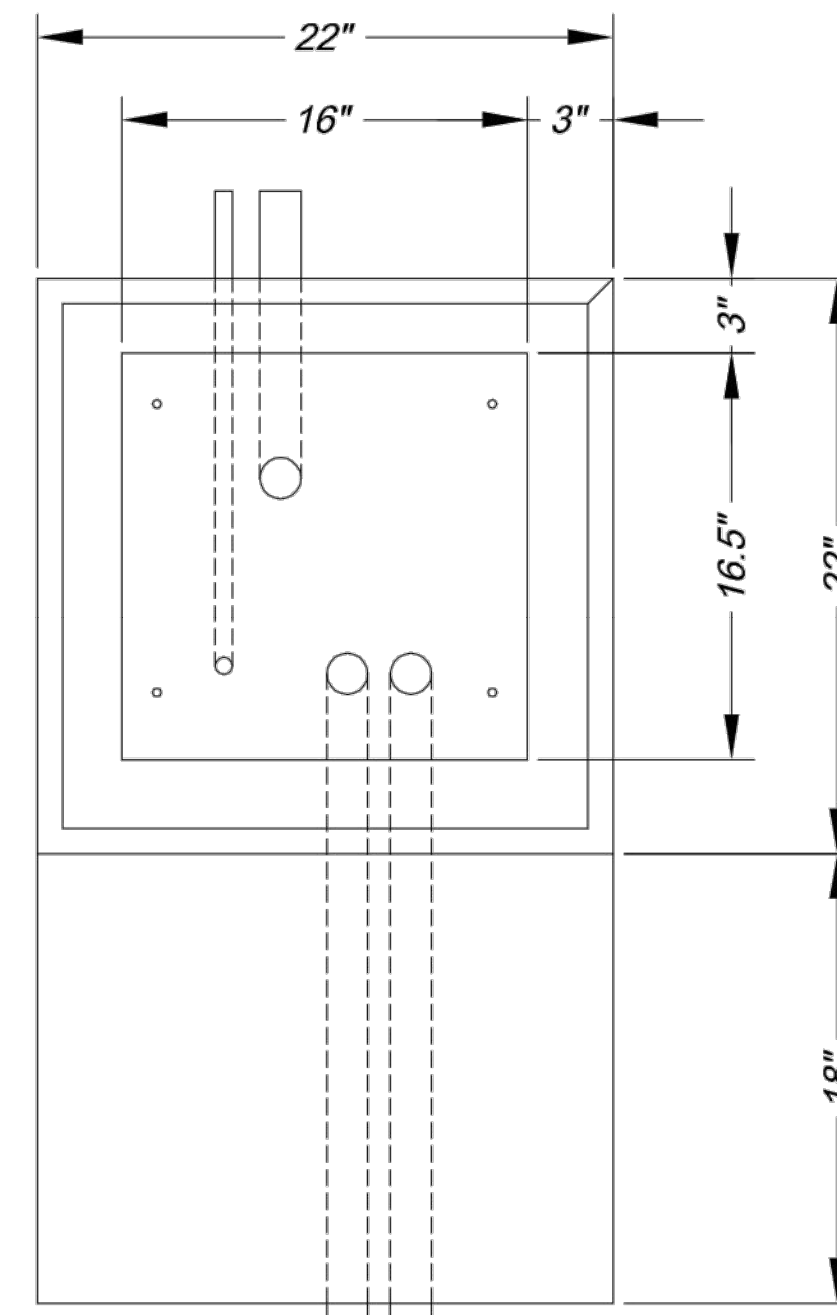
Drawn By: JH
 Checked By: JW
 Date: 08/21/2009



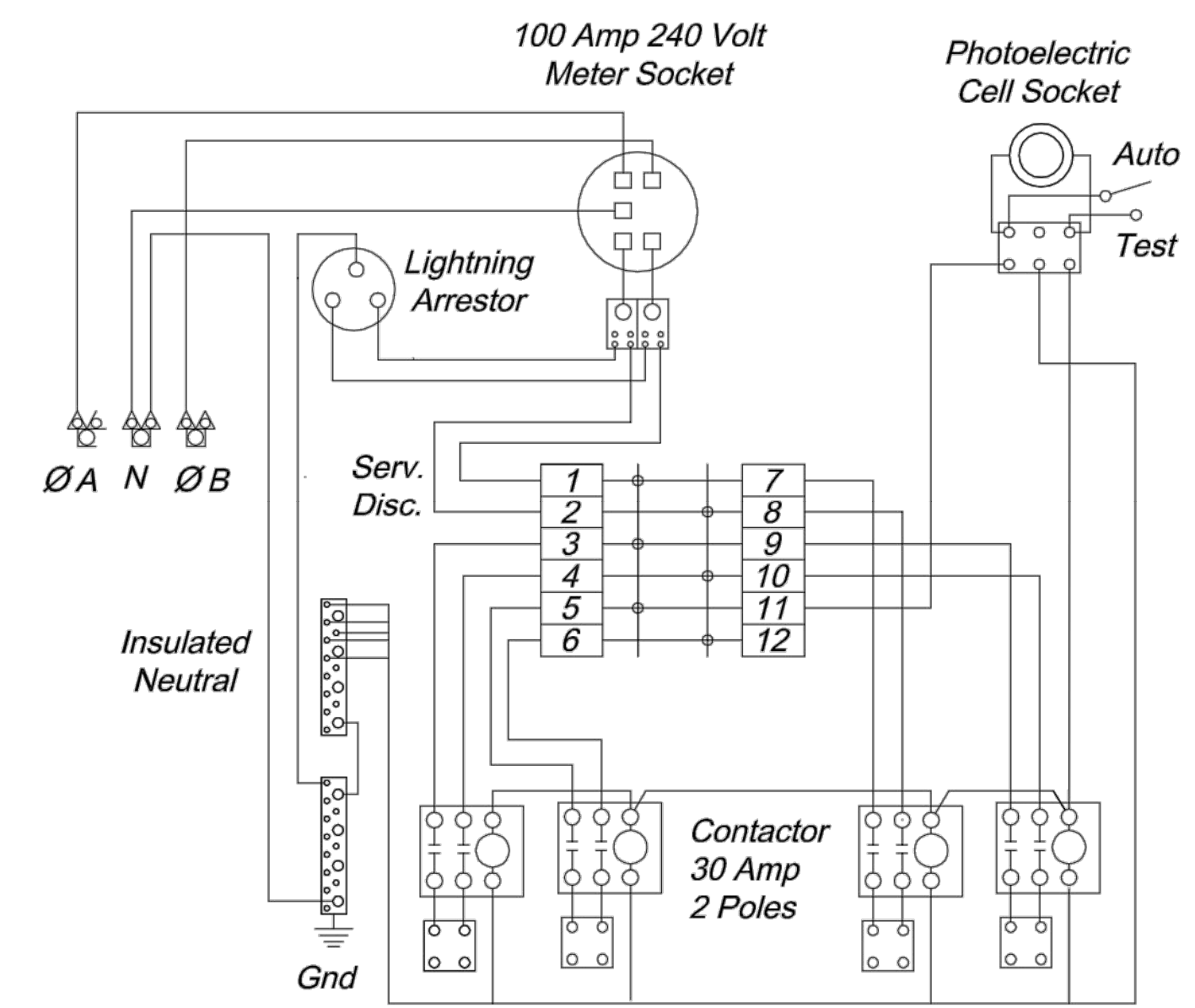
WIRING SCHEMATIC



PLAN VIEW

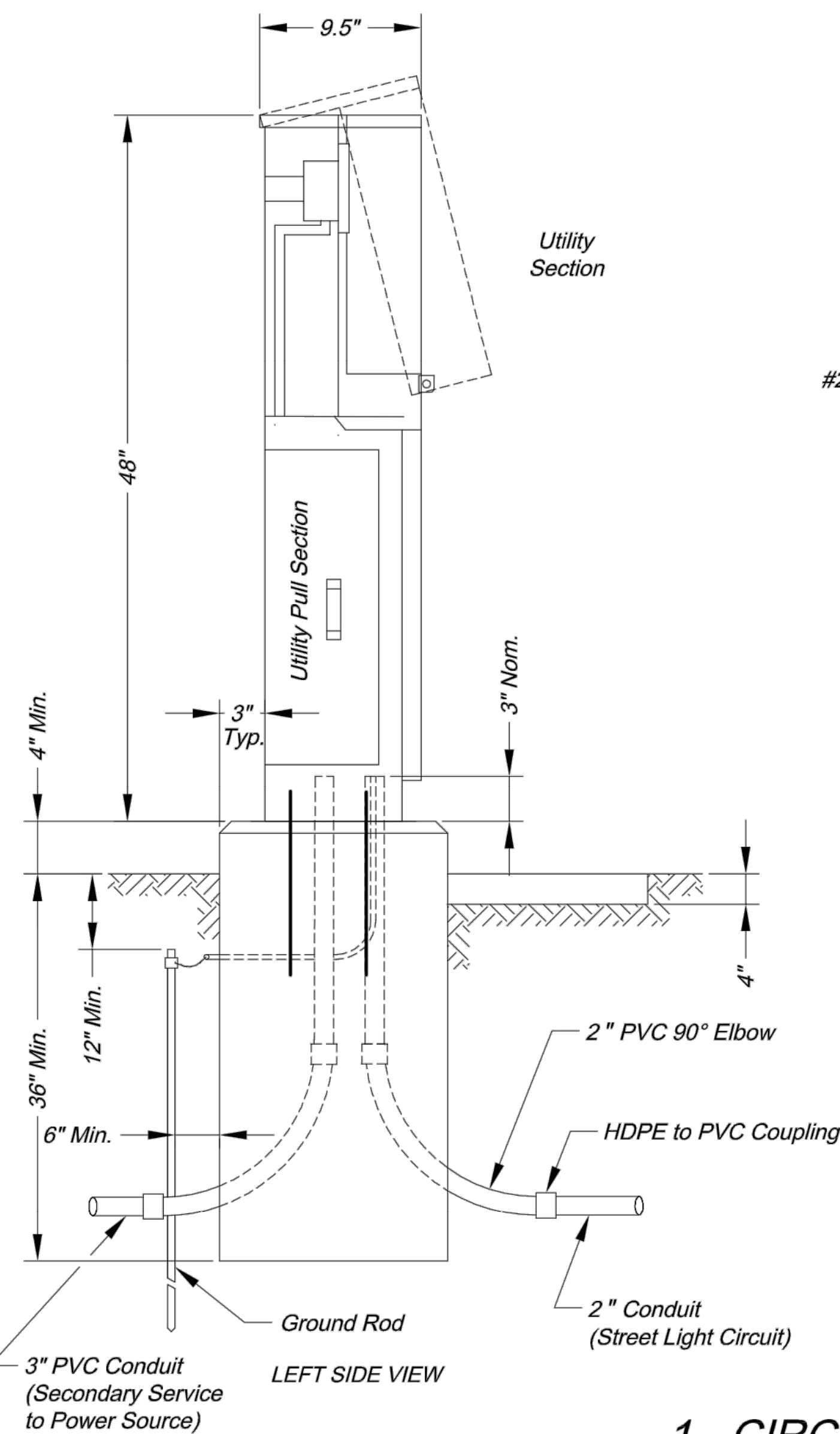


PLAN VIEW



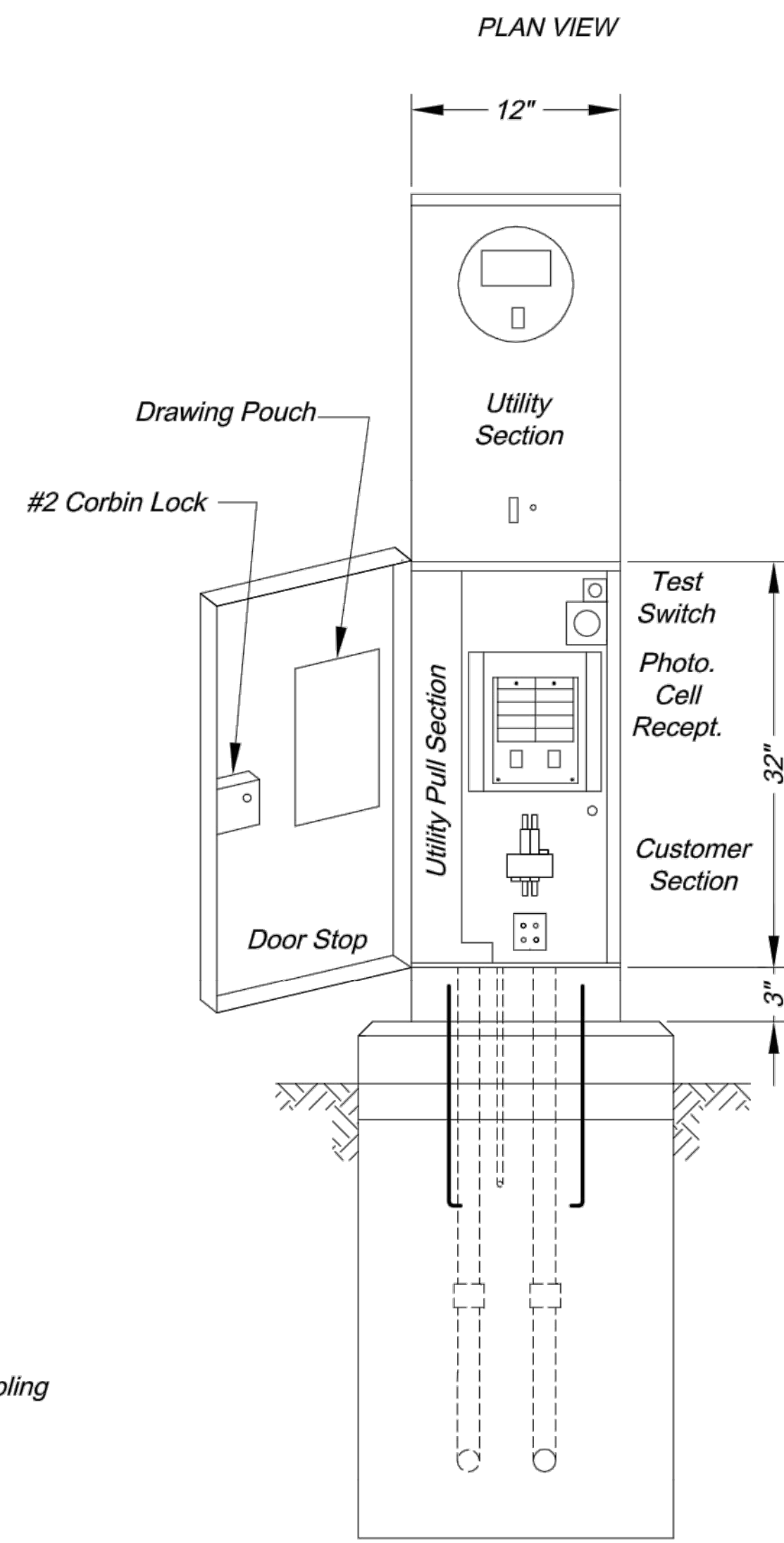
WIRING SCHEMATIC

FUSED CONTACTORS ARE NOT PERMITTED



LEFT SIDE VIEW

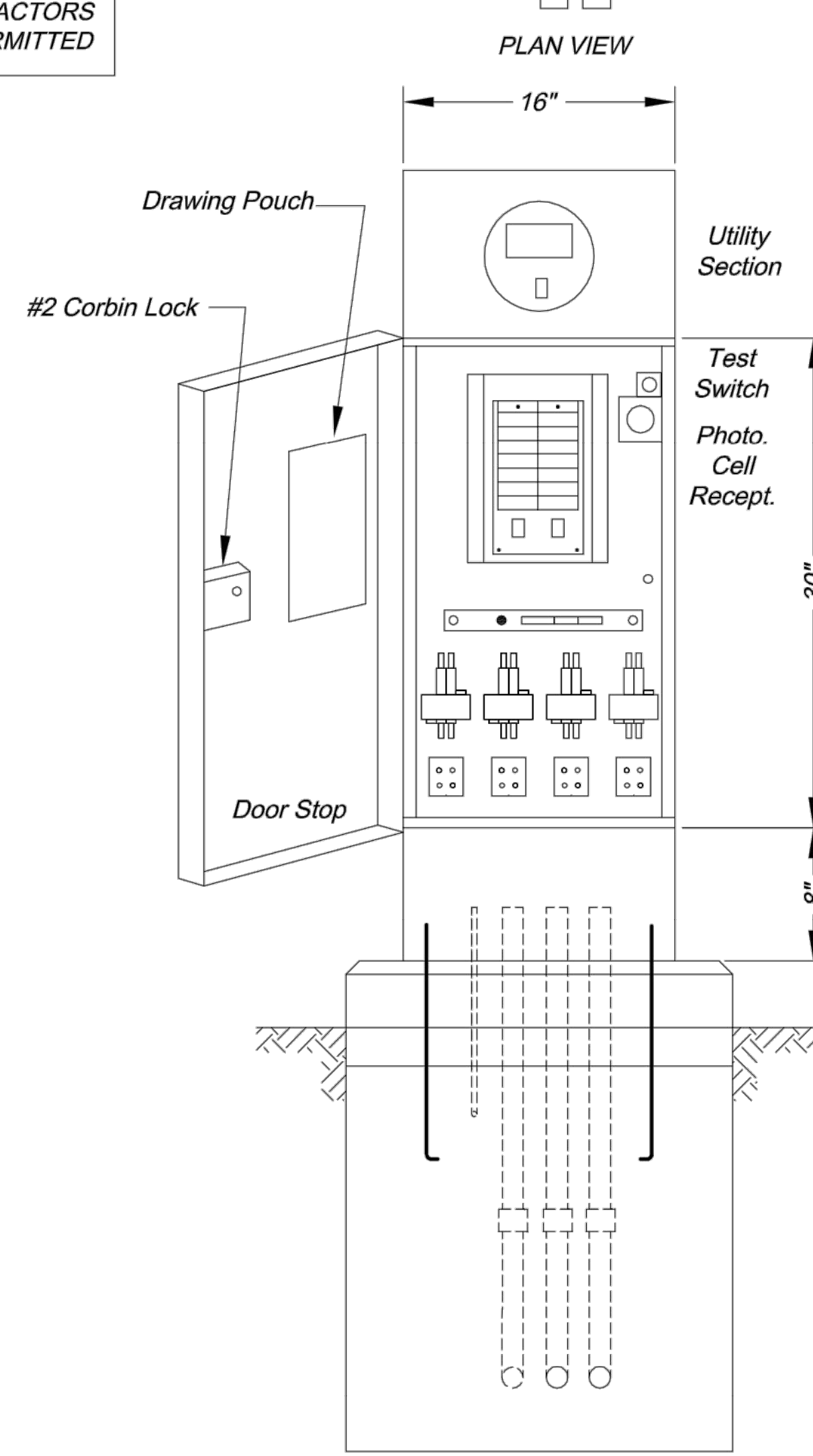
**1 - CIRCUIT
POWER SUPPLY**



FRONT VIEW

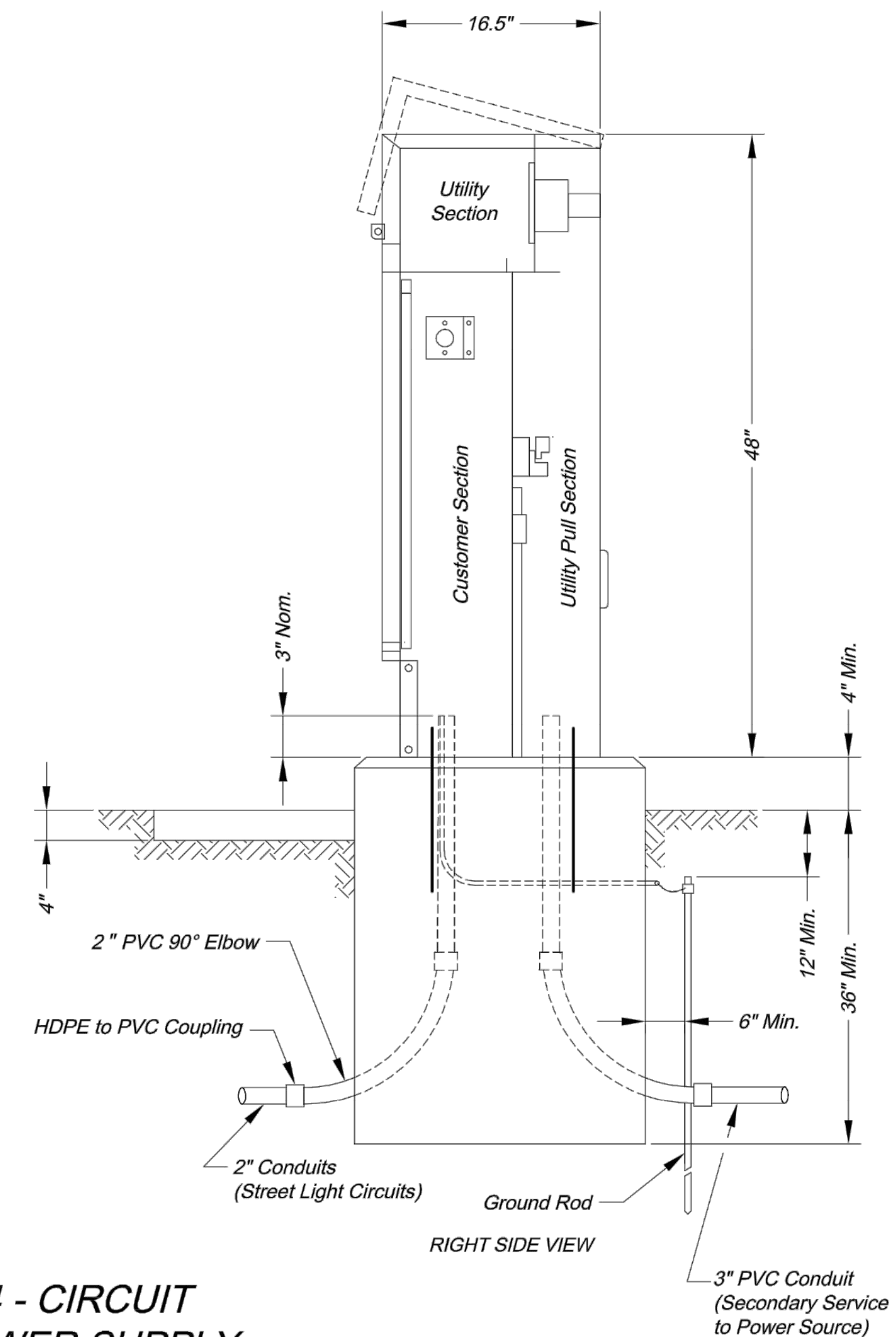
NOTES:

1. Photoelectric cell should be oriented to the north or east.
2. Seal around joint between cabinet and base with lifetime silicone caulk.
3. All exposed edges of the base should have a 1" chamfer
4. If base is adjacent to a traffic signal controller, raised portion of base (above finished grade) should be constructed to the same height as the signal controller base.
5. The street address with the power supply number below it should be labeled on the upper portion of the cabinet facing the street. The City will supply stickers for the Contractor to install.

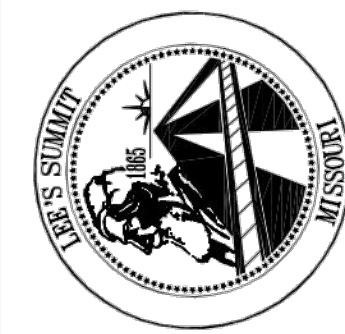


FRONT VIEW

**4 - CIRCUIT
POWER SUPPLY**



RIGHT SIDE VIEW



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ENGINEERING DIVISION
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Project: COLBERN ROAD
POWER SUPPLY DETAILS
Sheet Name: STANDARD DRAWING SL-4

Drawn By: JH
Checked By: JW
Date: 08/21/2009

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Lee's Summit, Missouri
11/07/2023

STREET LIGHT POLE, BRACKET ARM, AND BREAK-AWAY BASE

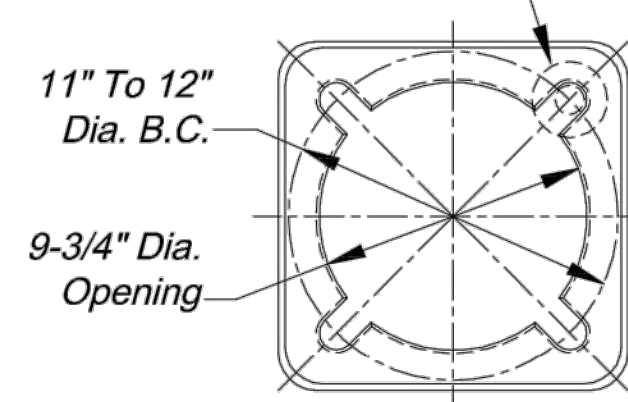
POLE TYPE	MOUNTING HEIGHT (A)	BRACKET ARMS		POLE SHAFT				SHOE BASE		ANCHOR BOLTS		
		LENGTH (B)		BASE O.D.	TOP O.D.	MIN. WALL THICKNESS	SHAFT LENGTH (C)	BOLT CIRCLE (BC)	DIAMETER	LENGTH	HOOK	
		ARM 1	ARM 2									
P14	14'	-	-	6"	3"	0.156"	14'-0"	9.5"	0.75" 10NC	25"	3"	
P30S	30'	6' or 10'	-	8"	6"	0.188"	26'-6" ±2"	11.0"	1.00" 8NC	36"	4"	
P30D	30'	6' or 10'	6' or 10'	8"	6"	0.219"	26'-6" ±2"	11.0"	1.00" 8NC	36"	4"	
P40S	40'	6', 10' or 15'	-	8"	6"	0.219"	36'-6" ±2"	11.5"	1.00" 8NC	36"	4"	
P40D	40'	6', 10' or 15'	6', 10' or 15'	10"	6"	0.219"	36'-6" ±2"	14.5"	1.00" 8NC	48"	4"	

- NOTES:**
- All poles, arms, and miscellaneous equipment shall conform to these details and as specified by the latest city standard specifications.
 - Pole shaft shall have a satin ground finish.
 - All hardware (bolts, nuts, washers but not including anchor bolts) not otherwise specifically designated in the specifications or details shall be 300-series stainless steel conforming to ASTM A193 or A194.
 - Anchor bolts shall be used with concrete bases. Anchor bolts shall be steel with 50,000 PSI minimum yield; top 10" min. galvanized; including 8 nuts and 8 flat washers galvanized to ASTM A153 standards. Galvanized hex head bolts (see pole foundation sheet) shall be used with screw-in anchor bases. 4 bolts, 4 nuts and 8 flat washers to be provided with each anchor.
 - All welding is to be done with 4043 weld wire. All arms and shafts are to be heat-treated to T6 temper after welding.
 - Anchor bolts shall project above the concrete base as per manufacturer's recommended practices, 2 1/2" to 3".
 - The aluminum street light pole assembly, including anchorage and luminaire, shall comply with the latest city standard specifications and the American Association of State Highway and Transportation Officials (AASHTO) load wind loading.
 - All poles and arms shall be clearly identified by the manufacturer's name, abbreviation, or symbol engraved on the shaft, shoe base, hand hole, or other means such as to be readily visible after installation.

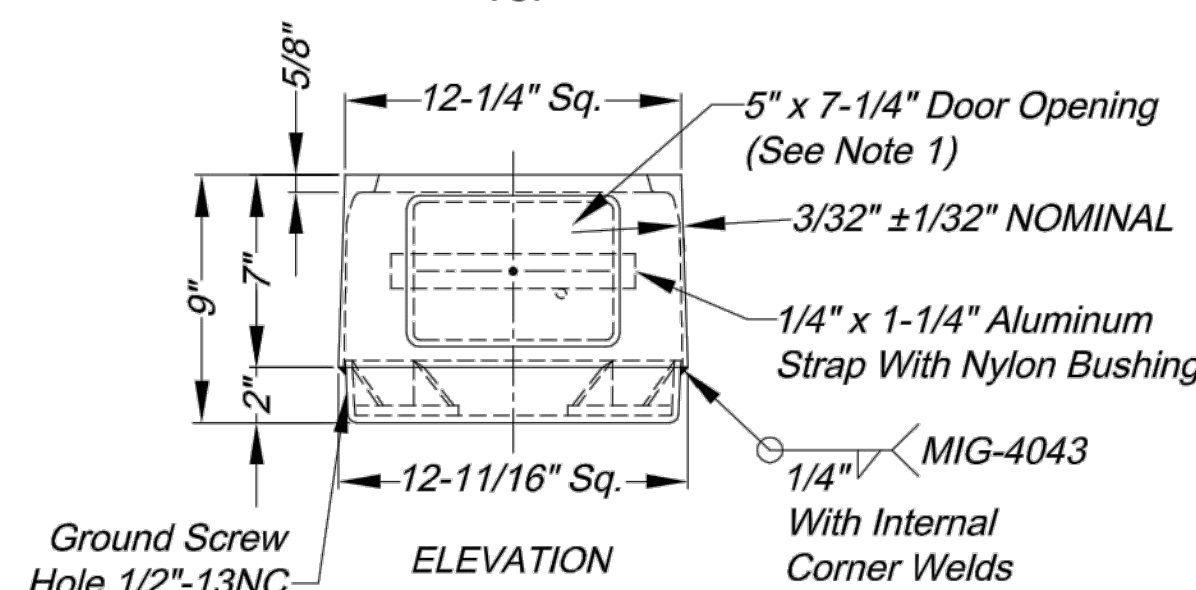
MATERIAL DATA

COMPONENT	ALUMINUM ALLOY DESIGNATION	SPECIFICATION
Shoe Base	356-T6, Cast	ASTM B26 or B108
Breakaway Base	356-T6, Cast	ASTM B108
Bolt Covers	356 or 360, Cast	ASTM B26 or B108
Pole Shaft	6063-T6, Extruded	ASTM B221 or B241
Ground Lug	6061-T5 or 6063-T6, Plate	ASTM B221
Reinforced Handhole Frame	356-T6 or 6061-T6	ASTM B26, B108 or B221
Handhole Cover	6063-T6	ASTM B209, B221 or B241
Bracket Arm & Tubing Pipes	6063-T6	ASTM B221, B241 or B249
Bracket Arm Mounting Plates	6061-T6 or 6063-T6 Extruded	ASTM B221
Bracket Arm Strut & Arm Connector	6061-T6 or 6063-T6 Extruded	ASTM B221, B241 or B249
Pole Cap	356, Cast	ASTM B26 or B108
Anchor Bolts	N/A	Galvanized per ASTM A153

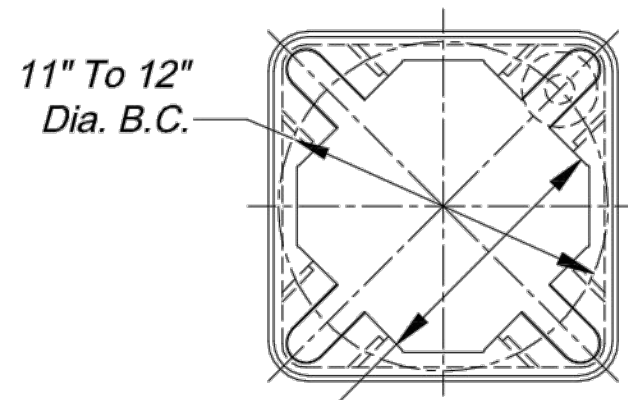
Use 2-3/4" O.D. x 1-1/16" I.D. x 1/2" Thick Washer For 1" Dia. Anchorage On Top And Bottom Bolt Circle



TOP



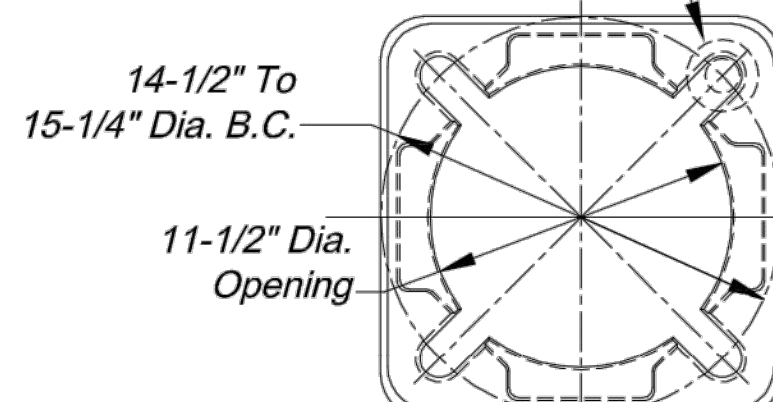
ELEVATION



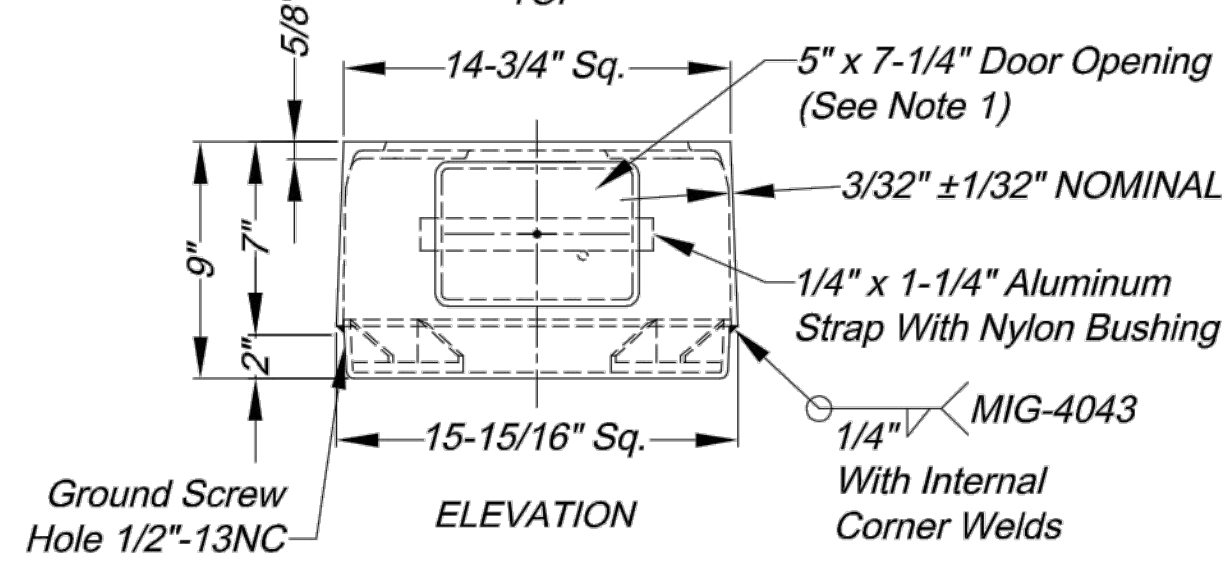
BOTTOM

11" BREAK-AWAY BASE

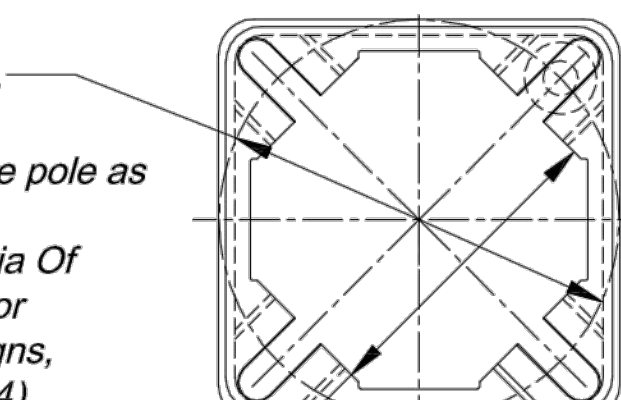
Use 2-3/4" O.D. x 1-1/16" I.D. x 1/2" Thick Washer For 1" Dia. Anchorage On Top And Bottom Bolt Circle



TOP



ELEVATION

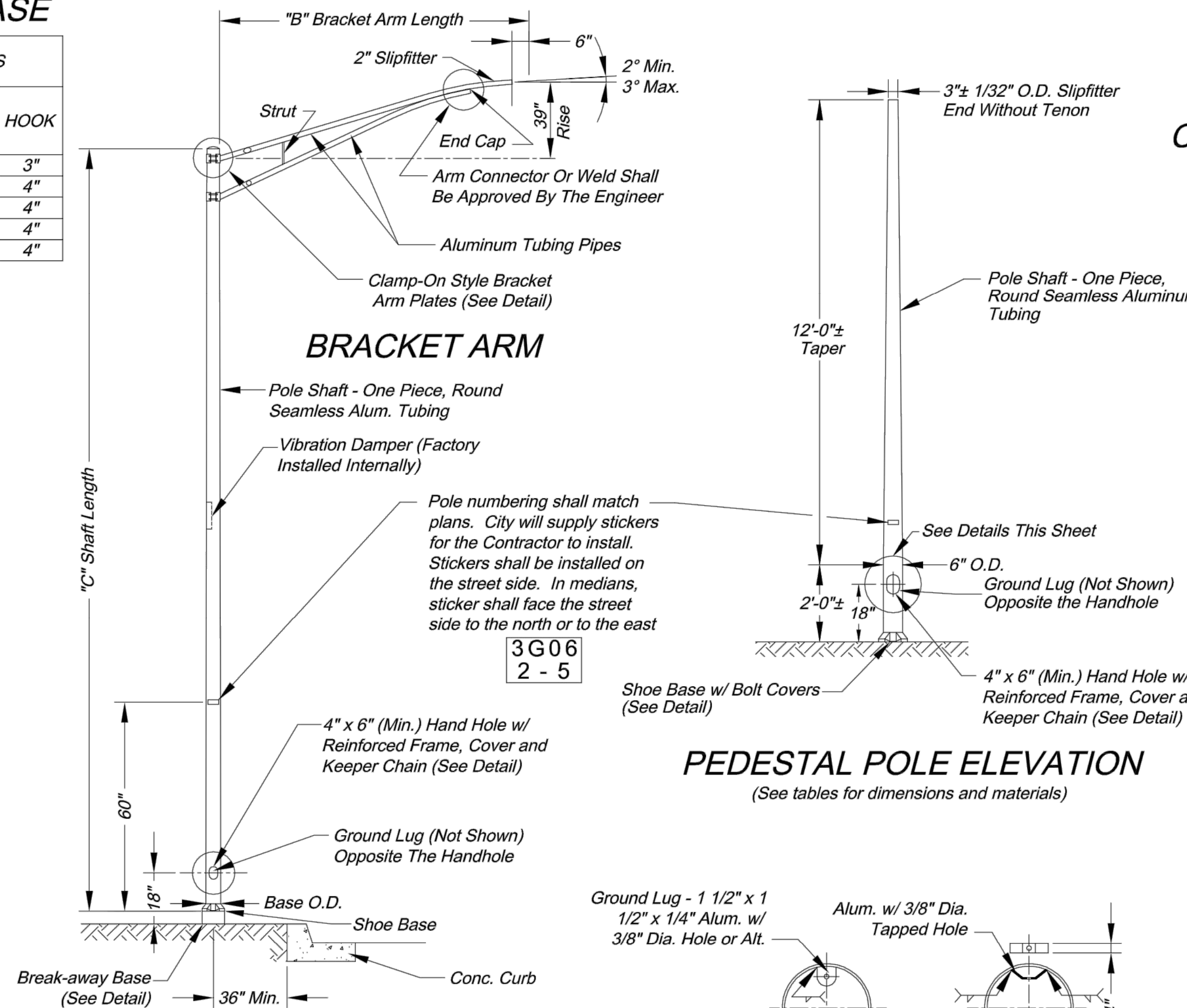


BOTTOM

15" BREAK-AWAY BASE

NOTES:

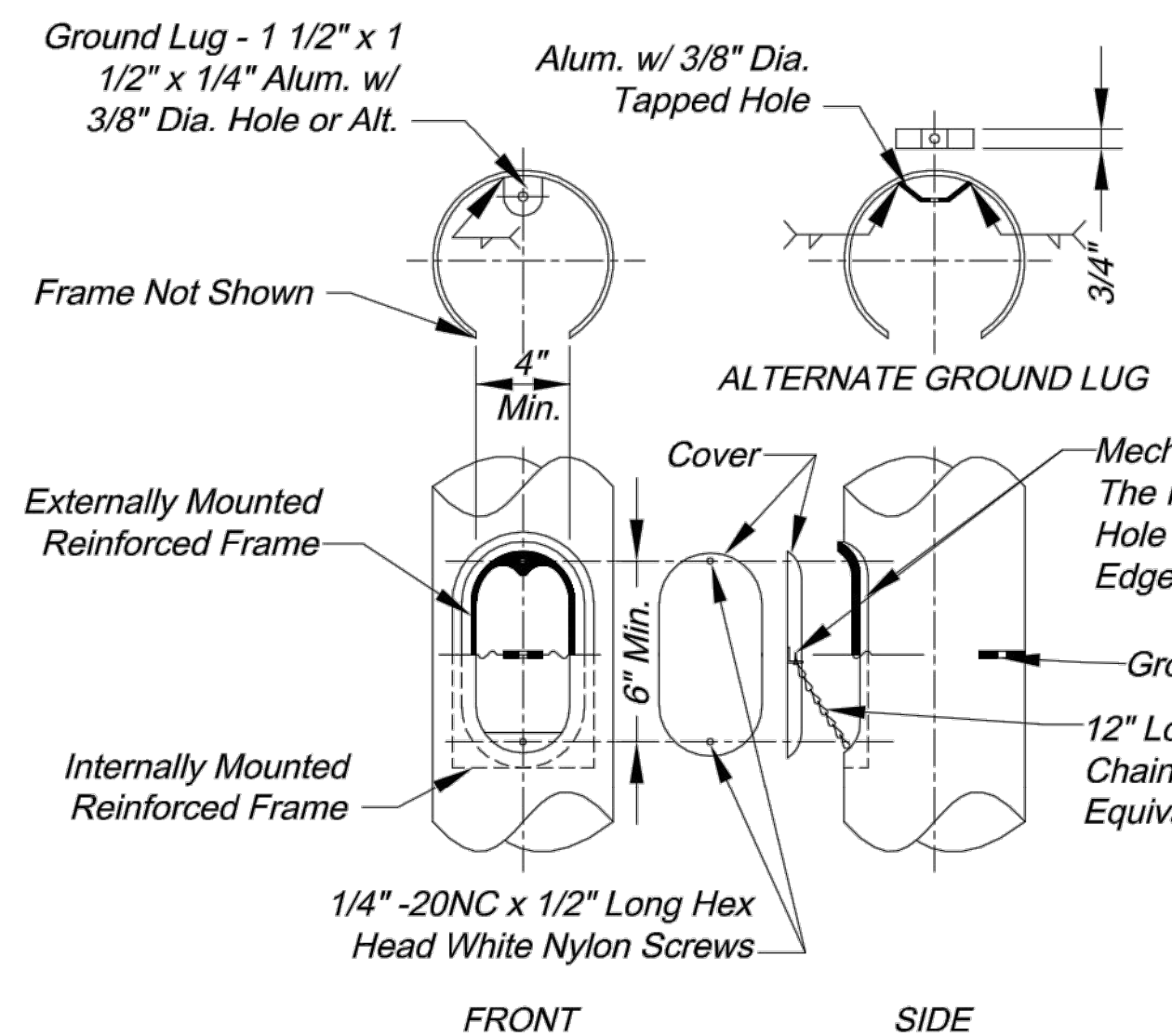
- Door shall be on the same side of the pole as the hand hole.
- Base Conforms to Breakaway Criteria Of AASHTO Standard Specifications For Structural Supports For Highway Signs, Luminaires And Traffic Signals (1994).



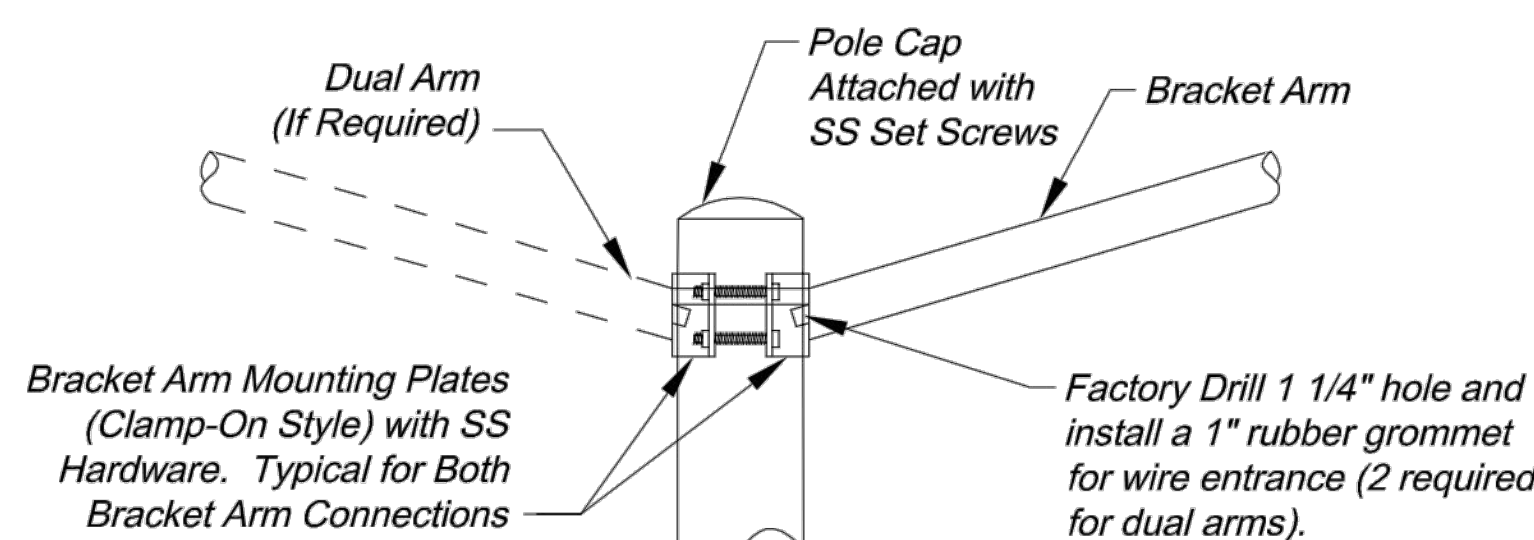
BRACKET ARM

PEDESTAL POLE ELEVATION

(See tables for dimensions and materials)



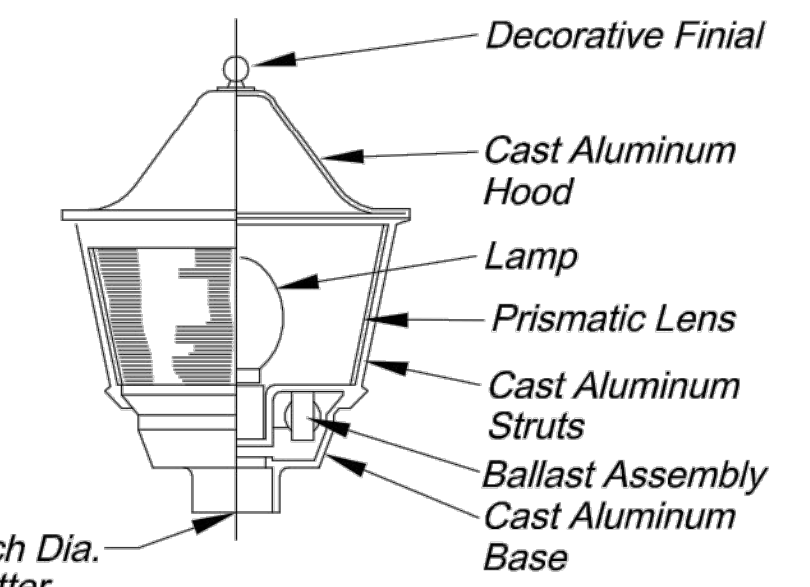
HAND HOLE



BRACKET ARM MOUNTING

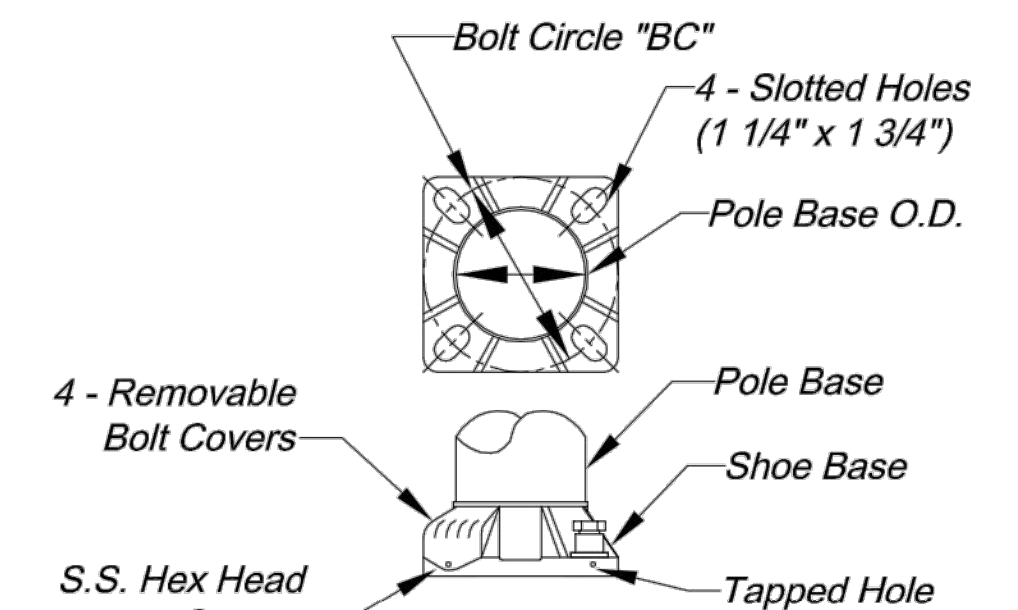
COBRA HEAD STYLE LUMINAIRE

150, 250, or 400 Watt HPS



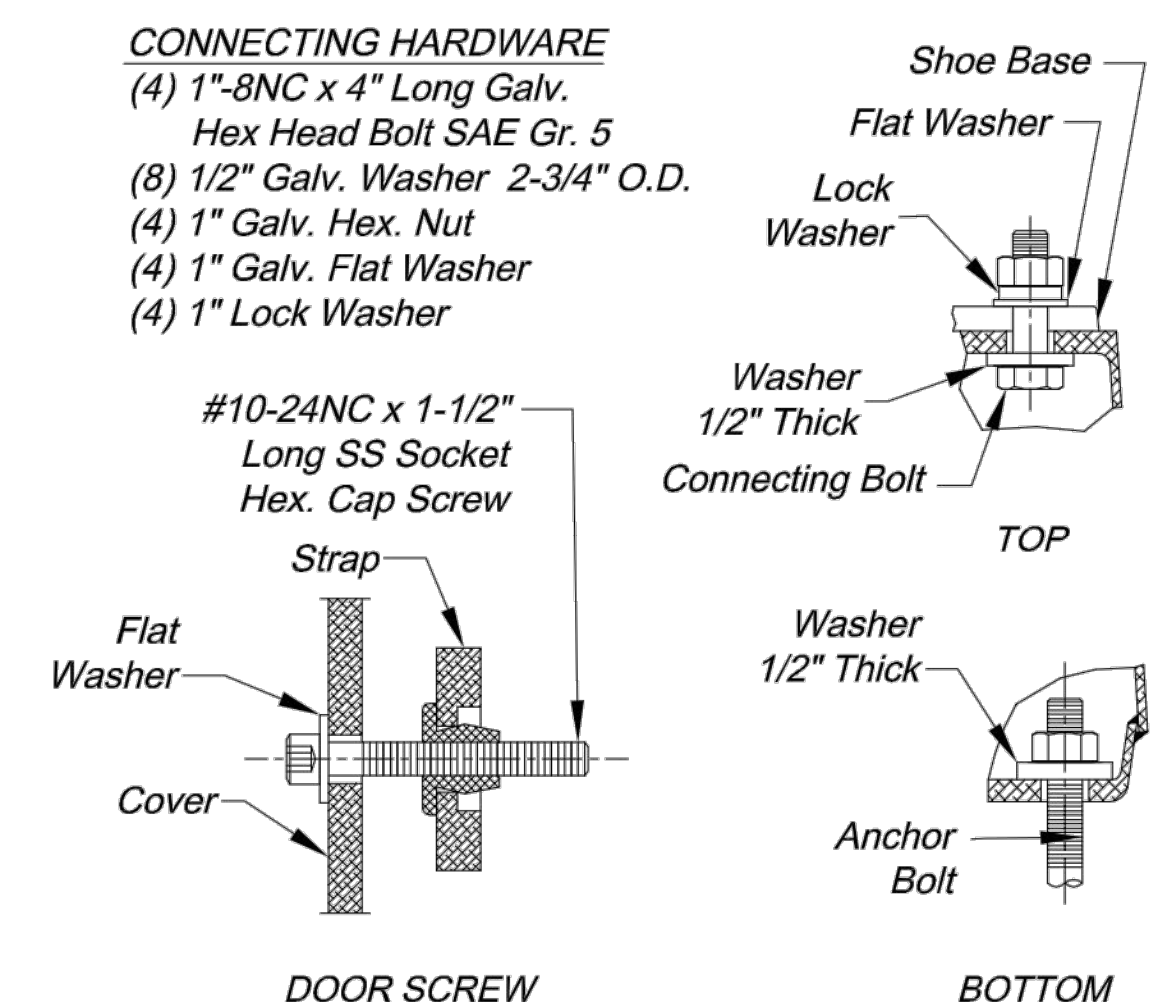
POST TOP LUMINAIRE

150 Watt HPS



SHOE BASE

CONNECTING HARDWARE
(4) 1"-8NC x 4" Long Galv. Hex Head Bolt SAE Gr. 5
(8) 1/2" Galv. Washer 2-3/4" O.D.
(4) 1" Galv. Hex. Nut
(4) 1" Galv. Flat Washer
(4) 1" Lock Washer



BREAK-AWAY BASE ANCHORAGE

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PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809



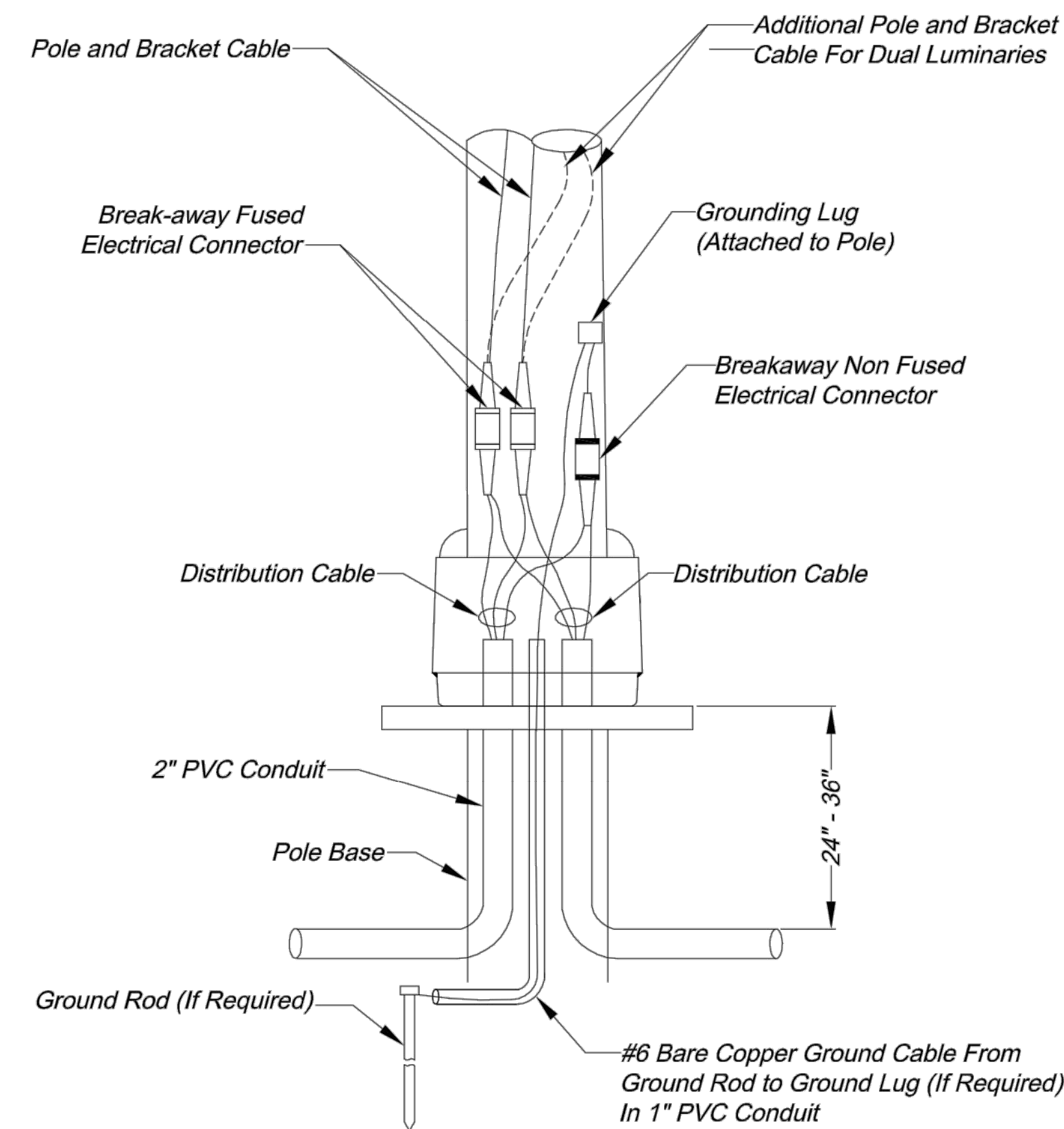
COLBERN ROAD
POLE AND LUMINAIRE
DETAILS
STANDARD DRAWING SL-1

Drawn By: JH
Checked By: JW
Date: 08/21/2009

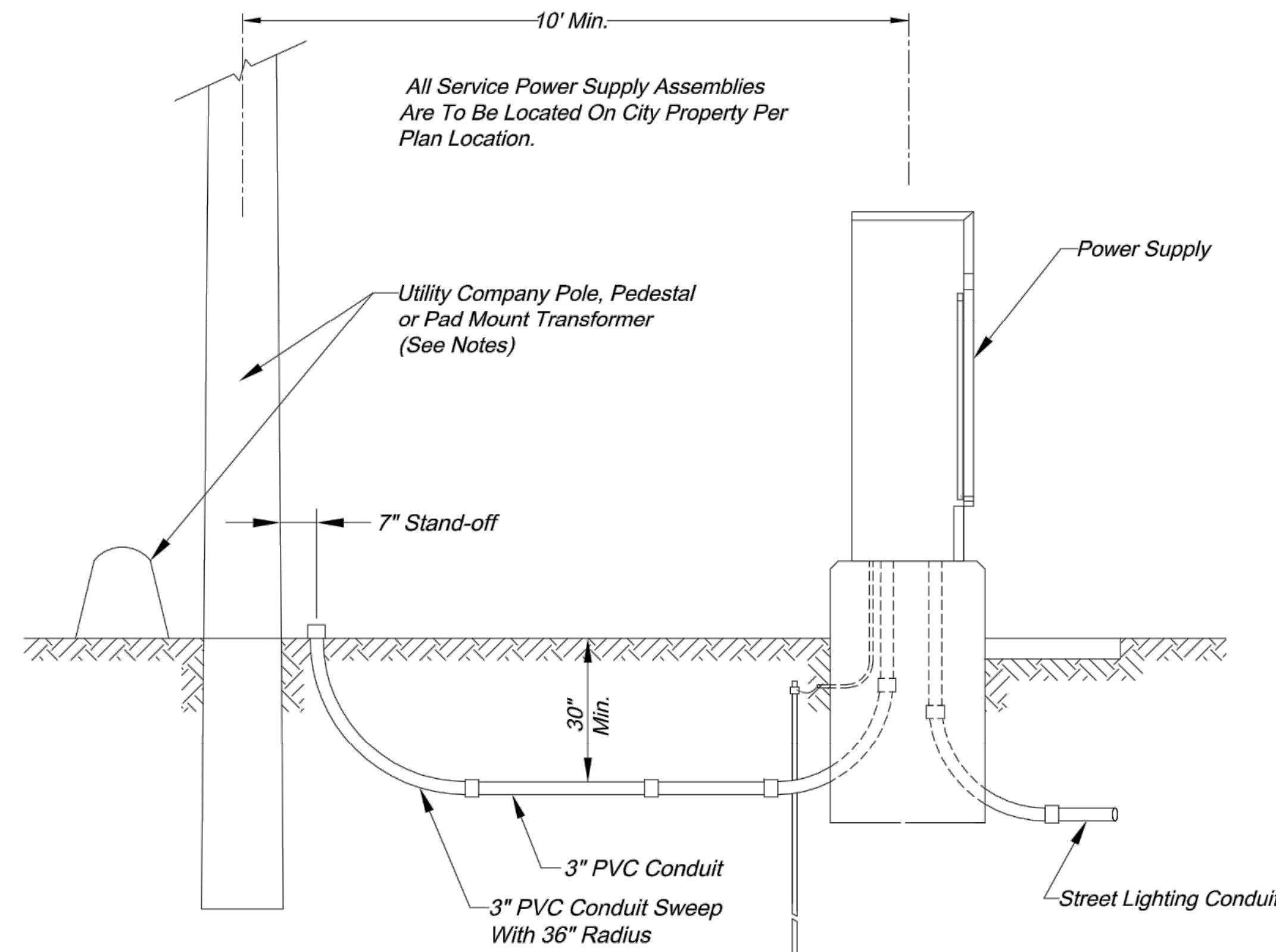
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Lee's Summit, Missouri

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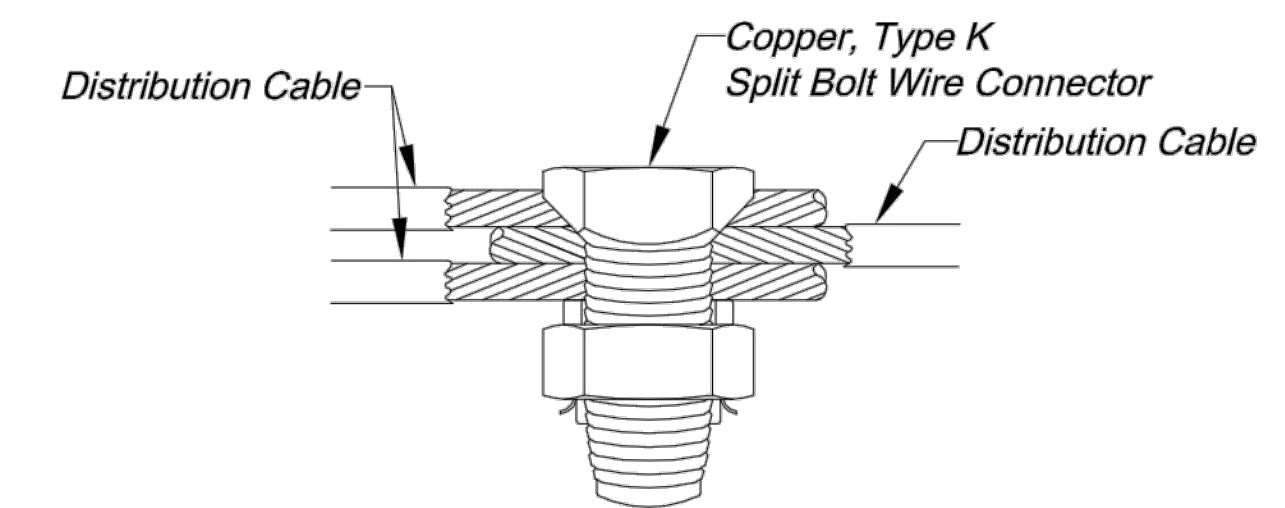
POLE WIRING DETAILS



SECONDARY SERVICE CONNECTION DETAILS

NOTES:

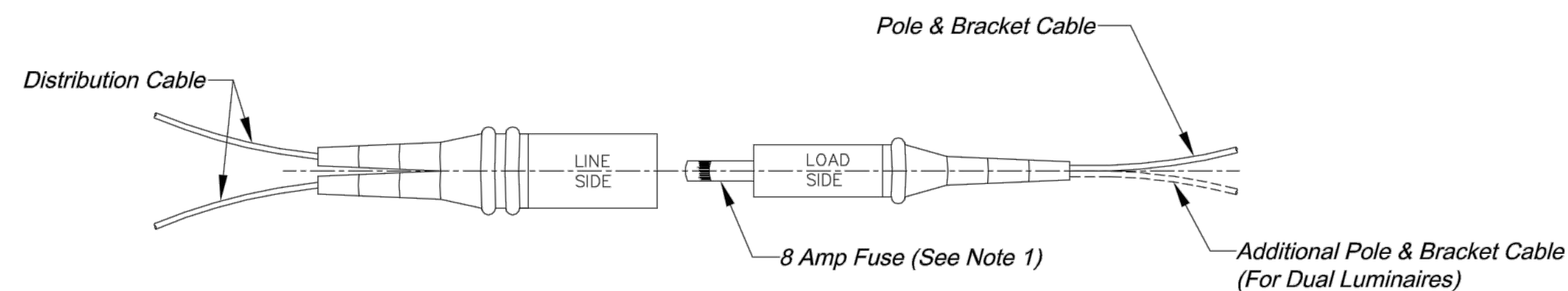
1. Contractor shall install a conduit stub 24" to 6" above ground at utility poles. Conduit shall be stubbed to the side of the pole that will allow a direct run up the pole to the transformer without crossing other utility lines or cables. The end of the conduit shall be capped.
2. Contractor shall install conduit in a trench to within 24" of pedestals or pad mount transformers and leave a 36" x 36" x 36" access hole in the ground. Contractor shall keep open trench covered and promptly backfill access hole when service is completed.



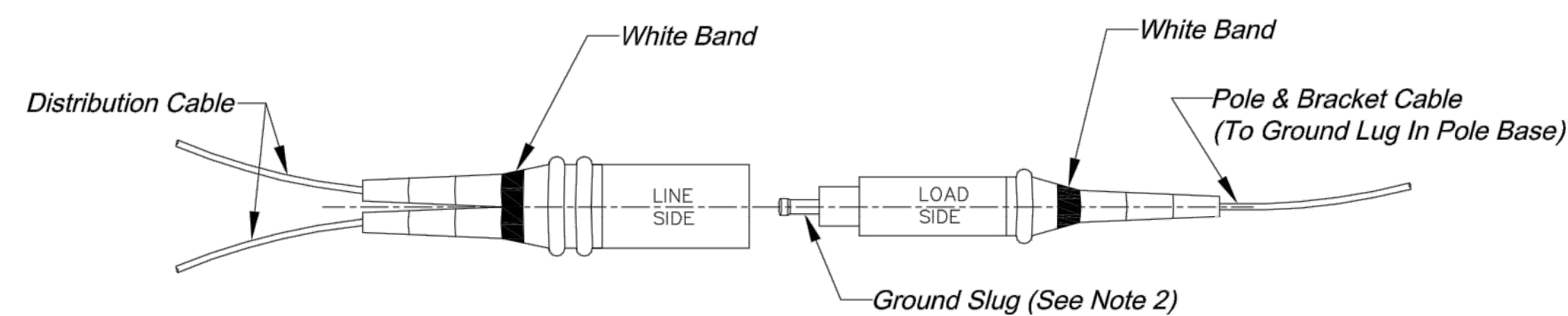
SPLICE KIT DETAILS

NOTES:

1. To be used only in junction or pull boxes where circuits branch or "tee".
2. All splices shall be protected with a resin splice kit (not shown) installed in accordance with the manufacturer's recommendations.



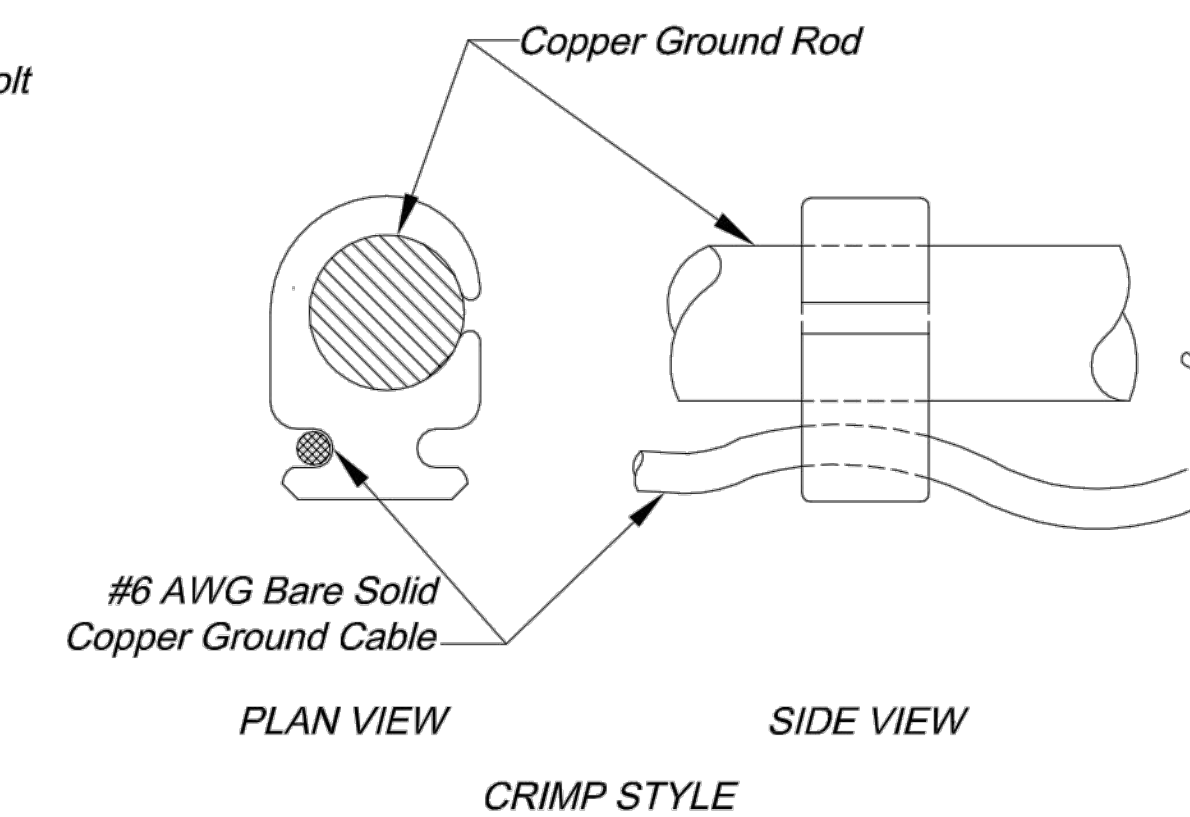
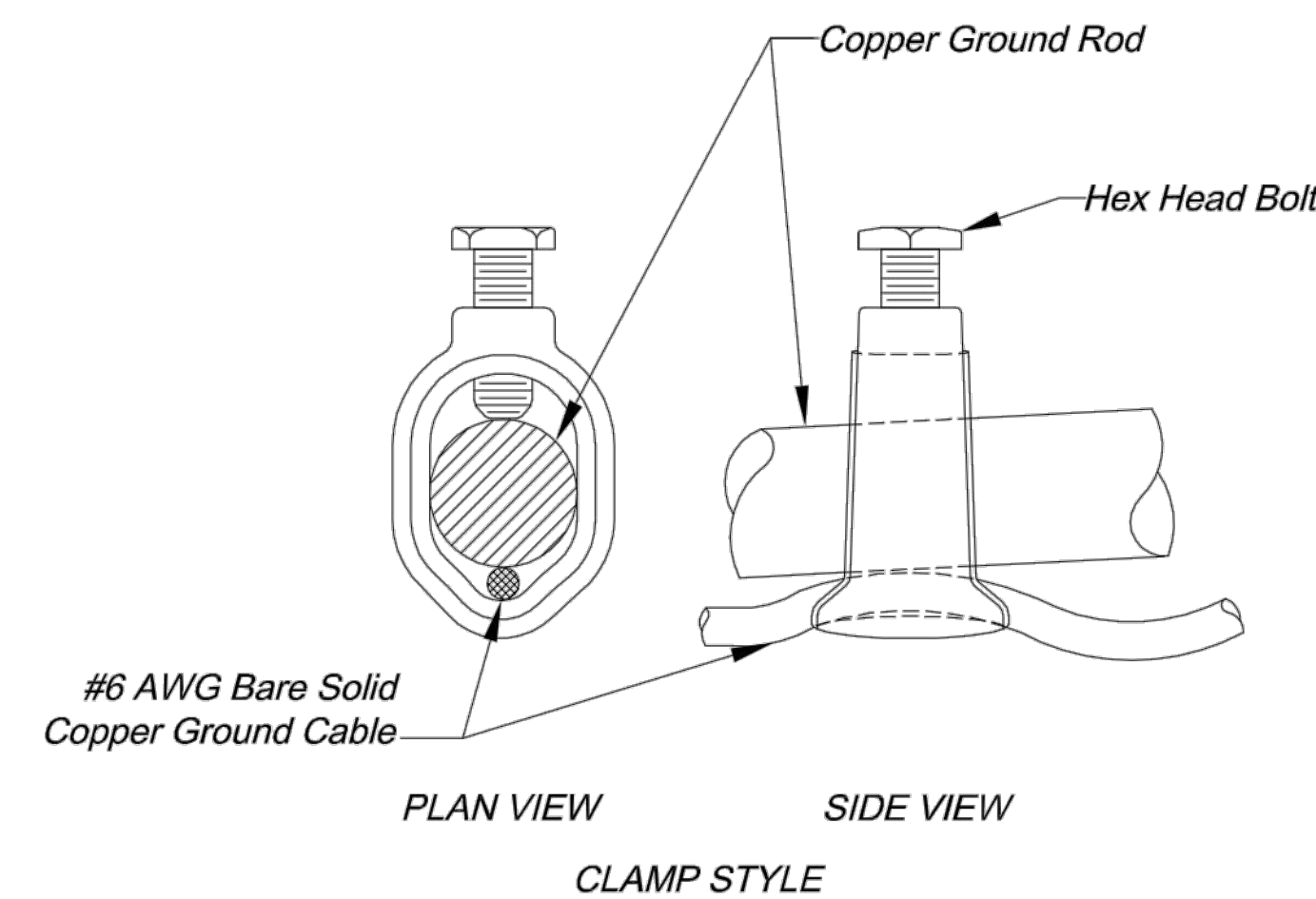
BREAK-AWAY FUSED ELECTRICAL CONNECTORS



BREAK-AWAY NON FUSED ELECTRICAL CONNECTOR

NOTES:

1. Fuse remains in "Load Side" after break-away.
2. Ground "Slug" remains in "Load Side" after break-away.
3. Connectors shall have set screw type terminals to attach cables.



GROUND ROD CONNECTION DETAILS

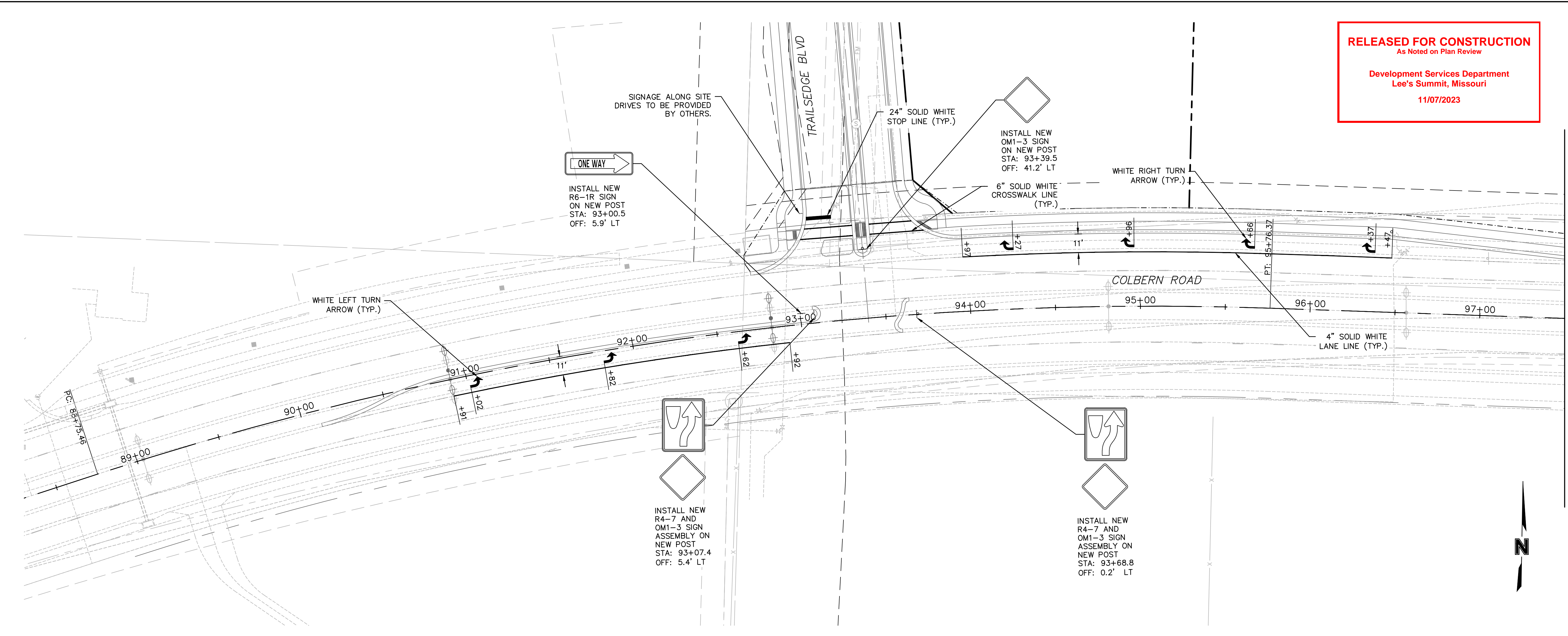
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ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
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Project: COLBERN ROAD
ELECTRICAL DETAILS
Sheet Name: STANDARD DRAWING SL-5

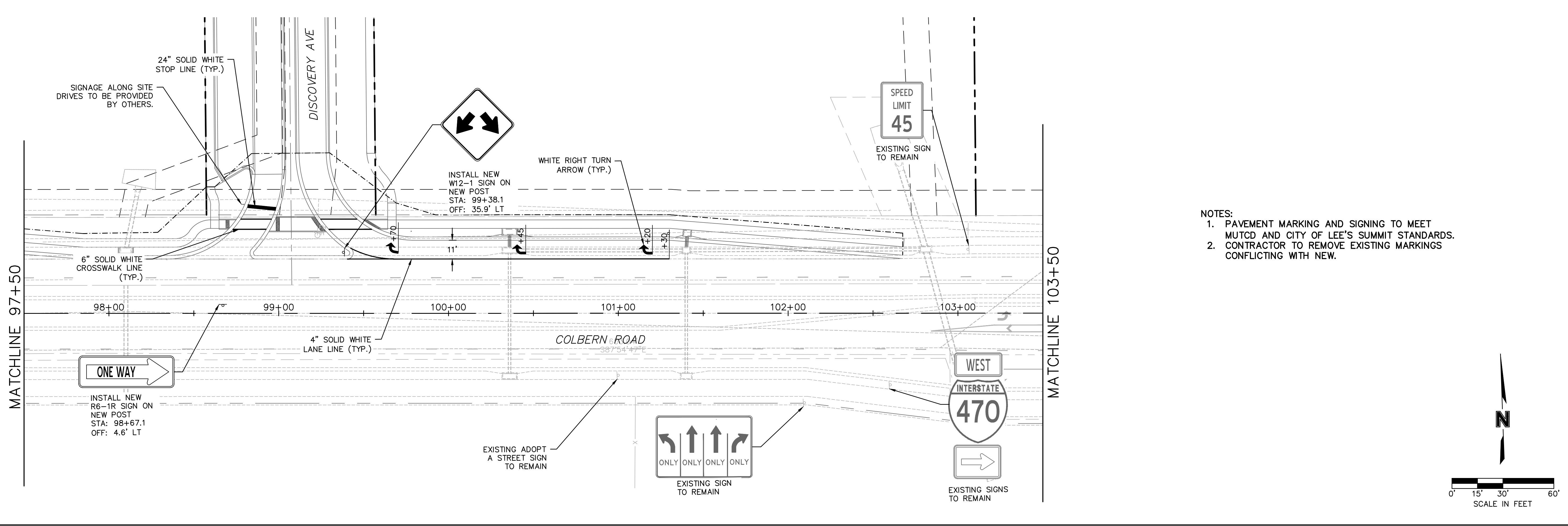
Drawn By: JH
Checked By: JW
Date: 08/21/2009

DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final Plans\Sheets\TTC\PAVEMENT MARKING AND SIGNING\F_SAS_D2104643.dwg
 DATE: Sep 27, 2023 4:55pm
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MATCHLINE 97+50



NOTES:
 1. PAVEMENT MARKING AND SIGNING TO MEET MUTCD AND CITY OF LEE'S SUMMIT STANDARDS.
 2. CONTRACTOR TO REMOVE EXISTING MARKINGS CONFLICTING WITH NEW.

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REV. NO.	DATE	REVISIONS DESCRIPTION

PAVEMENT MARKING AND SIGNING PLAN
 COLBERN ROAD

THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

2023

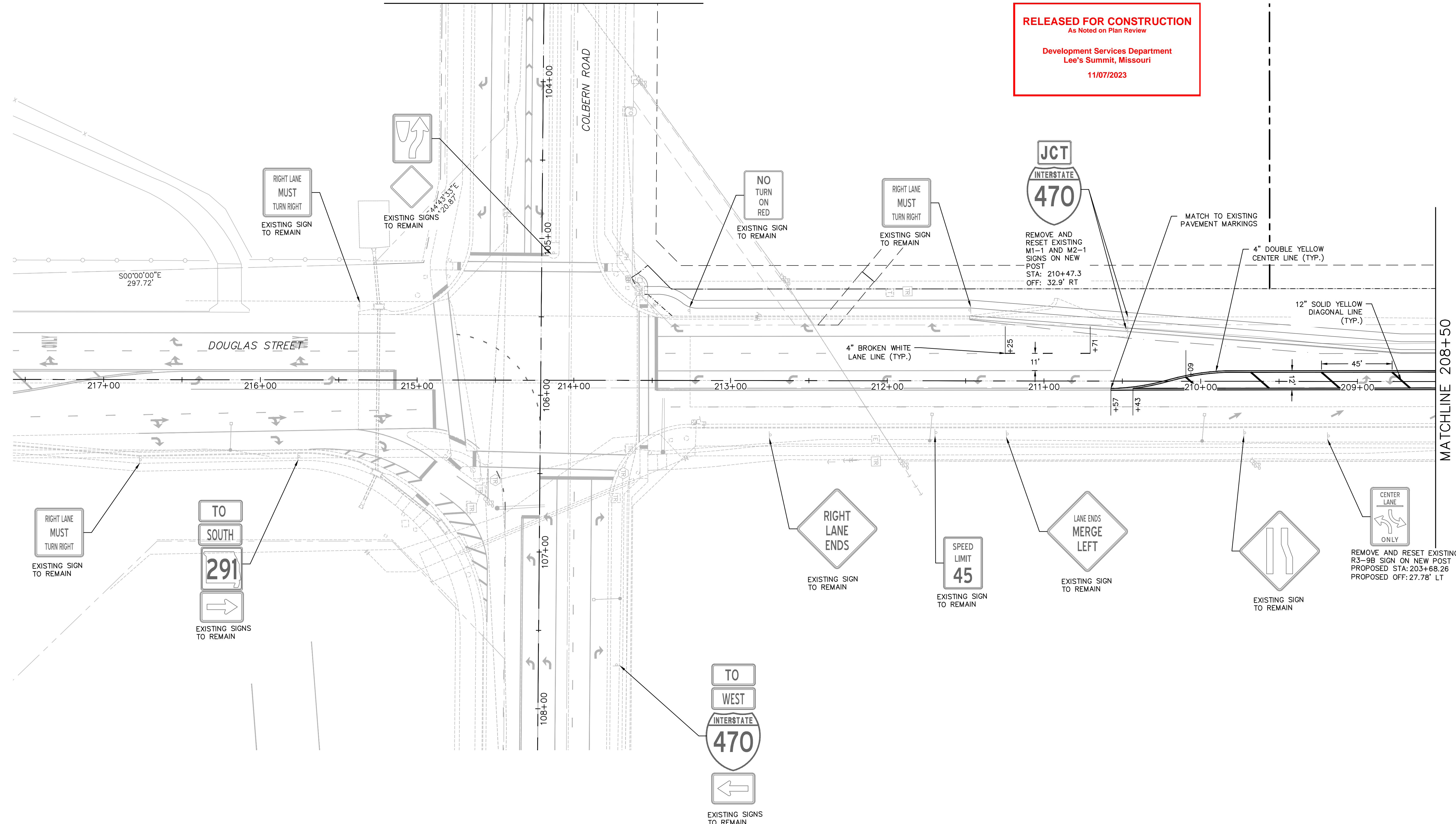
drawn by: SRH
 checked by: JSC
 approved by: JSS
 QA/QC by: SLI
 project no.: 021-04643
 drawing no.: 138-000000
 date: 9/27/2023

SHEET
 50 OF 86

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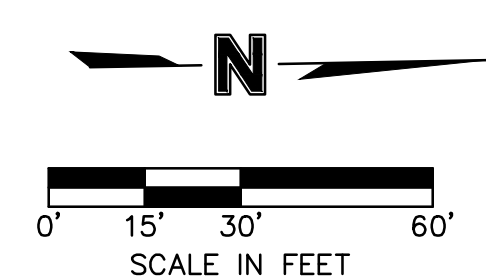
MATCHLINE 103+50

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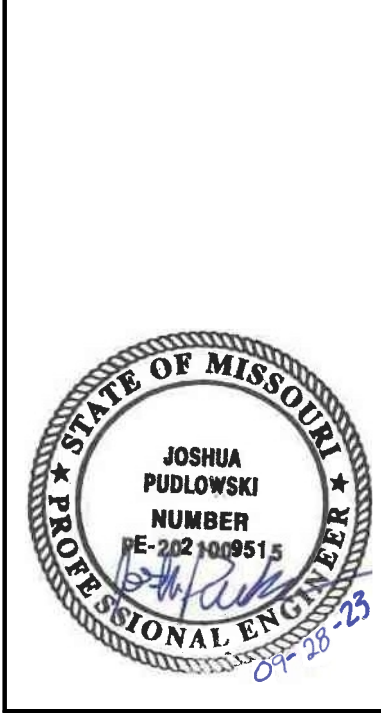


MATCHLINE 208+50

- NOTES:**
1. PAVEMENT MARKING AND SIGNING TO MEET MUTCD AND CITY OF LEE'S SUMMIT STANDARDS.
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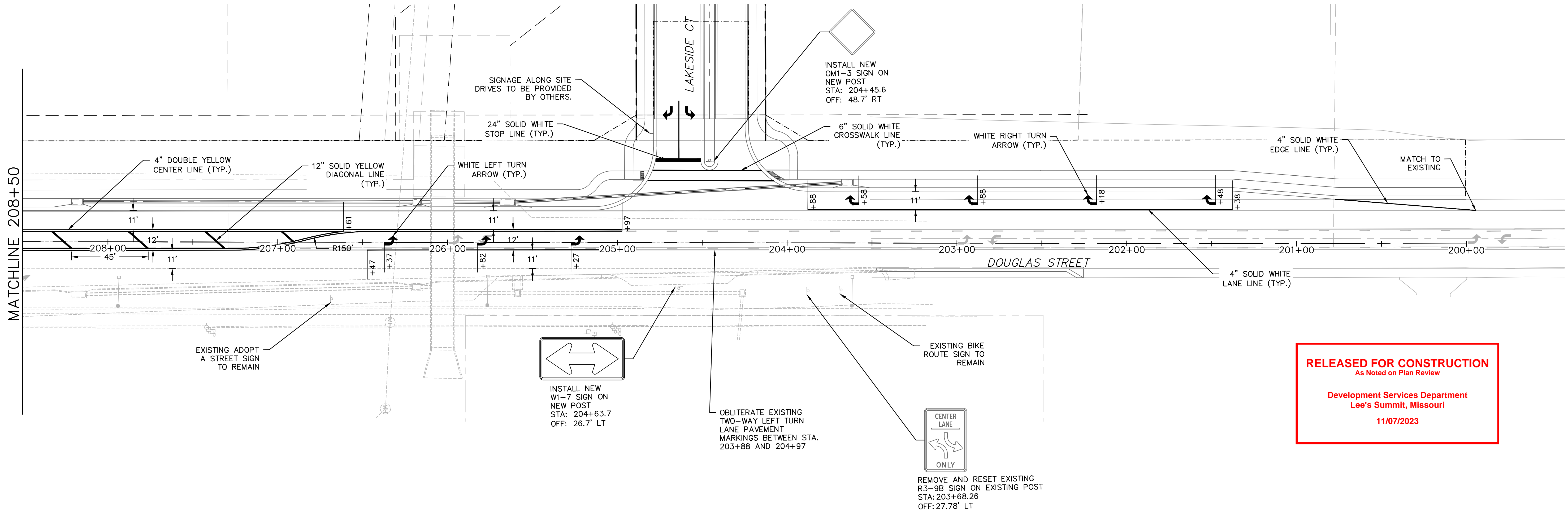


REV. NO.	DATE	REVISIONS DESCRIPTION

PAVEMENT MARKING AND SIGNING PLAN
 DOUGLAS STREET
 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI
 2023

drawn by: SRH
 checked by: JSC
 approved by: JSS
 QA/QC by: SLI
 project no.: 021-04643
 drawing no.: 138-33850-006
 date: 9/27/2023

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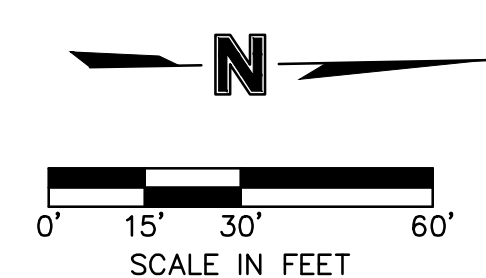


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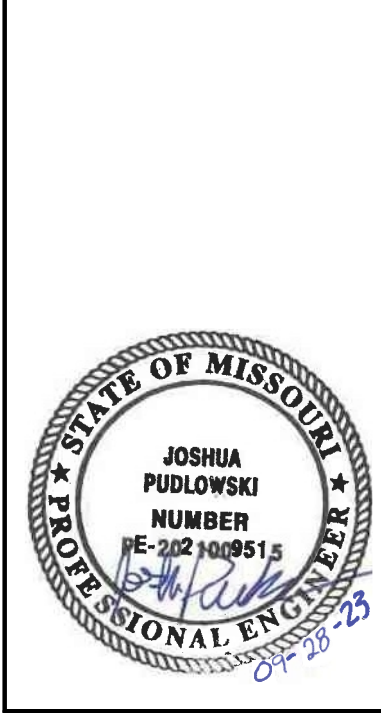
PAVEMENT MARKING	WHITE						YELLOW				SYMBOLS			
	Width	4"	4"	4"	6"	24"	4"	6"	24"	4"	12"	4"	12"	Left Turn Arrow
Line Type	Solid Edge Line	Solid Lane Line	Broken Lane Line	Solid Crosswalk Line	Solid Stop Bar	TOTAL	TOTAL	TOTAL	Double Center Line	Solid Diagonal Line	TOTAL	TOTAL		
Colbern Road (89+00 - 97+50)	0	450	0	87	15	450	87	15	0	0	0	0	3	4
Colbern Road (97+50 - 103+50)	0	215	0	87	17	215	87	17	0	0	0	0	0	3
Colbern Road (103+50 - 108+00)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Douglas Street (217+00 - 208+50)	0	0	55	0	0	55	0	0	404	59	404	59	0	0
Douglas Street (208+50 - 200+00)	83	435	0	139	27	518	139	27	545	57	545	57	4	5
MULTIPLIERS	1	1	0.25	1	1	1	1	1	2	1	1	1		
TOTALS	83	1100	14	313	59	1238	313	59	1898	116	949	116	7	12

SIGNING	NEW					REMOVE AND RESET			POST
	MUTCD Designation	R6-1R	OM1-3	R4-7	W12-1	W1-7	M1-1	M2-1	R3-9B
Sign Name	One-Way	Object Marker	Median	Double Down	Directional	Junction	Interstate 470	TWLTL	
Colbern Road (89+00 - 97+50)	1	3	2	0	0	0	0	0	4
Colbern Road (97+50 - 103+50)	2	0	0	1	0	0	0	0	2
Colbern Road (103+50 - 108+00)	0	0	0	0	0	0	0	0	0
Douglas Street (217+00 - 208+50)	0	0	0	0	0	1	1	1	1
Douglas Street (208+50 - 200+00)	0	0	0	0	1	0	0	0	2
SIGN SIZE	6.75	2.25	5.00	9.00	8.00	1.00	2.00	1.00	1.00
TOTALS	20	7	10	9	8	1	2	1	9

NOTES:
 1. PAVEMENT MARKING AND SIGNING TO MEET MUTCD AND CITY OF LEE'S SUMMIT STANDARDS.
 2. CONTRACTOR TO REMOVE EXISTING MARKINGS CONFLICTING WITH NEW.



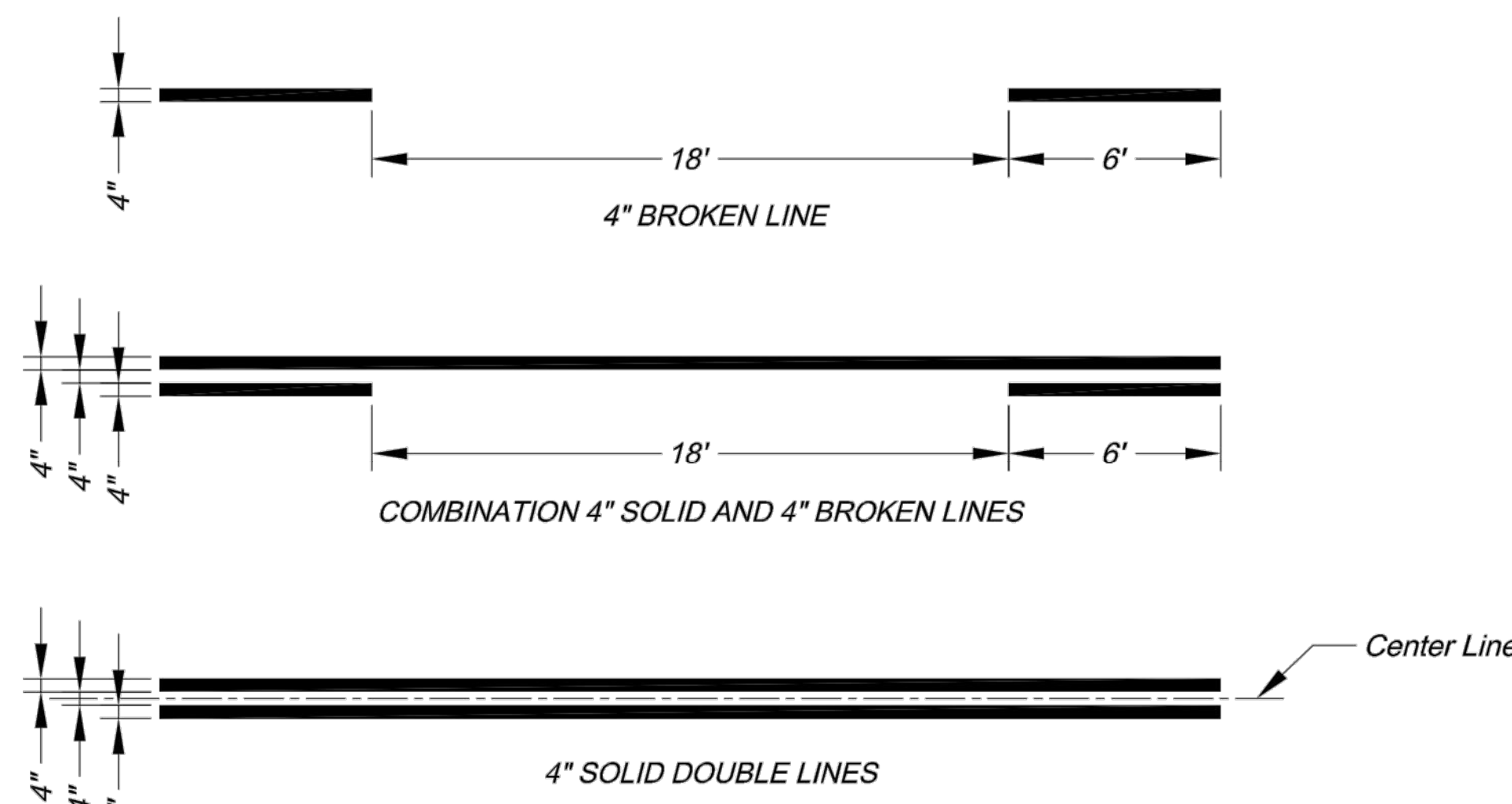
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REV. NO.	DATE	REVISIONS DESCRIPTION

PAVEMENT MARKING AND SIGNING PLAN
 DOUGLAS STREET
 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI
 2023

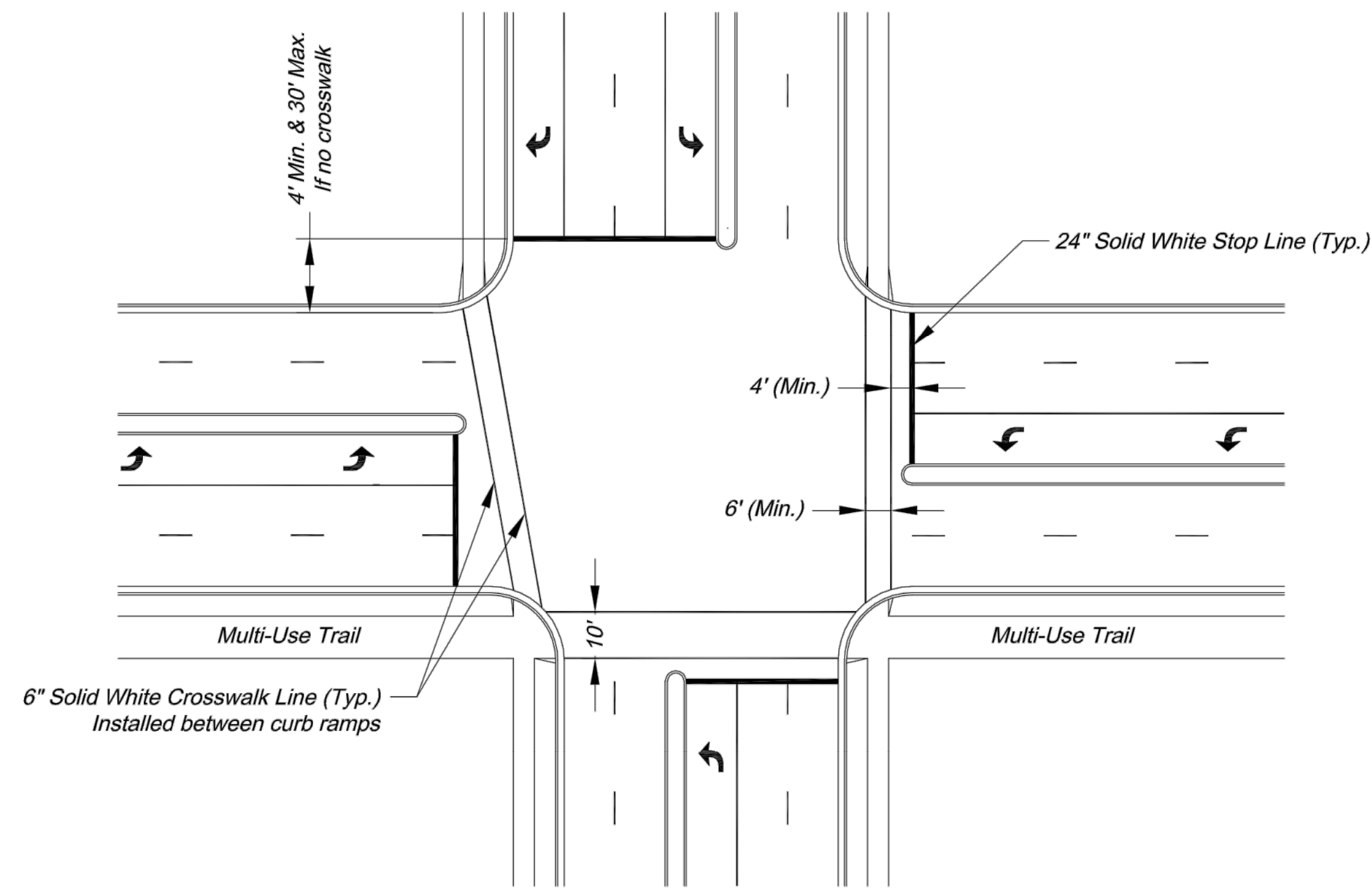
drawn by: SRH
 checked by: JSC
 approved by: JSS
 QA/QC by: SLI
 project no.: 021-04643
 drawing no.: 138-138500-00
 date: 9/27/2023



TYPICAL LINE DETAILS

NOTES:

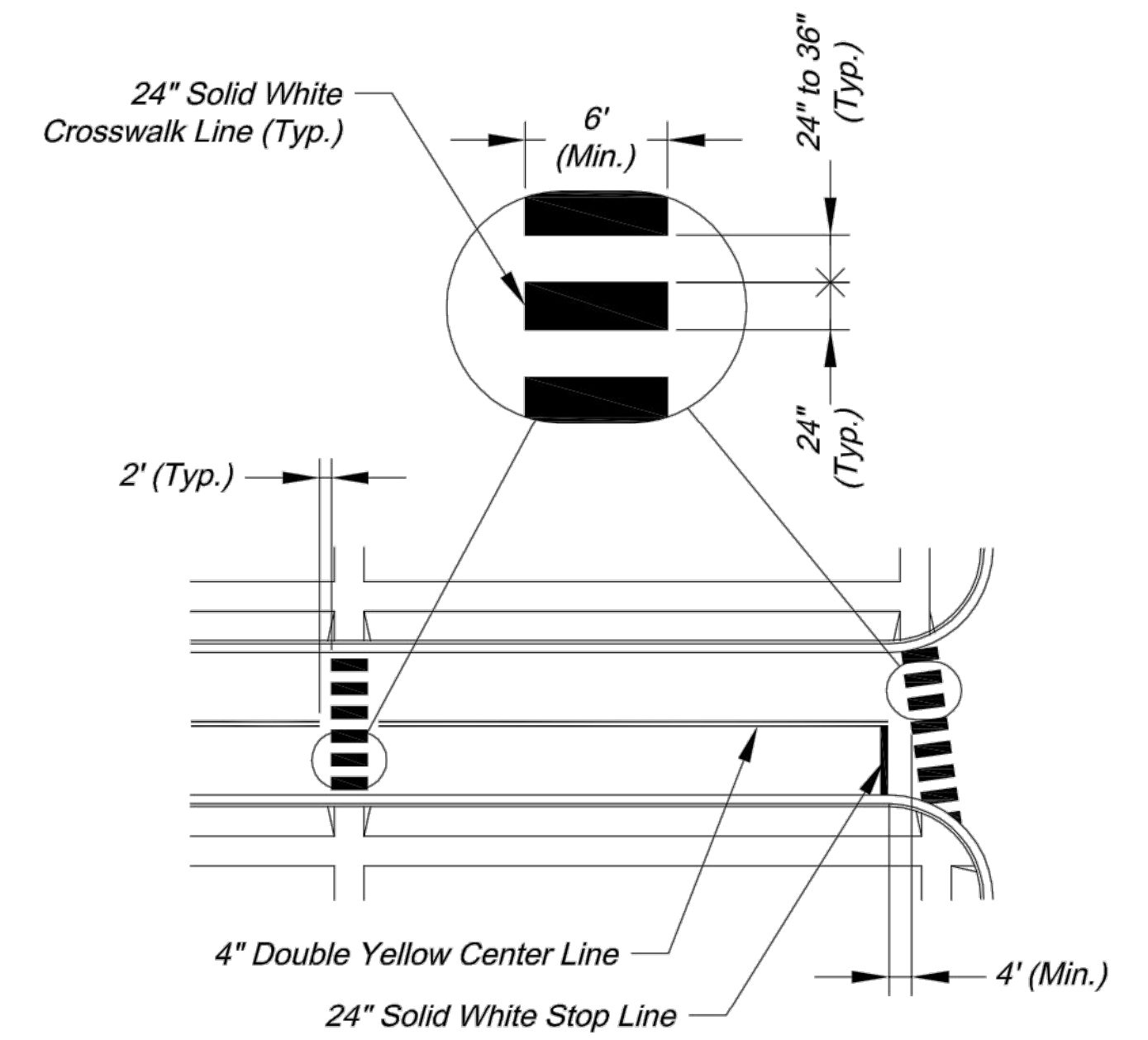
1. All edge line, center line, and lane line pavement markings shall be 4" wide unless otherwise noted.
2. Edge lines shall be continuous solid white or yellow lines. Right side edge lines shall be solid white. Median or left side edge lines on divided roadways are to be solid yellow. Edge lines and center lines shall be continuous across driveways.



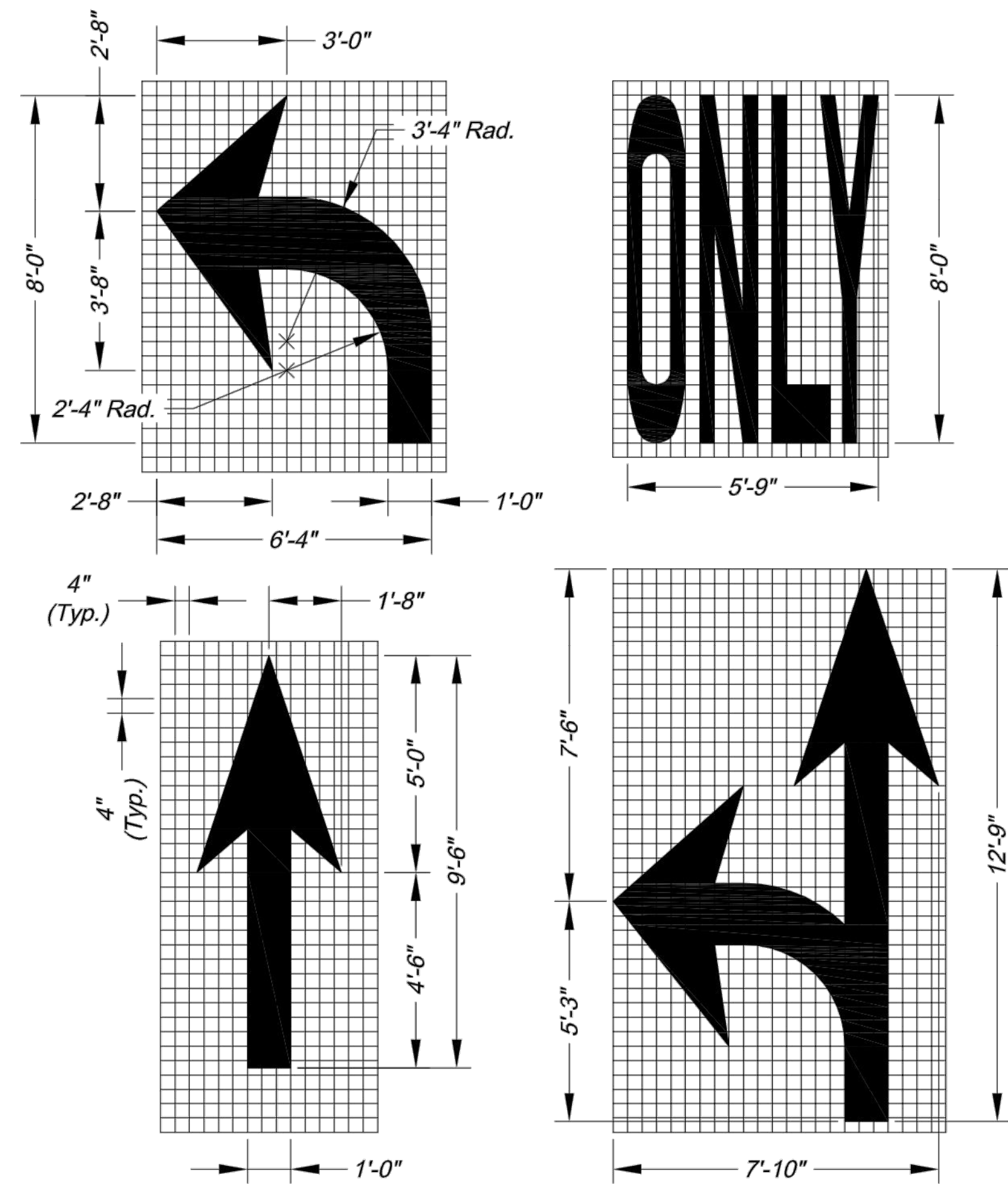
TYPICAL INTERSECTION MARKINGS

NOTES:

1. Transverse crosswalk lines shall be installed such that the distance between lines is at least 6 or 10 feet.
2. Stop lines are required at signalized intersections, on multi-lane stop controlled approaches, or in front of crosswalks at controlled intersections.



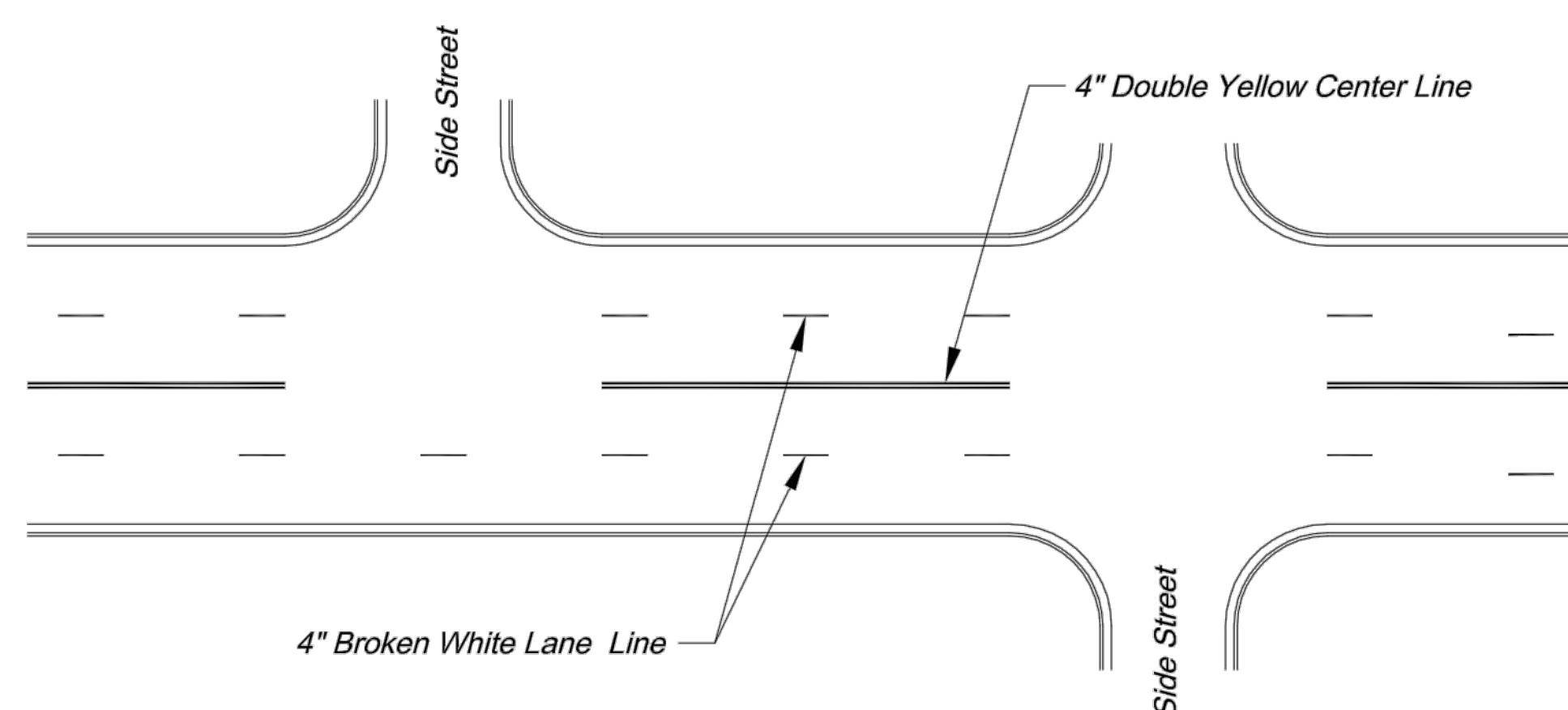
TYPICAL MIDBLOCK OR SCHOOL CROSS WALK



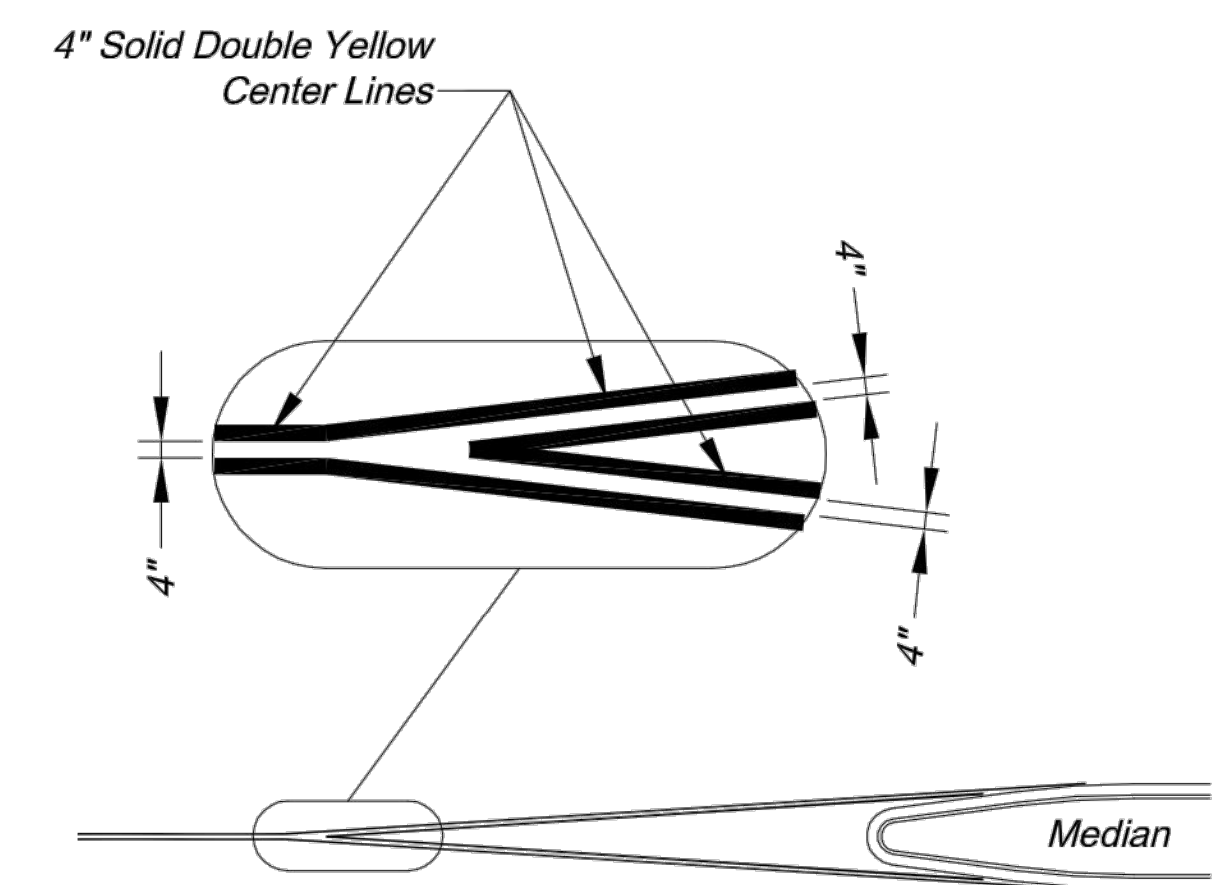
ARROW AND SYMBOL DETAILS

NOTES:

1. All arrow and symbol markings shall be white, and shall be centered in their respective traffic lanes.
2. Right-turn and combination right-turn/straight arrows are reverse of arrows shown.



TYPICAL MARKINGS FOR FOUR-LANE UNDIVIDED ROADWAY



TYPICAL MEDIAN NOSE CENTER LINE DETAIL

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PAVEMENT MARKING GENERAL NOTES:

1. All pavement markings shall be in accordance with the latest edition of the *Manual on Uniform Traffic Control Devices (MUTCD)*.
2. All words and symbols shall conform to the latest edition of *Standard Alphabets for Highway Signs and Pavement Markings* printed by the U.S. Department of Transportation, Federal Highway Administration.
3. Pavement markings, either temporary or permanent are required at all times if the roadway is open to traffic.
4. All pavement markings that conflict with the desired markings shall be completely removed. Removals shall not leave the road surface scarred with an image that misleads traffic. Any excess damage or scarring of pavement shall be repaired at the Contractor's expense.
5. The proposed permanent markings shall be laid out by the Contractor in advance of the marking installation. Markings shall not be applied until the layout has been approved by the City Traffic Engineer.
6. Center lines shall be marked on all undivided arterial streets, and any other undivided street with more than two lanes and/or a speed limit of 30 mph or more.
7. Edge lines shall be marked on all non-curbed streets.

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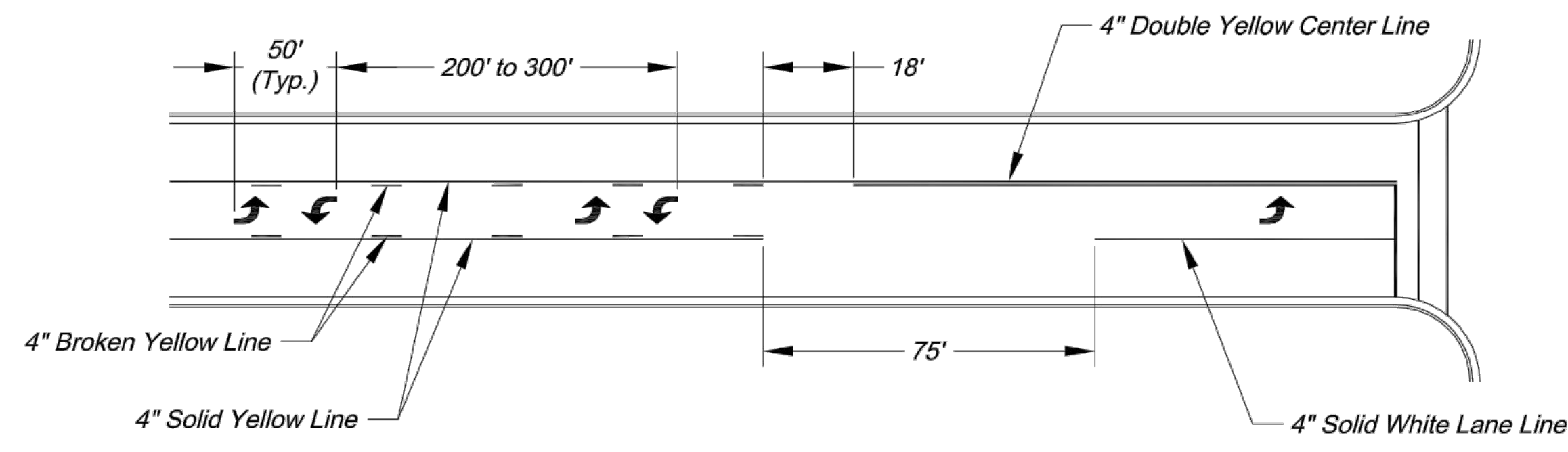


Project: COLBERN ROAD AND DOUGLAS STREET
 ROADWAY MARKING DETAILS
 Sheet Name: STANDARD DRAWING PM-1

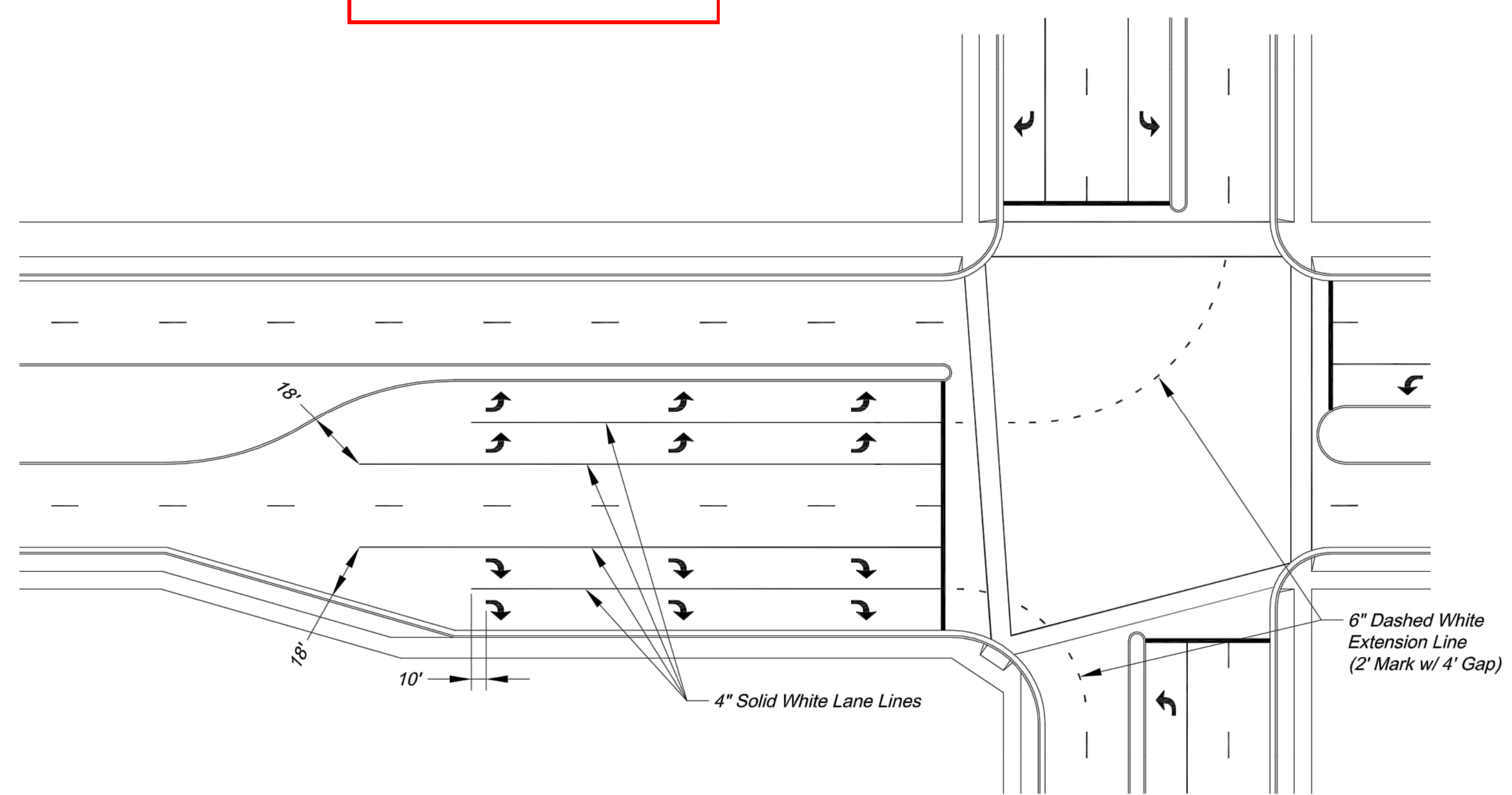
Drawn By: AS
 Checked By: JW
 Date: 09/09/2009
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11/07/2023

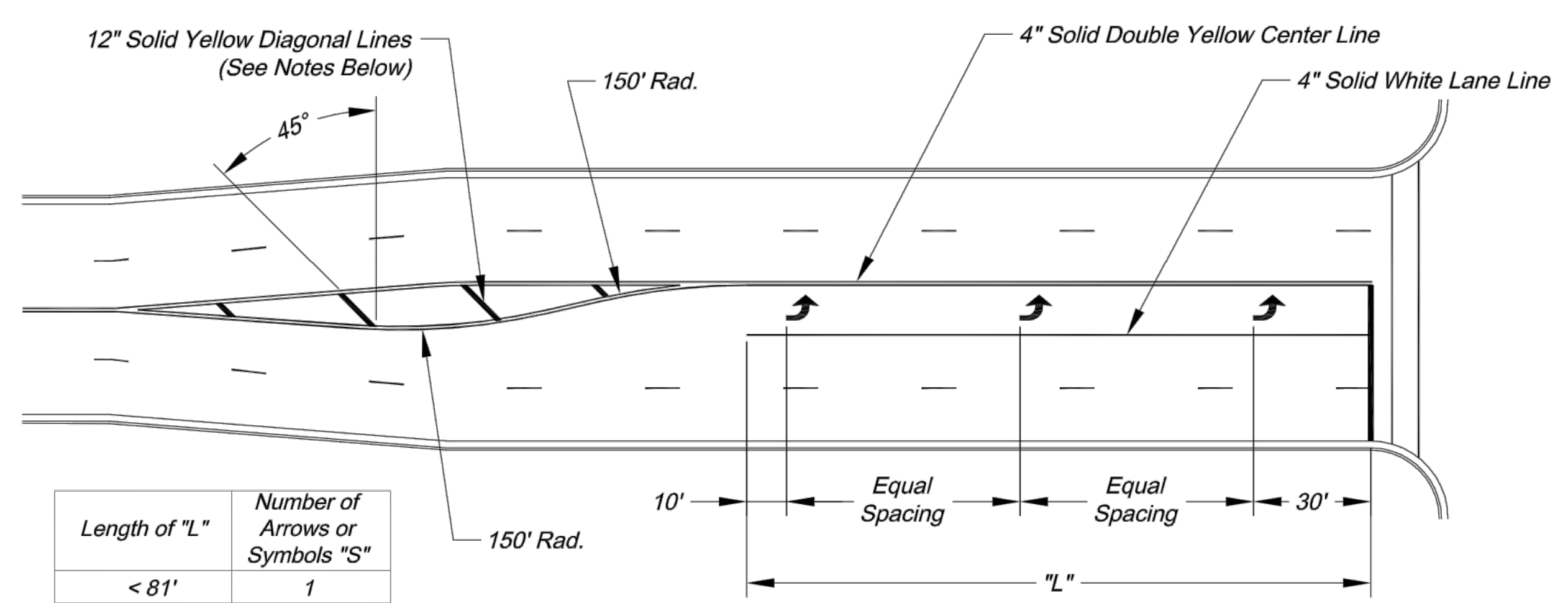


TYPICAL MARKINGS FOR TWO-WAY LEFT-TURN LANE



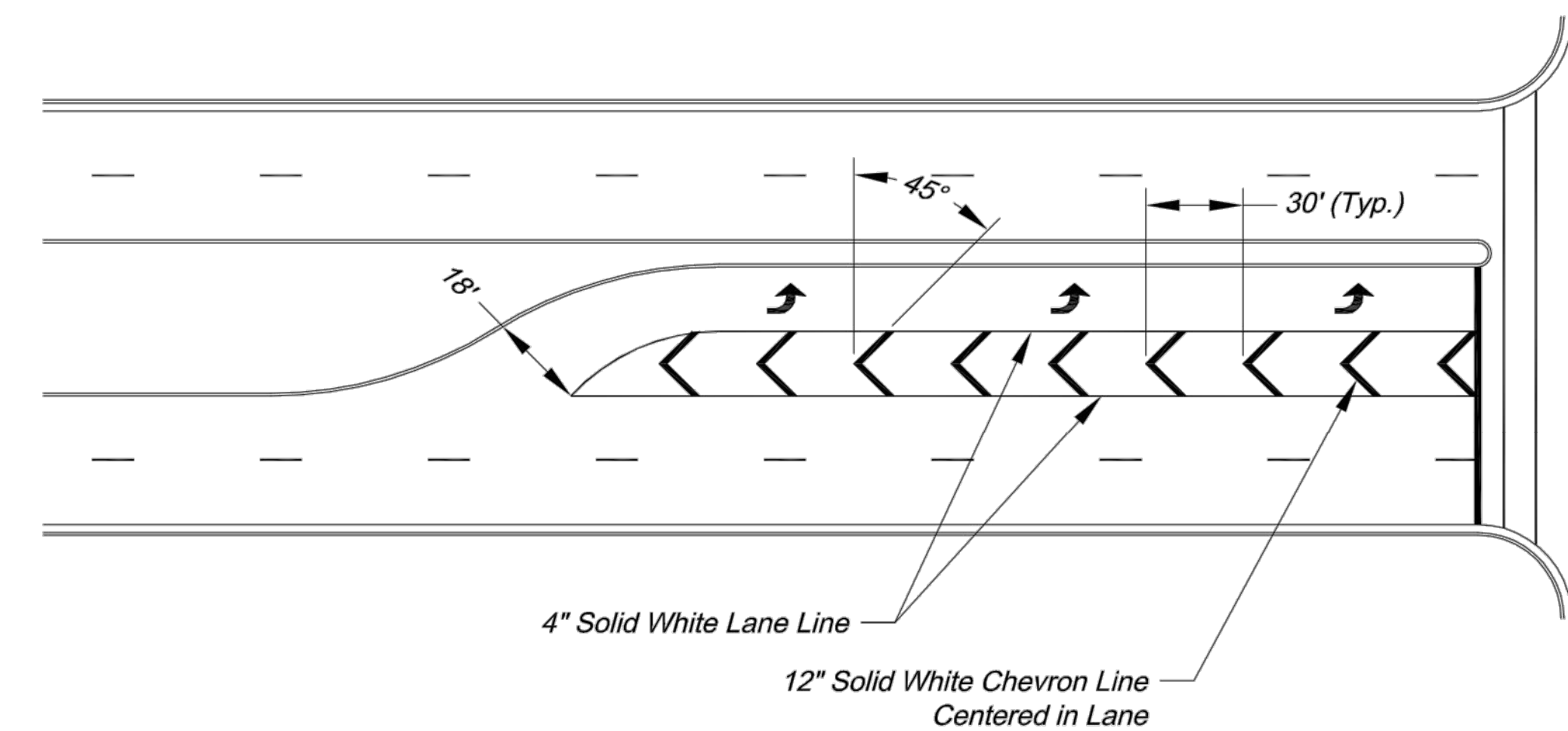
TYPICAL DUAL TURN LANE MARKINGS

NOTE:
1. Dashed extension lines shall not extend through crosswalks.



TYPICAL TURN LANE MARKINGS

NOTES:
1. Diagonal lines are required between centerlines if the width of the area between the center lines is greater than 12' and/or the length of the area between center lines is greater than 250'.
2. Diagonal lines should be spaced at 5' increments, equal to the posted speed limit.
3. Equal Spacing is calculated as $(L - 40) / (S - 1)$.
4. When a through lane of traffic terminates as a mandatory turn lane, Arrow and "ONLY" symbols should be marked in the turn lane, in alternating order. The first and last symbols should be Arrows.



TYPICAL STRIPED OUT TURN LANE MARKINGS

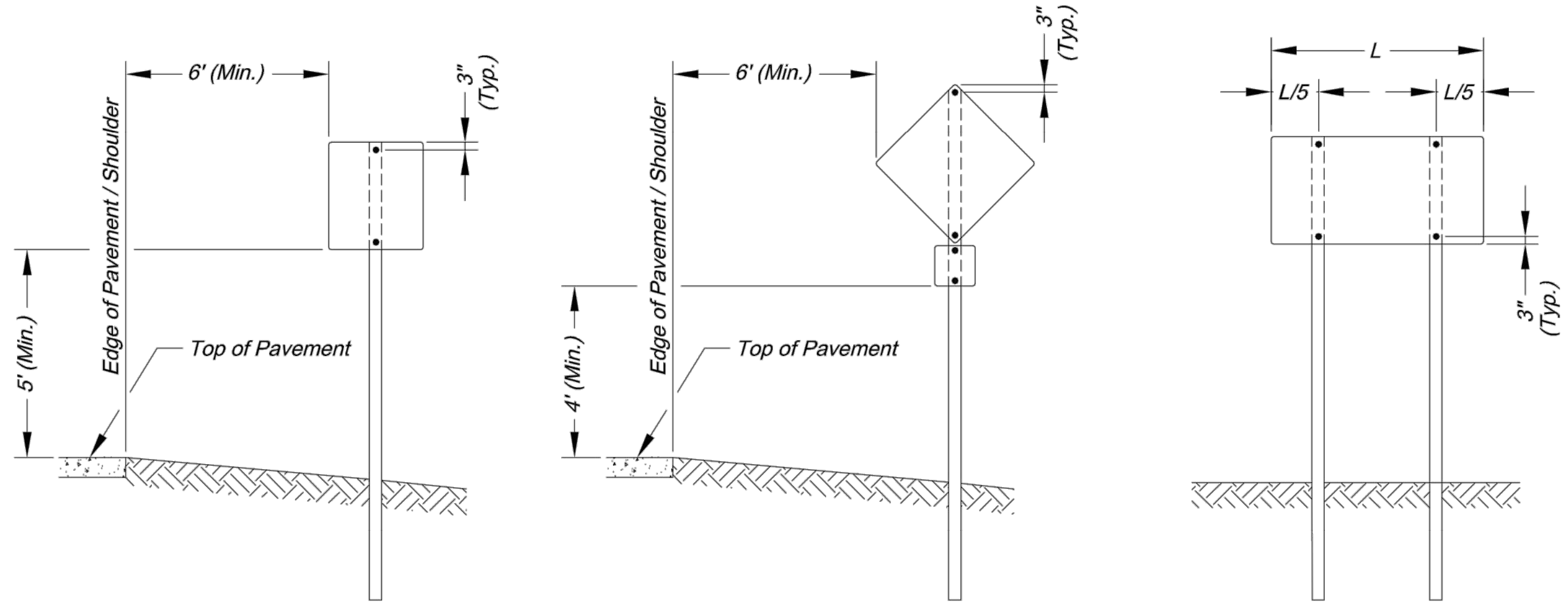
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LEE'S SUMMIT, MISSOURI 64063
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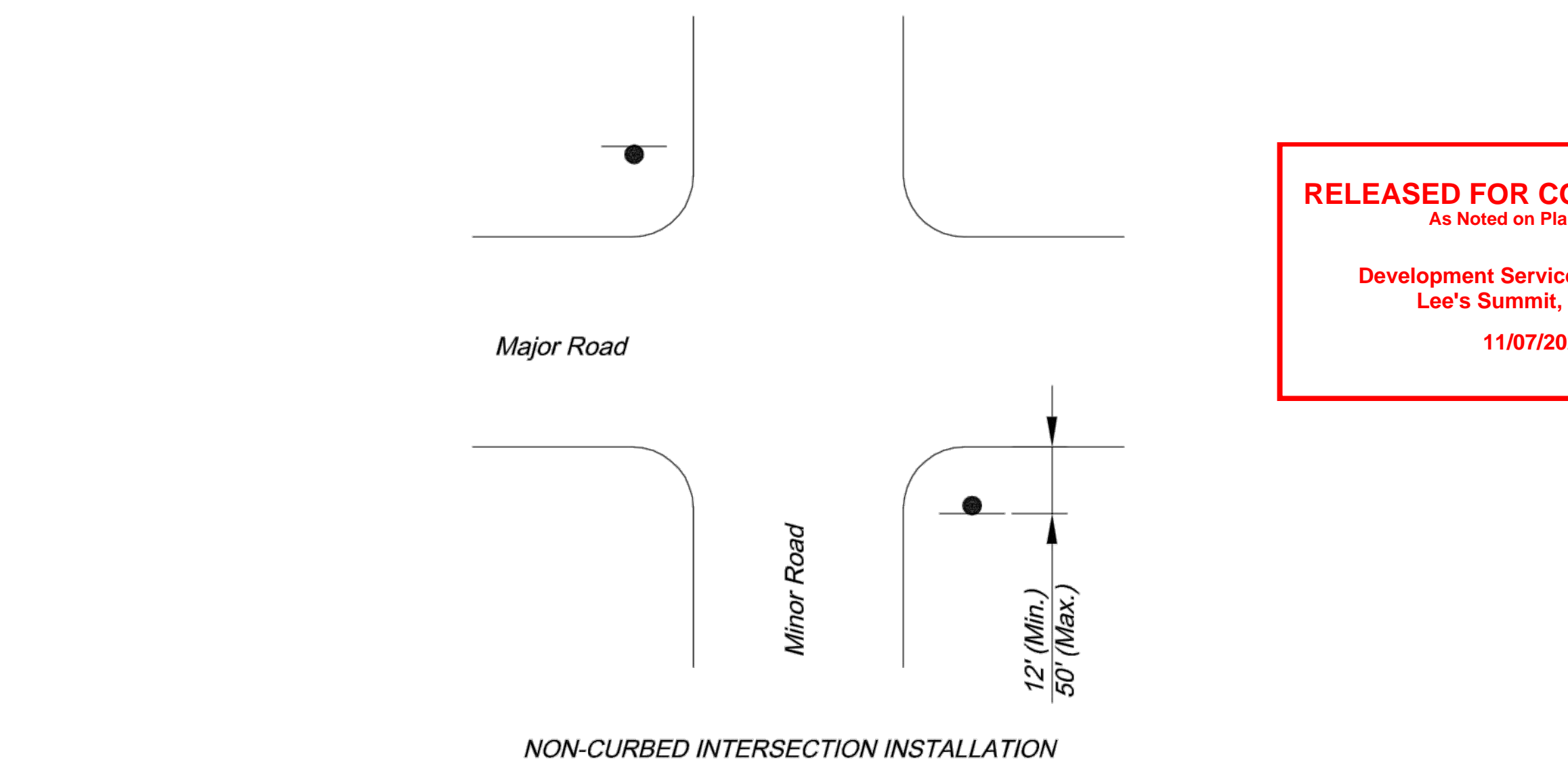
Project: COLBERN ROAD AND DOUGLAS STREET
INTERSECTION MARKING DETAILS
Sheet Name: STANDARD DRAWING PM-2

Drawn By: AS
Checked By: JW
Date: 09/09/2009
Project#

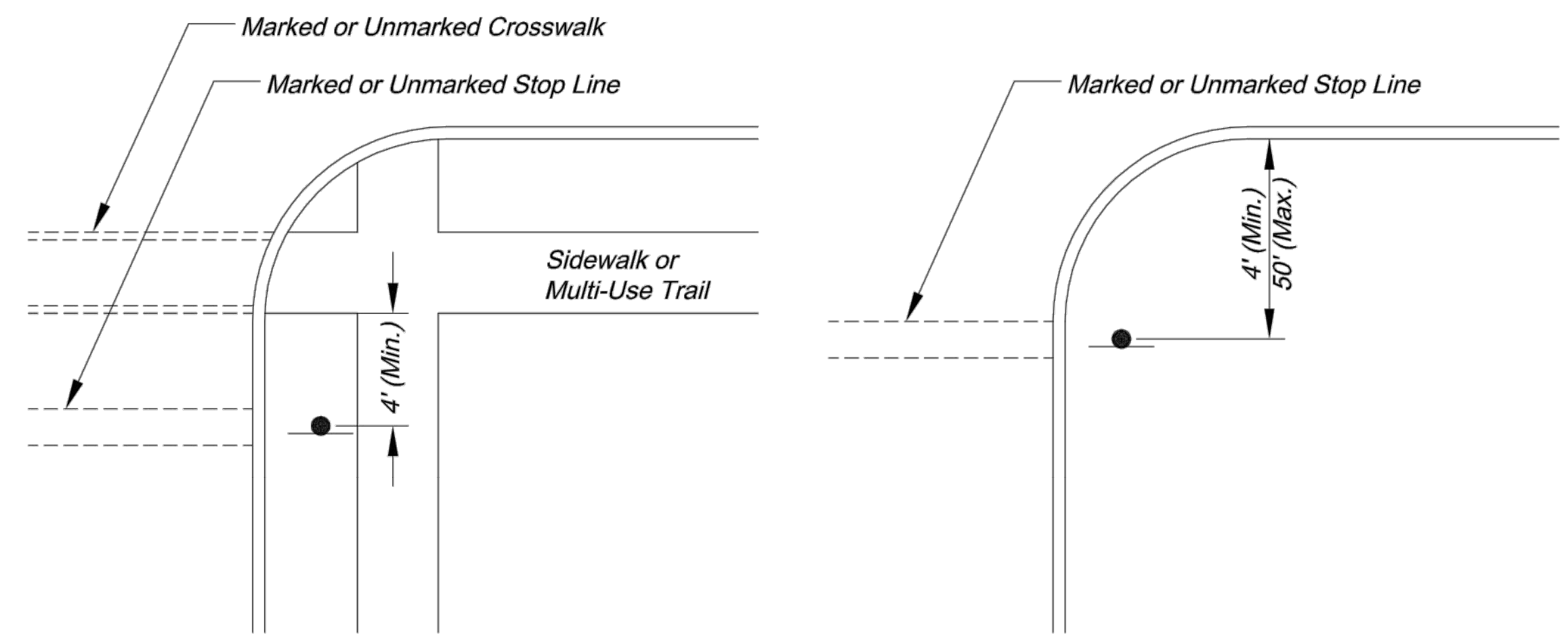
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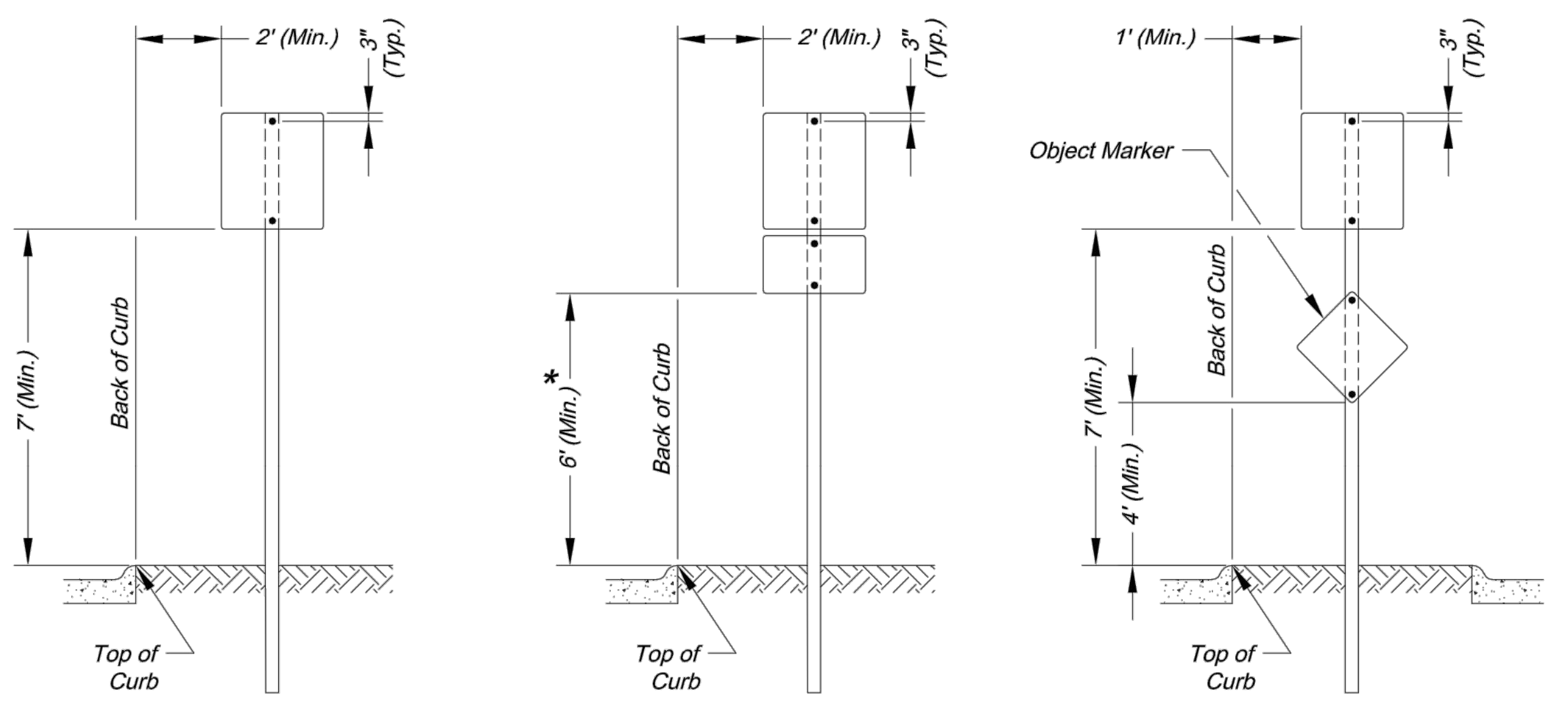
SIGN INSTALLATION FOR NON-CURBED STREET
SIGN INSTALLATION WITH AUXILIARY SIGN FOR NON-CURBED STREET
SIGN INSTALLATION WITH TWO SIGN POSTS



NON-CURBED INTERSECTION INSTALLATION

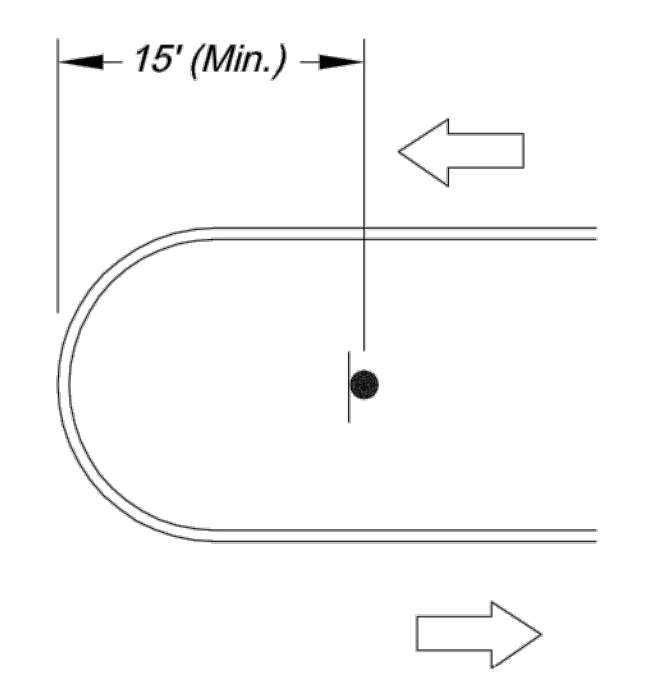


INTERSECTION WITH SIDEWALK / MULTI-USE TRAIL INSTALLATION
CURBED INTERSECTION INSTALLATION



SIGN INSTALLATION FOR CURBED STREET
SIGN INSTALLATION WITH AUXILIARY SIGN FOR CURBED STREET
SIGN INSTALLATION FOR RAISED MEDIANS

CONTROL SIGN LOCATION



TYPICAL MEDIAN SIGN LOCATION

MEDIAN SIGN LOCATION

SIGN MOUNTING DETAILS

* The height to the bottom of a sign when it is located in a pedestrian walkway or extends into a walkway shall be a minimum of 80 inches above the walkway.
 NOTE:
 1. Generally, the sign mounting height should not be more than 1' greater than the minimum mounting height.

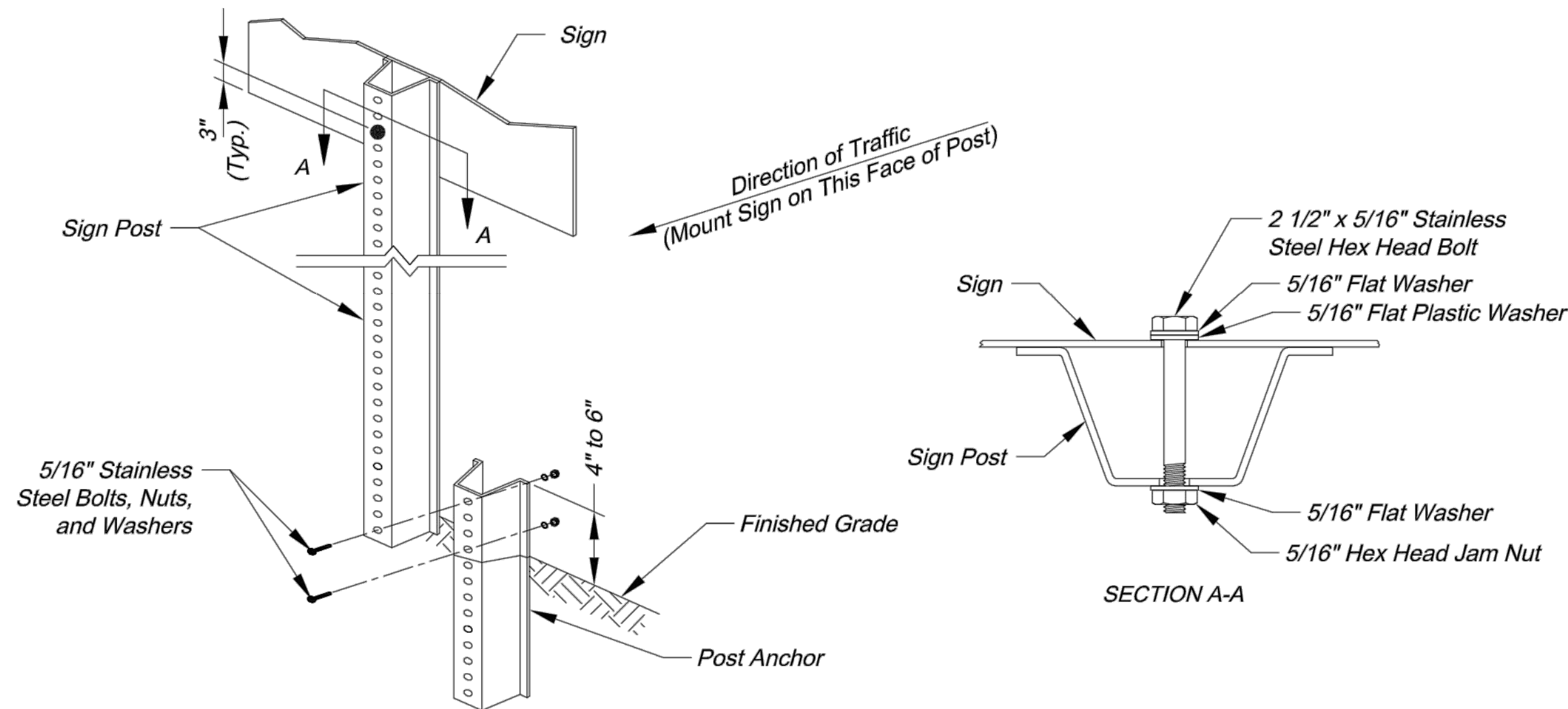
NOTES:
 1. A 4" P.V.C. sleeve shall be installed in new concrete medians at each location where a sign is to be installed.
 2. For existing concrete medians, a 4" hole shall be cored into the concrete.

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Project: COLBERN ROAD AND DOUGLAS STREET
 Sheet Name: SIGN MOUNTING DETAILS
 STANDARD DRAWING SN-1

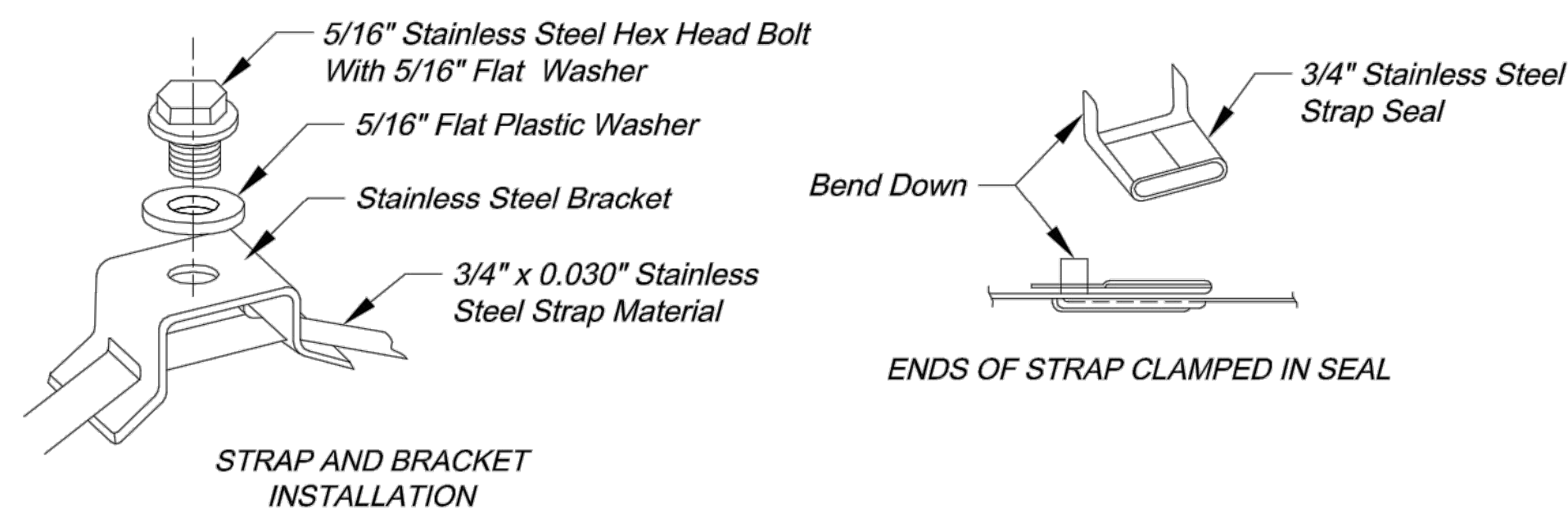
Drawn By: AS
 Checked By: JW
 Date: 08/26/2009
 Project#



U-STEEL POST DETAILS

U-STEEL POST NOTES:

1. Splice shall be positioned entirely between finished grade line and 18" above finished grade line. Only one splice will be allowed per post.
2. U-Steel post shall be 3 lb./ft., galvanized according to ASTM A123.
3. U-Steel post can be used for installation of signs with an area of less than 2.5 square feet.
4. All posts shall be embedded a minimum of 3 feet.



STRAP TYPE SIGN SUPPORT DETAILS

METAL POLE SIGN MOUNTING NOTES:

1. Signs on metal poles shall be attached with two brackets and stainless steel bands.
2. Holes in sign for attachment to the mounting brackets shall be offset a minimum of 2 inches from the edge of the sign.
3. Holes in sign shall be located such that the sign is level.
4. All strap, bracket, and seal materials should be Type 201 stainless steel.

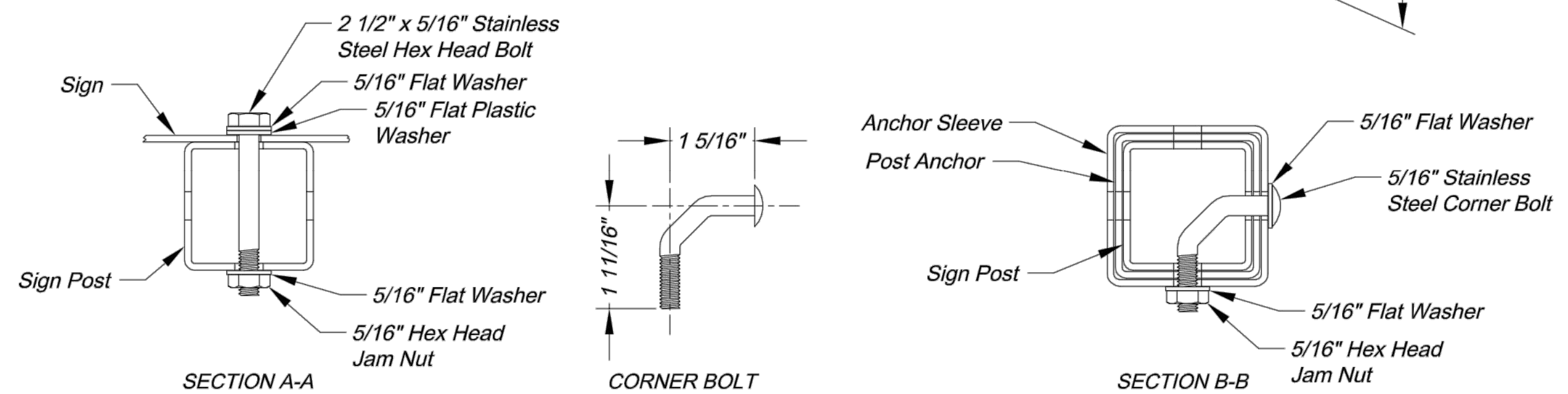
PERMANENT SIGNING GENERAL NOTES:

1. All signing shall be in accordance with the latest edition of the *Manual on Uniform Traffic Control Devices (MUTCD)*.
2. The Contractor is responsible for avoiding any and all utilities when installing sign posts, whether the utility is indicated on the plans or not.
3. All workmanship and materials shall be subject to the inspection and approval of the Public Works Department of the City of Lee's Summit.
4. The Contractor shall stake the location of all sign posts to be installed. The City Inspector shall inspect the staking prior to installation. Minor relocation to avoid conflicts may be allowed with the approval of the City Traffic Engineer or designee.
5. Signs shown to be installed on the side of metal poles shall be mounted with stainless steel straps or wing brackets as detailed. No signs are to be installed on wood poles. See *Traffic Signal Standard Drawings* for the installation of signs on mast arms.
6. All post mounted signs shall be installed with breakaway anchors according to the Standard Drawings.
7. All existing signs will be used in place during construction and protected from damage unless otherwise indicated in the plans. If the Contractor damages any existing sign or posts during construction, the Contractor will be required to replace the damaged materials with new signs or posts of the same type and size at the Contractor's expense. The Contractor shall be responsible for removing and storing any signs that are to be reinstalled on the project. All equipment shall be reinstalled in good condition.
8. Existing permanent signs and posts removed by the Contractor for construction purposes which are not to be reinstalled shall be delivered to the City's Public Works Maintenance Facility (1971 SE Hamblen Road). The Contractor shall be responsible for removing and storing equipment in good condition and is fully responsible for the equipment until it is delivered.
9. All Stop, Yield, or street name signs shall be maintained in a conspicuous location for the driving public. All Stop and Yield signs removed for construction purposes can be temporarily erected in reflectorized drums (no less than 7 feet above the pavement surface) until they can be reinstalled. Any temporary Stop or Yield sign installation to be left in place overnight will require prior approval from the City Inspector.

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri
11/07/2023

- #### SQUARE STEEL POST INSTALLATION SEQUENCE:
1. Sign post anchor driven partially into the ground using a drive cap with a sledge or power equipment.
 2. Anchor sleeve slipped over anchor and drive into the ground together with the sign post anchor.
 3. Insert sign post into the post anchor and bolt in place.



SQUARE STEEL POST DETAILS

SQUARE STEEL POST NOTES:

1. Square steel sign posts and break-away anchor shall consist of the following materials:
Sign Post - 14 Ga. 2" x 2" Square Steel Post
Post Anchor - 12 Ga. 2 1/4" x 2 1/4" x 36" Square Steel Post
Anchor Sleeve - 12 Ga. 2 1/2" x 2 1/2" x 18" Square Steel Post
2. 14 Gauge posts must meet a certified minimum yield strength of 60,000 psi.
3. In all installations the first hole above the finished grade line on the sign post, anchor, and anchor sleeve must be in line for the insertion of the corner bolt.
4. The maximum area for one sign post is 9.0 square feet. A sign or combination of signs with an area greater than 9.0 square feet will require two posts. Also, signs with a width greater than 36" (not including 36" x 36" diamond shaped signs) will require two posts.

CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809



Project: COLBERN ROAD AND DOUGLAS STREET

SIGN POST DETAILS

Sheet Name: STANDARD DRAWING SN-2

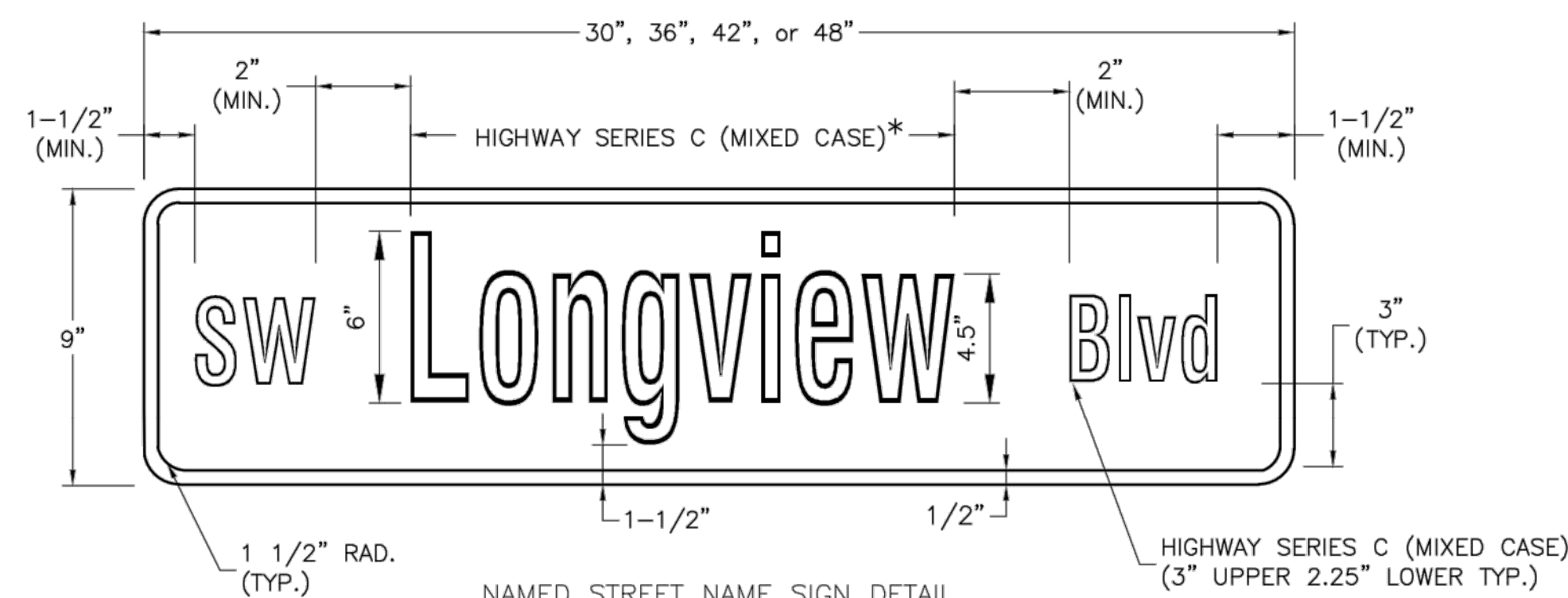
Drawn By: AS
Checked By: JW
Date: 08/26/2009
Project#

2 OF 3

STANDARD ABBREVIATION LISTS

NAMED STREETS	
AVENUE	Ave
BOULEVARD	Blvd
CIRCLE	Cir
CREEK	Cr
COURT	Ct
CROSSING	Xing
DRIVE	Dr
HIGHWAY	Hwy
LANE	Ln
PARKWAY	Pkwy
PLACE	Pl
ROAD	Rd
STREET	St
TERRACE	Ter
TRAIL	Trl
WAY	Way

NUMBERED STREETS	
FIRST	ST
SECOND	ND
THIRD	RD
FOURTH TO TENTH	TH

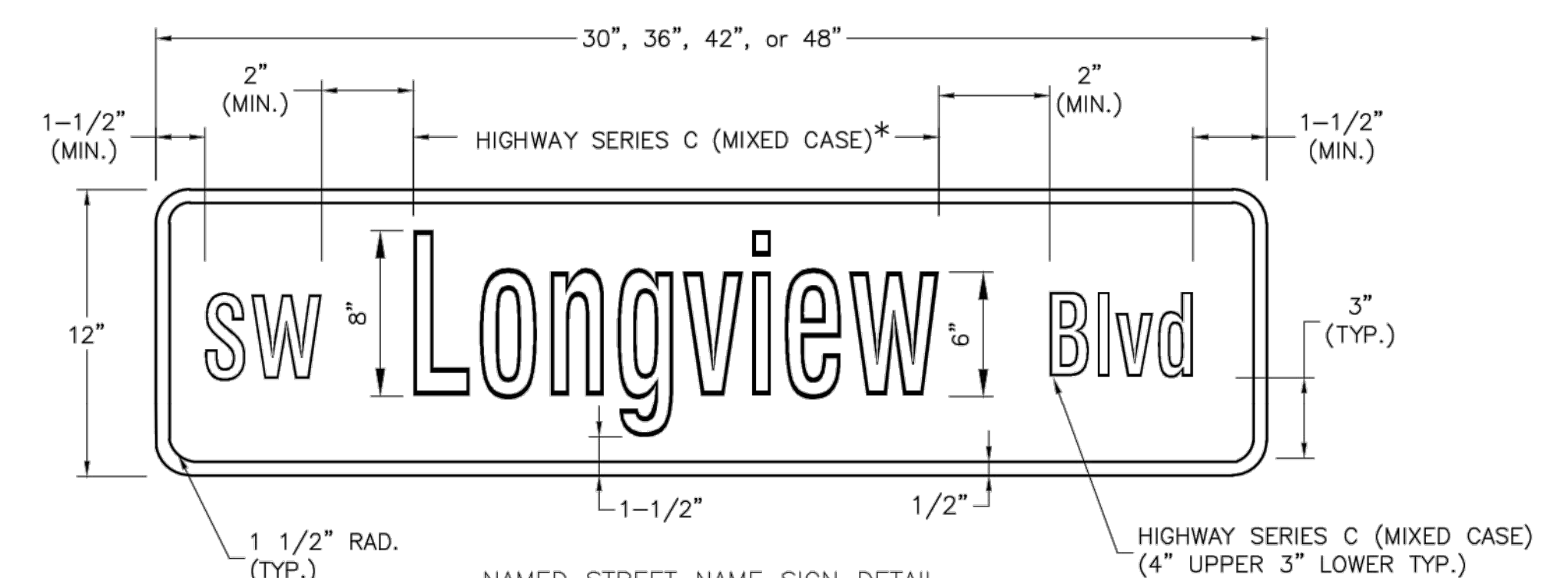


NAMED STREET NAME SIGN DETAIL

* USE HIGHWAY SERIES B (MIXED CASE) IN LIEU OF SERIES C IF NECESSARY TO FIT TEXT ON A 36" SIGN BLANK.

STREET NAME SIGN FACE DETAILS

POST MOUNTED 2-LANE ALL SPEEDS AND MULTI-LANE UNDER 40 MPH

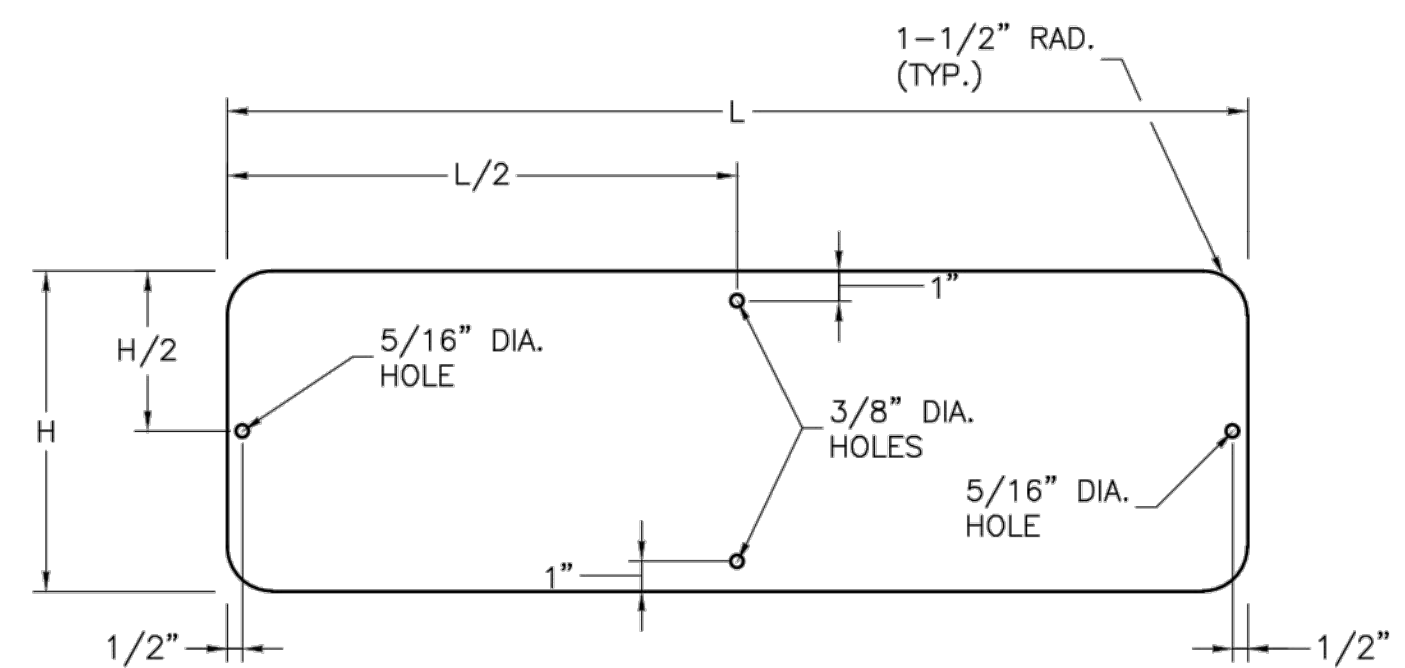


NAMED STREET NAME SIGN DETAIL

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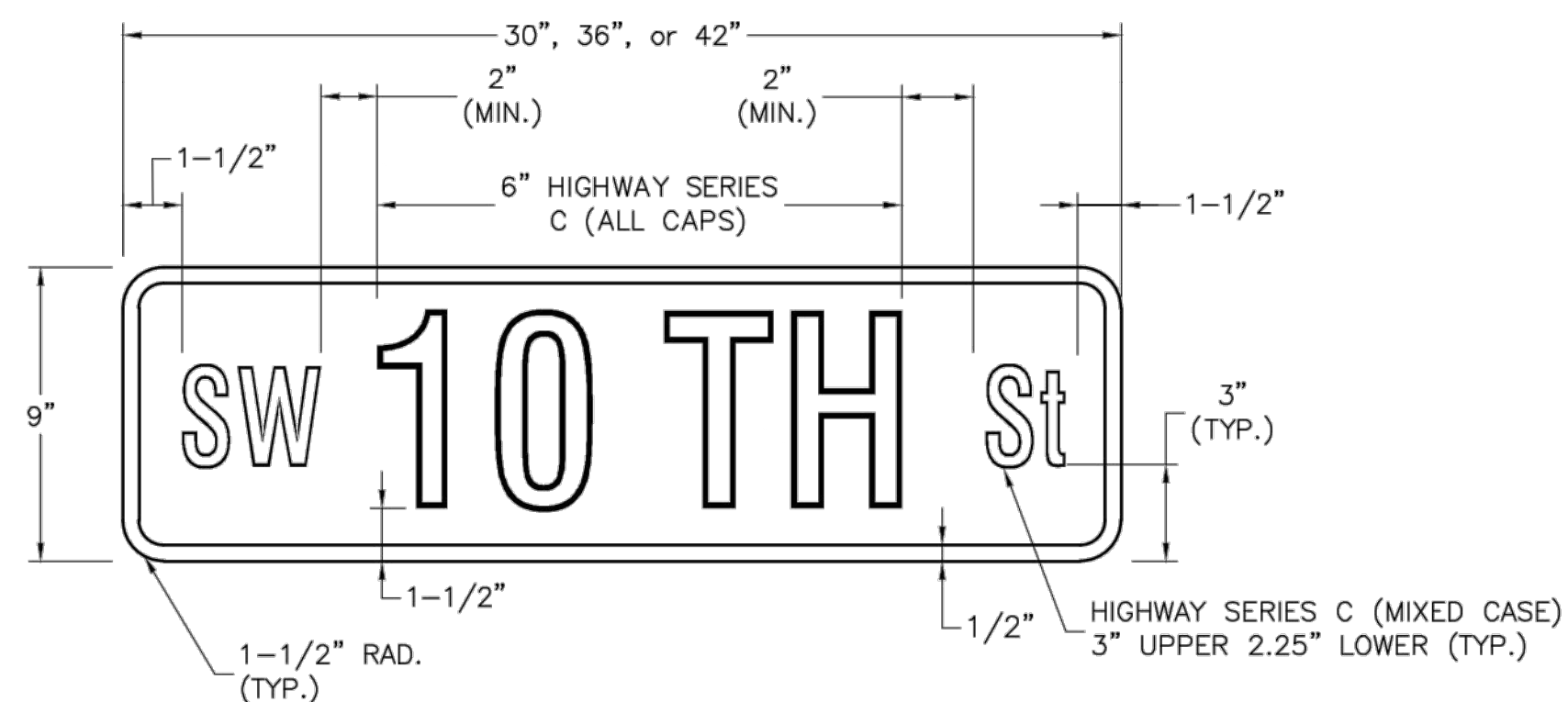
STREET NAME SIGN FACE DETAILS

POST MOUNTED MULTI-LANE GREATER THAN 40 MPH



STREET NAME SIGN BLANK DETAILS

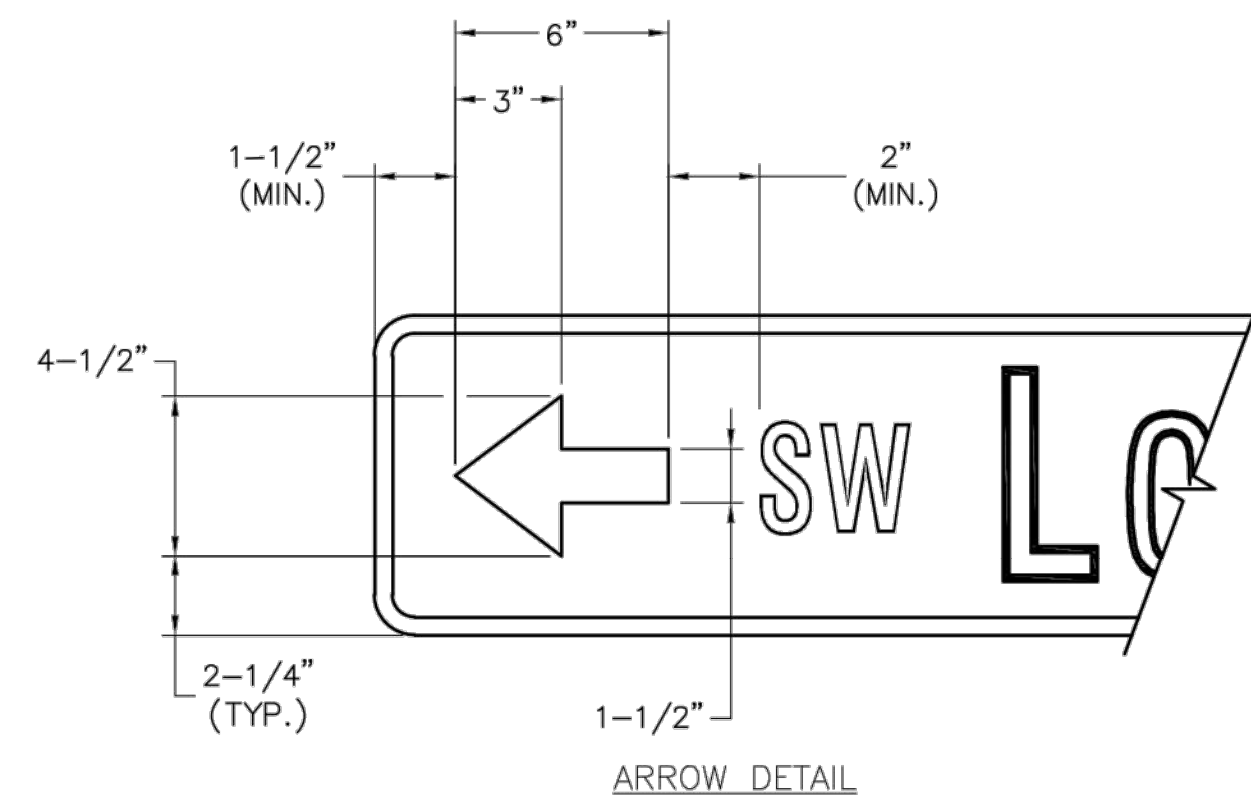
FOR MOUNTING ON SQUARE STEEL POSTS



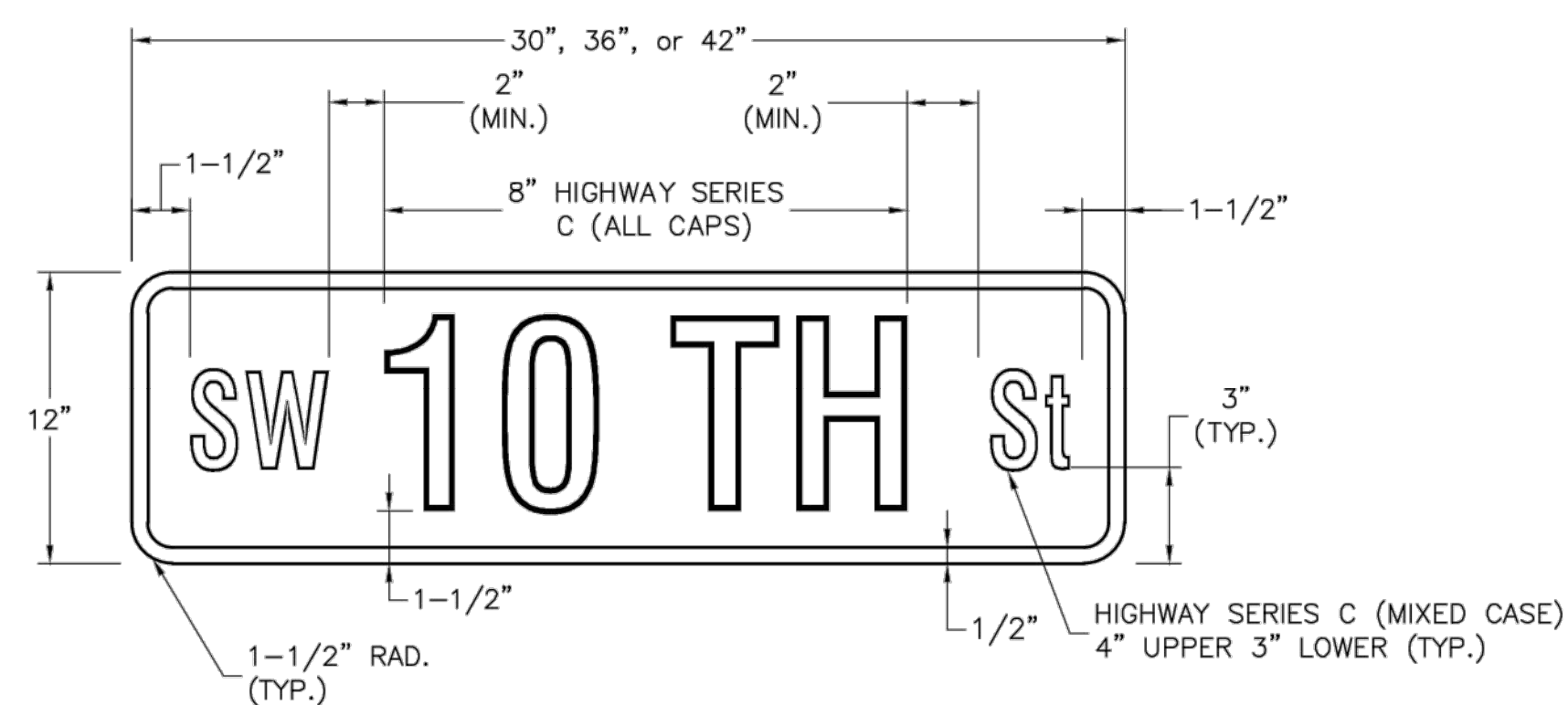
NUMBERED STREET NAME SIGN DETAIL

STREET NAME SIGN FACE DETAILS

POST MOUNTED 2-LANE ALL SPEEDS AND MULTI-LANE UNDER 40 MPH



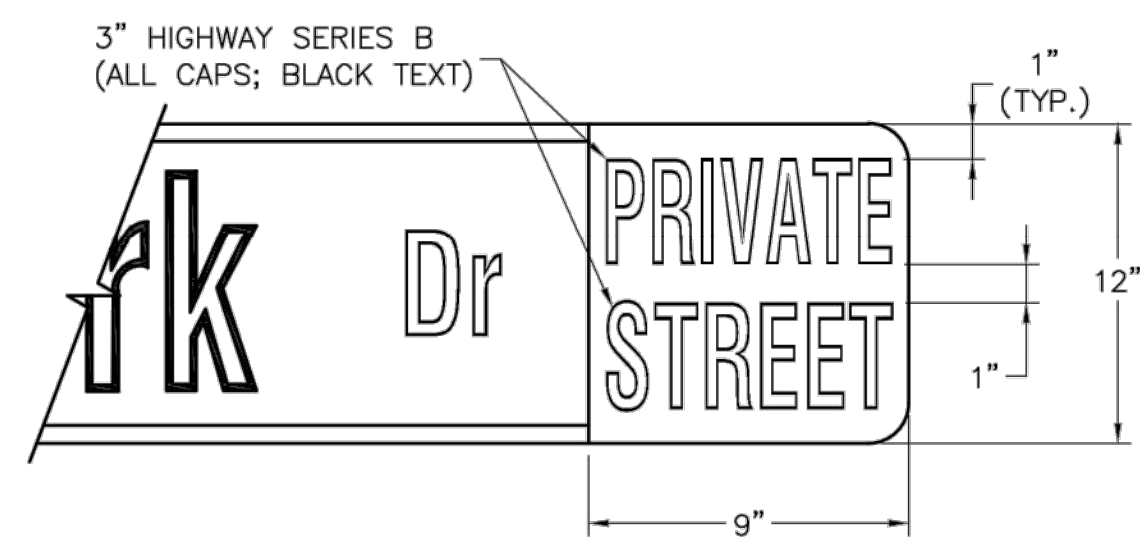
ARROW DETAIL



NUMBERED STREET NAME SIGN DETAIL

STREET NAME SIGN FACE DETAILS

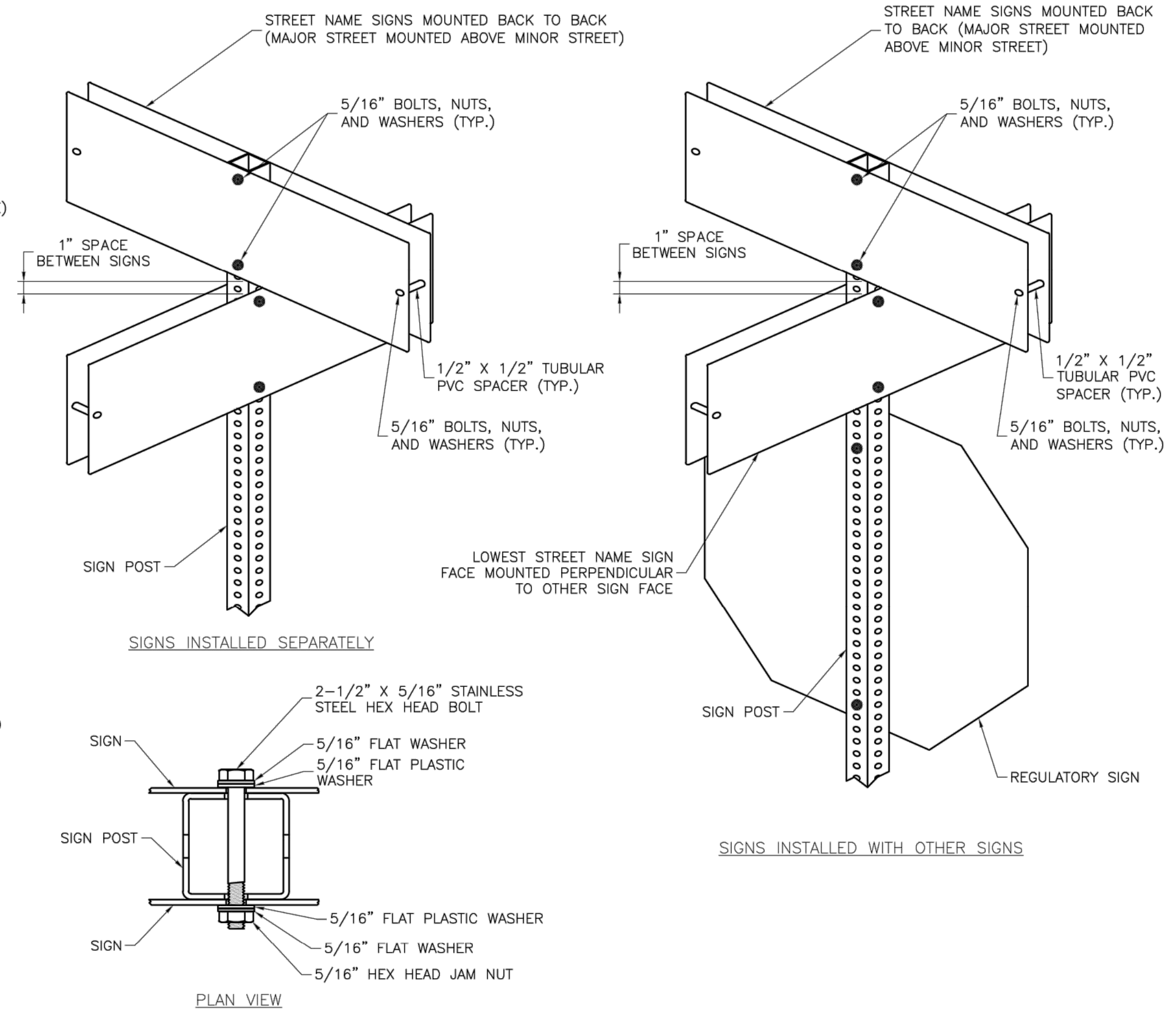
POST MOUNTED MULTI-LANE GREATER THAN 40 MPH



PRIVATE STREET TAG DETAIL

NOTES:

- FOR ALL STREET NAME SIGNS, THE LEGEND SHALL BE WHITE AND THE BACKGROUND SHALL BE GREEN.
- ARROWS SHALL BE ADDED TO STREET NAME SIGNS WHERE THE NAME OF A STREET CHANGES AT AN INTERSECTION. STREET NAME SIGNS WITH ARROWS ARE TO BE INSTALLED ON EACH SIDE OF THE INTERSECTION TO INDICATE THE CHANGE IN NAMES. ARROWS SHALL BE WHITE.
- THE "PRIVATE STREET" TAG SHOULD BE ADDED TO THE END OF STREET NAME SIGNS TO INDICATE WHERE A STREET THAT IS OUTSIDE THE RIGHT-OF-WAY INTERSECTS A PUBLIC STREET. THE BACKGROUND FOR THE "PRIVATE STREET" TAG SHALL BE YELLOW.
- MULTI-LANE IS DEFINED AS HAVING 2 LANES OR MORE IN EACH DIRECTION, EXCLUDING TURN LANES.
- OVERHEAD SIGN DETAILS MAY BE FOUND ON THE SIGNAL HEAD MOUNTING DETAIL.



SIGNS INSTALLED SEPARATELY

LOWEST STREET NAME SIGN FACE MOUNTED PERPENDICULAR TO OTHER SIGN FACE

SIGNS INSTALLED WITH OTHER SIGNS

PLAN VIEW

SQUARE STEEL POST MOUNTING DETAILS

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri

11/07/2023

CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809



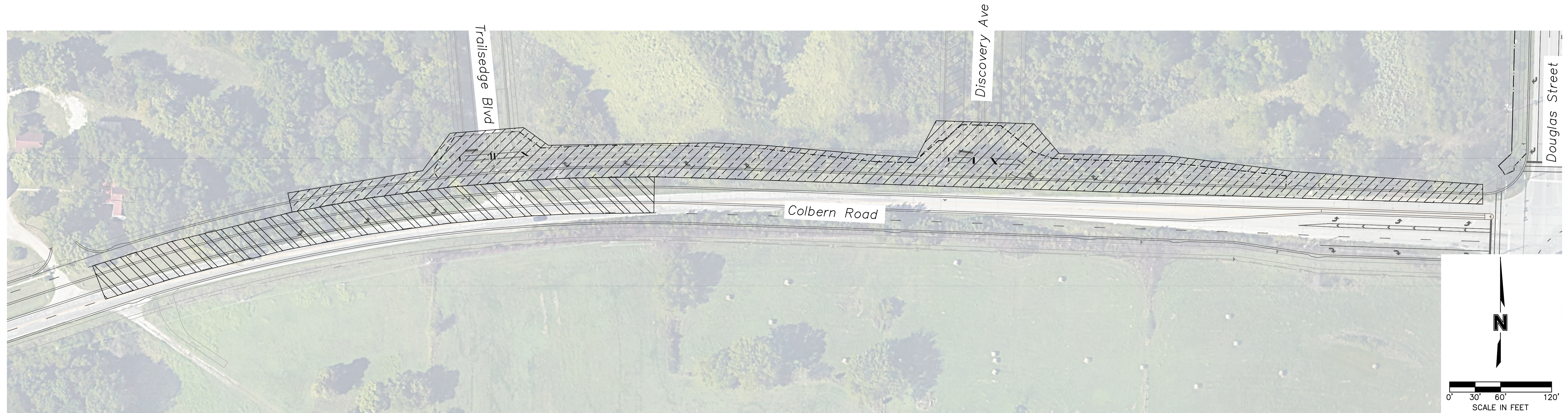
Project: COLBERN ROAD AND DOUGLAS STREET
Sheet Name: STANDARD DRAWING SN-3
STREET NAME SIGN DETAILS

Drawn By: AS
Checked By: JW
Date: 08/26/2009
Project#

3 OF 3

57

DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final\Plans\Sheets\JTTC\TRAFFIC_CONTROL\F_TFE_D2104643.dwg USER: kwilliams2
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CONSTRUCTION SEQUENCING:

COLBERN ROAD AND DOUGLAS STREET CONSTRUCTION TO BE COMPLETED IN TWO PHASES

- PHASE 1 – TURN LANE AND DRIVEWAY CONSTRUCTION
- PHASE 2 – MEDIAN MODIFICATION

PHASE 1 NOTES:

COLBERN ROAD – COLBERN ROAD TO REMAIN OPEN DURING PHASE 1 CONSTRUCTION. THE OUTSIDE MOST WESTBOUND THROUGH LANE IS TO BE TEMPORARILY CLOSED. ONE LANE WESTBOUND TO REMAIN OPEN TO THROUGH TRAFFIC.

DOUGLAS STREET – DOUGLAS STREET TO REMAIN OPEN DURING PHASE 1 CONSTRUCTION. THE SOUTHBOUND THROUGH LANE IS TO BE TEMPORARILY CLOSED. THE TWO-WAY LEFT-TURN LANE IS TO BE UTILIZED FOR SOUTHBOUND THROUGH TRAFFIC.

PHASE 2 NOTES:

COLBERN ROAD – COLBERN ROAD TO REMAIN OPEN DURING PHASE 2 CONSTRUCTION. THE INSIDE MOST EASTBOUND AND WESTBOUND THROUGH LANES ARE TO BE TEMPORARILY CLOSED. ONE LANE EACH DIRECTION TO REMAIN OPEN TO THROUGH TRAFFIC.

DOUGLAS STREET – DOUGLAS STREET TO REMAIN OPEN DURING PHASE 2 CONSTRUCTION IN BOTH DIRECTIONS WITH TEMPORARY TRAFFIC CONTROL IN PLACE FOR STRIPING OPERATIONS.

RELEASED FOR CONSTRUCTION
 As Noted on Plan Review
 Development Services Department
 Lee's Summit, Missouri
 11/07/2023

PHASING LEGEND

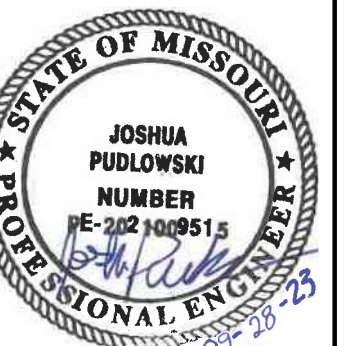
- PHASE 1 WORK AREA
- PHASE 2 WORK AREA

GENERAL NOTES:

1. CONTRACTOR SHALL FOLLOW CITY OF LEE'S SUMMIT STANDARDS AND SPECIFICATIONS FOR THIS AND ALL OTHER TEMPORARY TRAFFIC CONTROL MEASURES UTILIZED FOR ALL WORK LISTED IN THESE PLANS.
2. SEE SHEET 59 FOR ADDITIONAL CITY OF LEE'S SUMMIT REQUIREMENTS AND TYPICAL TEMPORARY TRAFFIC CONTROL APPLICATIONS AS NEEDED FOR THE REMAINING CONSTRUCTION ITEMS, WHICH INCLUDES BUT IS NOT LIMITED TO PAVEMENT MARKING AND TRAFFIC CONTROL INSTALLATION.
3. CONTRACTOR TO MAINTAIN MINIMUM 11' LANES WITHIN THE WORK ZONE AREA THROUGHOUT CONSTRUCTION.
4. CONSTRUCTION TO TAKE PLACE DURING NON-PEAK HOUR PERIODS. CONES ARE TO BE PUSHED BACK AND RESTRICTED LANES ARE TO BE REOPENED DURING PEAK HOUR AND NON-CONSTRUCTION PERIODS.

olsson

1301 Burlington Street
 North Kansas City, MO 64116
 TEL 816.361.1177 www.olson.com



REV. NO.	DATE	REVISIONS DESCRIPTION

TRAFFIC CONTROL PLAN

THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

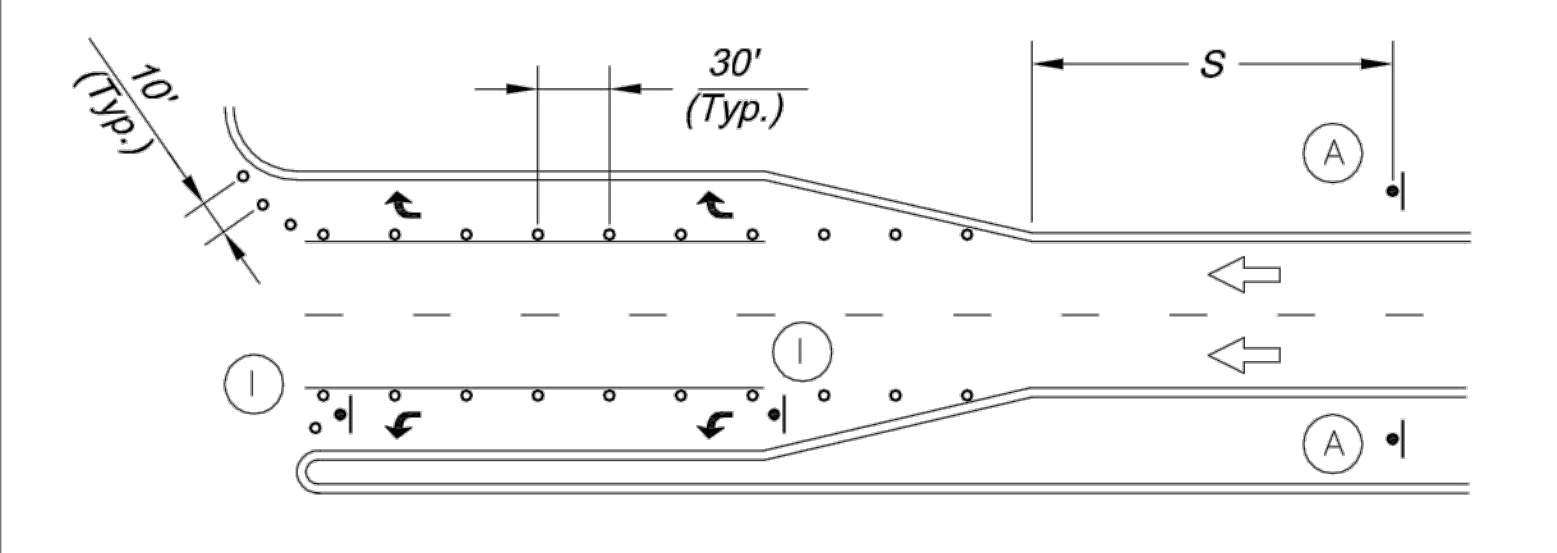
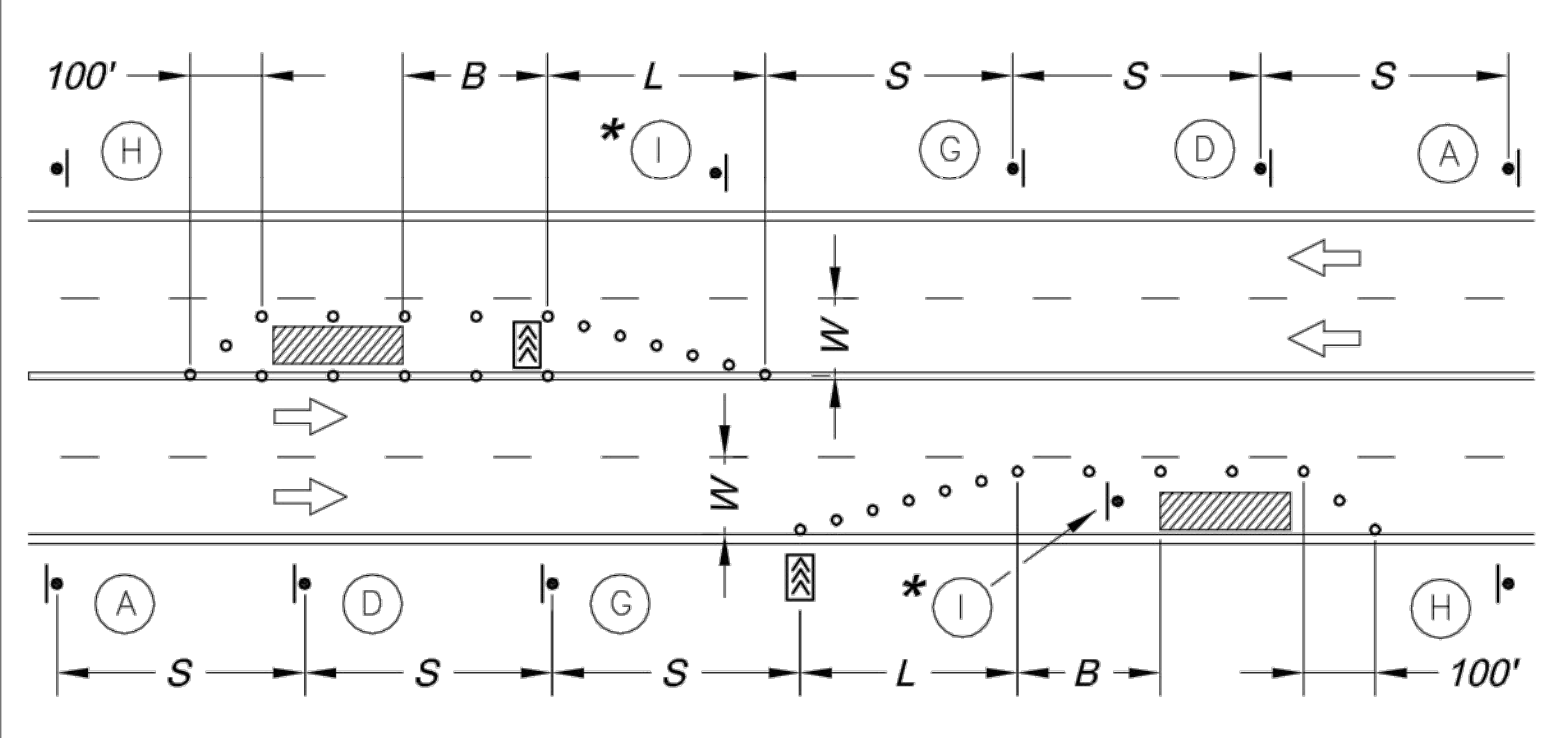
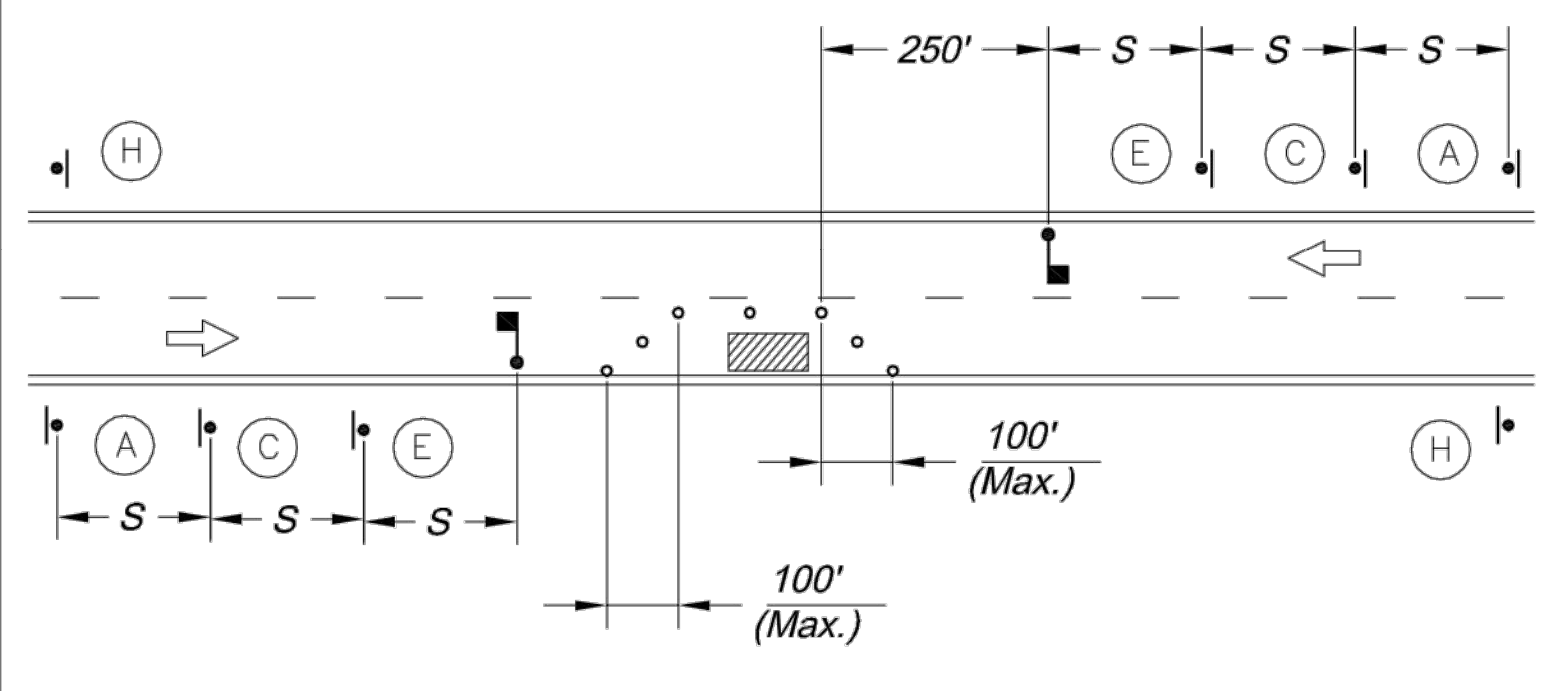
LEE'S SUMMIT, MISSOURI

2023

drawn by: SRH
 checked by: JSC
 approved by: JSS
 QA/QC by: SLI
 project no.: 021-04643
 drawing no.: 116-33850-06
 date: 9/27/2023

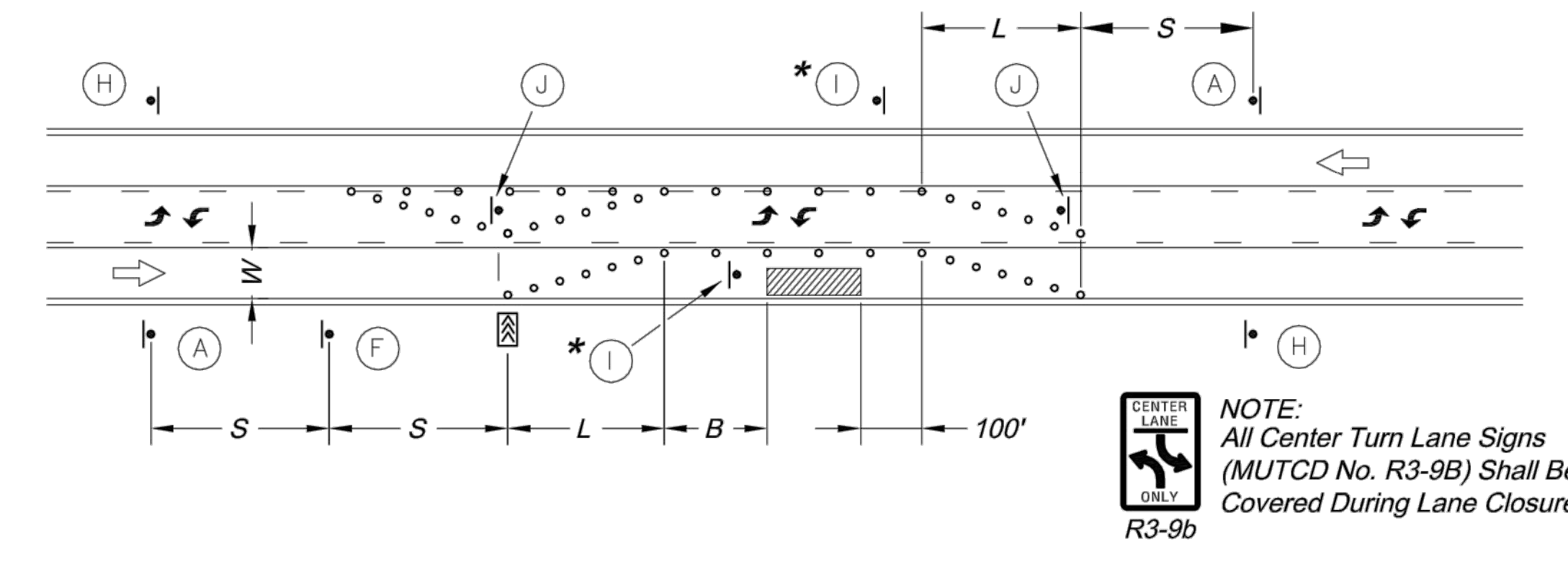
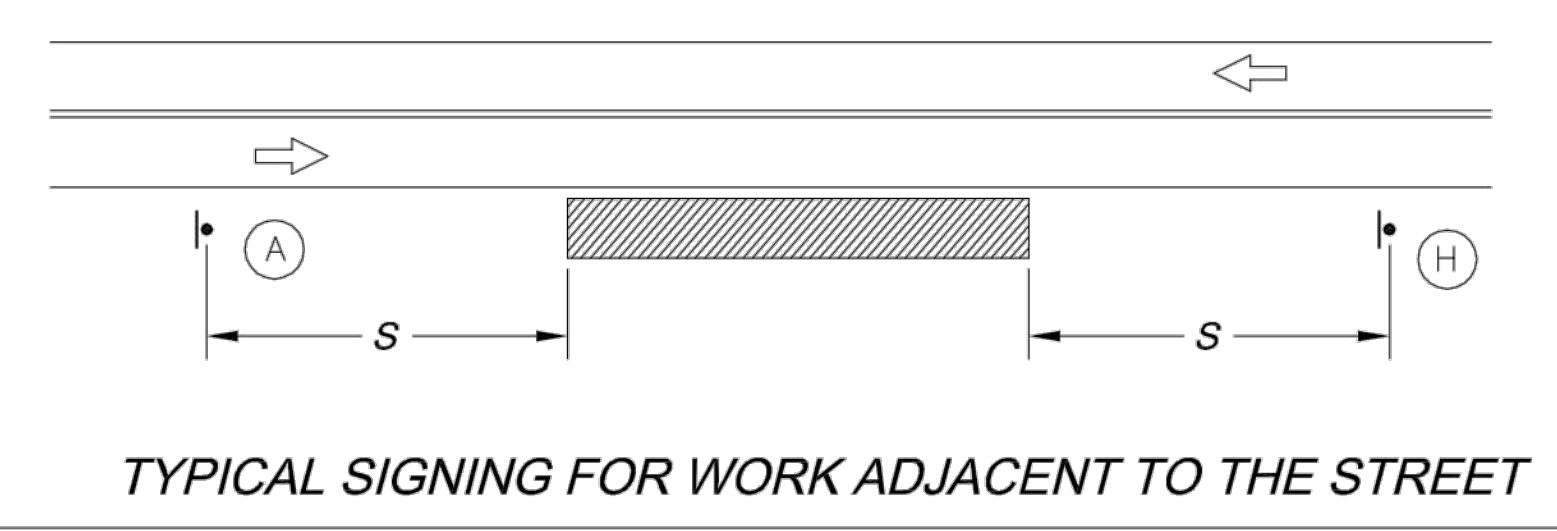
SYMBOL LEGEND

- Work Area
- Channelizer
- Sign
- Arrow Panel
- Barricade
- Flagger
- Direction of Travel



SIGN LEGEND

- W20-1 36" x 36"
- W20-2 36" x 36"
- W20-4 36" x 36"
- W20-5R 36" x 36"
- W20-7a 36" x 36"
- W1-4L 36" x 36"
- W4-2R 36" x 36"
- G20-2 36" x 18"
- R3-2 24" x 24"
- R4-7a 24" x 30"
- R11-2 48" x 30"
- R11-4 60" x 30"



GENERAL NOTES:

- All signs, barricades, channelizers, markings and other traffic control devices shall conform to the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
- All traffic control devices shall be standard in size, shape, color, and message, in good condition, and retro-reflectORIZED. All signs shall be securely mounted with height and lateral location as described in the MUTCD.
- Warning lights shall be used on barricades in place at night and on warning signs which alert drivers about a change in alignment, traffic control, lane closure, or road closure.
- Flaggers shall be used where indicated on the plans, where construction vehicles interact with normal traffic, or where construction activities impose a restriction on traffic, as directed by the City Traffic Engineer. Where flaggers are used, advance signing shall be erected as shown in the details or as specified in the MUTCD. Flaggers shall meet the requirements in the MUTCD in regard to character, training, attire, and behavior.
- Trim-lines are the City's preferred channelizing device. Cones may not be used at nighttime.
- Traffic control devices not in use or not applicable shall be either covered or removed from the work area.
- The Contractor shall use barricades, street plates, or fencing as needed to effectively shield pedestrian and vehicular traffic from exposed objects, excavations, and construction activities.
- Access shall be maintained to all driveways and side streets unless noted otherwise on the plans.
- No street shall be closed without the approval of the City Traffic Engineer. The Contractor shall notify the City Traffic Engineer at least 7 days in advance of any street closure. If a detour route around the closure is to be provided, all detour signing shall be as shown on a plan approved by the City Traffic Engineer.
- Construction vehicles parked along streets shall be located within the work area (traffic control) or where otherwise normally permitted. Construction materials, including traffic control and vehicles shall not restrict sight distance for vehicles exiting at streets or drives.
- Construction materials shall be kept off of sidewalks, consolidated in one location within City right-of-way, and removed daily unless otherwise approved by the Inspector. Dirt, mud, and other construction debris on streets and sidewalks shall be removed immediately.
- The Contractor shall not perform any work that will restrict vehicular traffic in any way between the hours of 7:00 a.m. and 9:00 a.m. or 4:00 p.m. and 6:00 p.m. Monday through Friday unless otherwise indicated in the specifications.
- All travel lanes should be at least 11 feet wide unless otherwise authorized by the City Traffic Engineer. A "Narrow Lanes" sign shall be installed in advance of a lane width reduction to less than 11 feet.
- All edge drop-offs of more than 2 inches and less than 4 inches should be protected by a wedge or barrier and all edge drop-offs greater than 4 inches shall have edge protection (see Traffic Control Specifications for edge treatment requirements).
- The "Workers" symbolic sign (MUTCD No. W21-1a) may be used instead of the "Road Work Ahead" sign for work with a duration of 12 hours or less. The "End Road Work" sign is not required to be installed after the "Workers" sign.
- No traffic signal shall be altered or modified in any way without a plan approved by the City Traffic Engineer.
- The Contractor shall be responsible for maintaining all traffic control devices on an around-the-clock basis, whether or not work is actively being pursued and any deficiencies noted shall be corrected immediately.
- The traffic control requirements shown on these plans are minimum requirements only and do not attempt to address in depth the variety of situations that may occur once construction has started. In no way do the requirements shown on these plans relieve the Contractor of his responsibility for selecting the proper traffic control devices and implementation procedures that will assure the safety of drivers, pedestrians, and workers at all times.
- Should the contractor fail to enforce the traffic control plan or fail to clean, replace or otherwise maintain the traffic control devices when directed to do so by the City Traffic Engineer or representative, the City may take one or more of the following actions:
 - Employ another agency to correct deficiencies in traffic control devices and deduct the cost from the Contractor's pay estimate,
 - Stop the work until deficiencies are corrected,
 - Suspend all pay estimates until deficiencies are corrected, or
 - Place the Contractor in default.

Sign Spacing "S"

Speed Limit (mph)	Spacing (Feet)
25	100
30 - 35	250
≥ 40	350

Taper Dimensions (Feet)

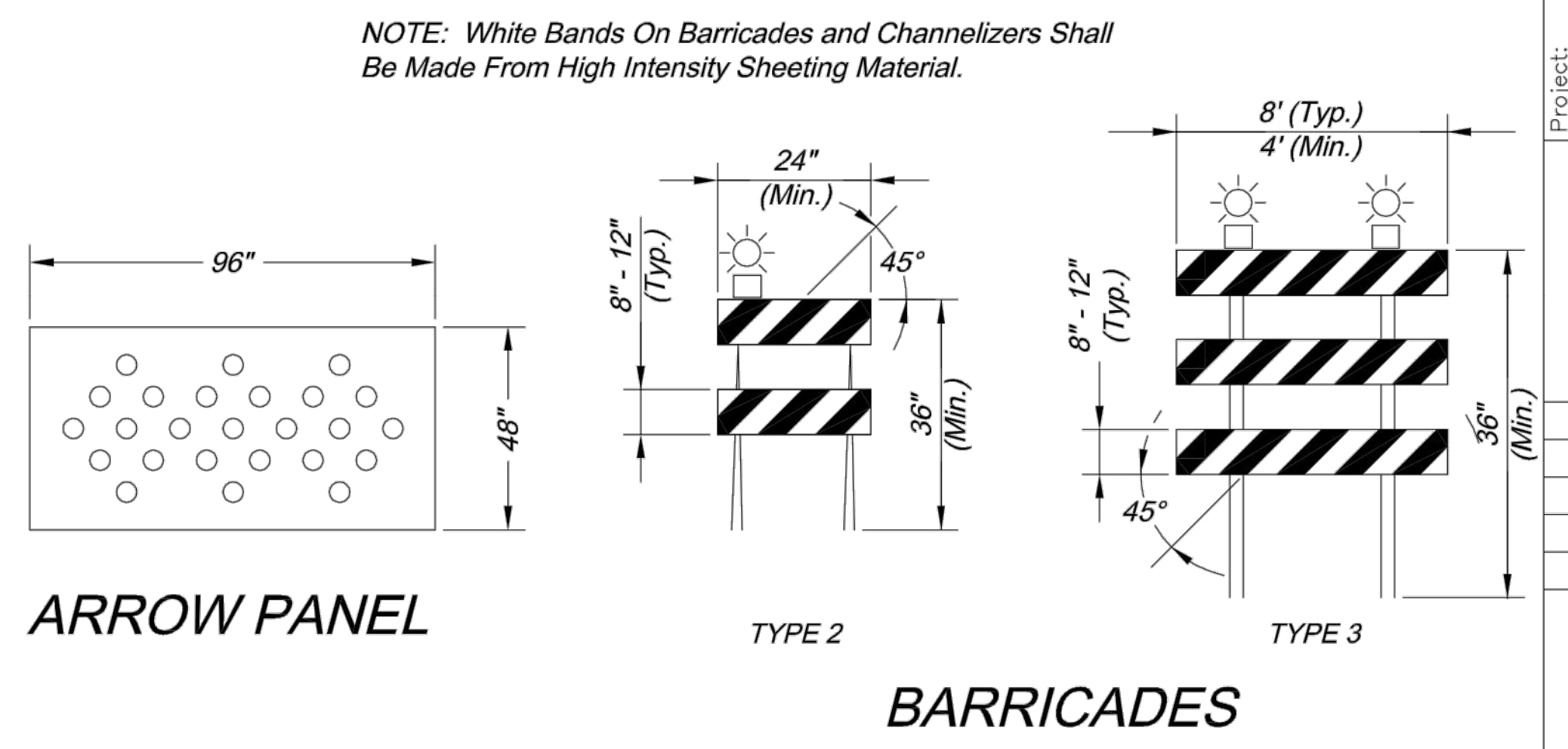
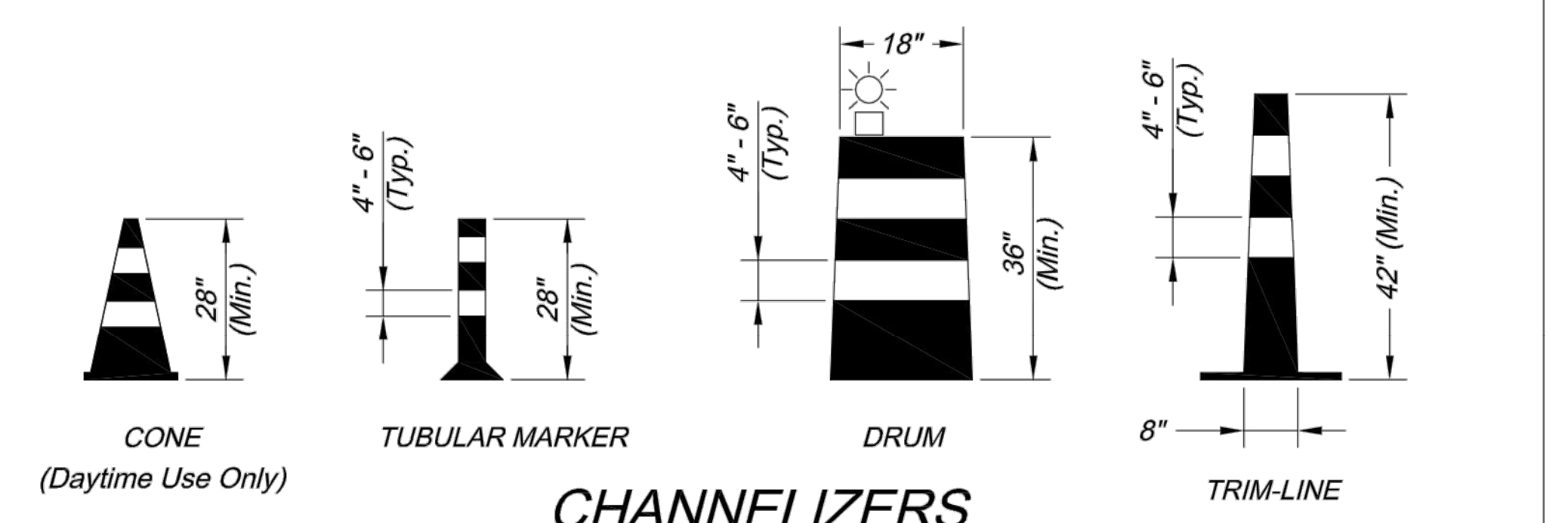
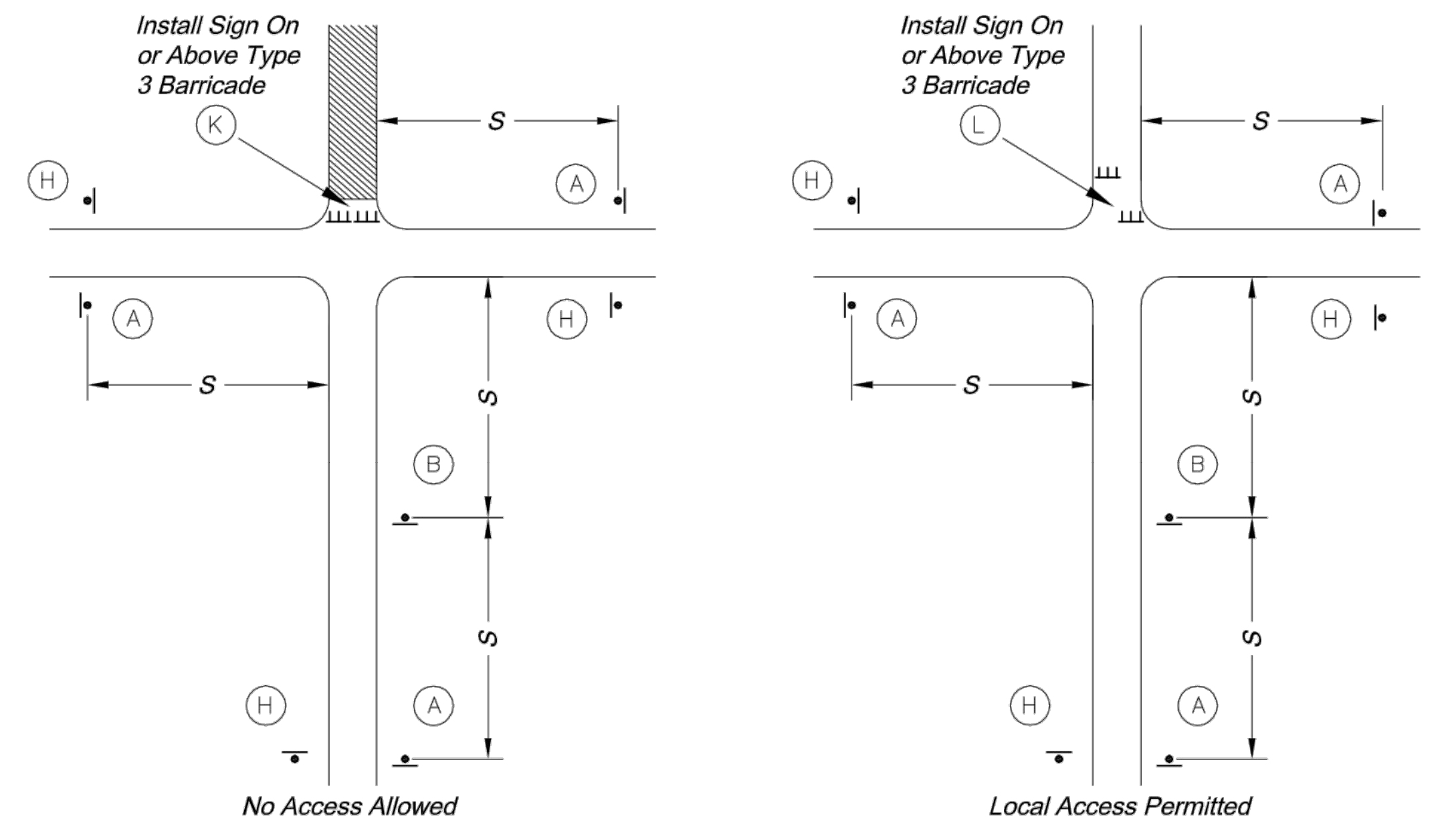
Speed Limit (mph)	Minimum Taper Length "L", per Lane Width "W"			Minimum Number of Channelizers
	10	11	12	
25	105	115	125	6
30	150	165	180	7
35	205	225	245	8
40	270	295	320	9
45	450	495	540	13

Guidelines for Length of Longitudinal Buffer Space "B"

Speed Limit (mph)	Length (Feet)
25	35
30	55
35	85
40	120
45	170

Maximum Channelizer Spacing

Speed Limit (mph)	Maximum Channelizer Spacing	
	Within Taper (Feet)	Outside Taper (Feet)
25	25	50
30	30	60
35	35	70
40	40	80
45	45	90



CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

Project: COLBURN ROAD AND DOUGLAS STREET
TRAFFIC CONTROL DETAILS
Standard Name: STANDARD DRAWING TC-1

Drawn By: JJW
Checked By: MP
Date: 12-10-2008
Project No.: X

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 As Noted on Plan Review

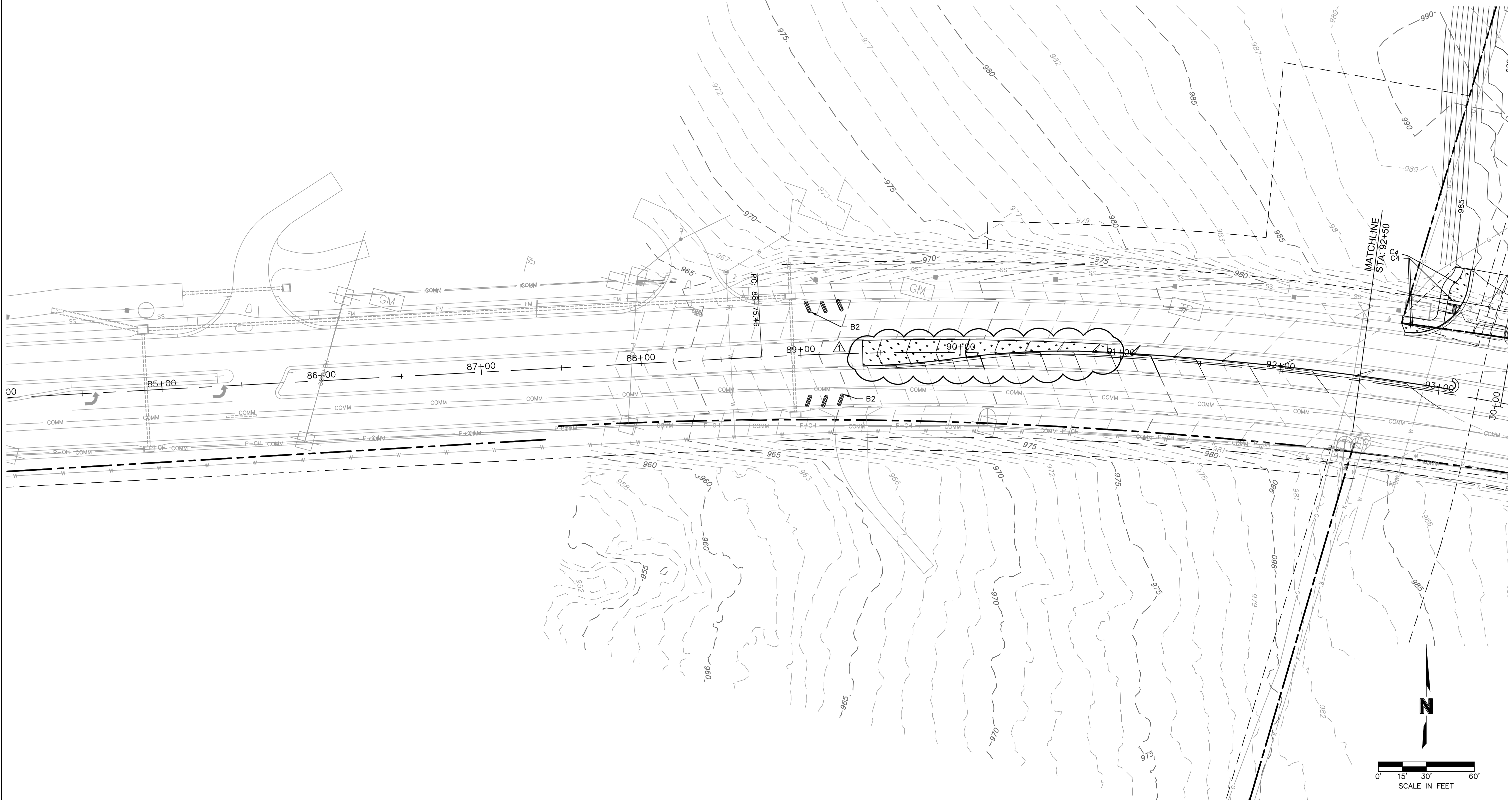
 Development Services Department
 Lee's Summit, Missouri
 11/07/2023

EROSION CONTROL PHASING				
PROJECT STAGE	EROSION CONTROL PLAN BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES
A - PRIOR TO LAND DISTURBANCE	NA	STAGING AREA AND CONST. ENTRANCE	C	CONSTRUCTION OS STAGING AREA AND CONSTRUCTION ENTRANCE
	A1	INSTALL SILT FENCE	C	INSTALL SILT FENCE AS INDICATED ON PLANS
	N/A	CONCRETE WASHOUT	C	TO BE INSTALLED PRIOR TO POURING CONCRETE. SEED WASHOUT AREA ONCE PAVING HAS CEASED
B - ROAD CONSTRUCTION	B2	INSTALL INLET PROTECTION	C	INSTALL INLET PROTECTION AS INDICATED ON PLANS
	B3	INSTALL BIODEGRADABLE LOG	C	INSTALL BIODEGRADABLE LOGS AS INDICATED ON PLANS
	N/A	ESTABLISH PERENNIAL VEGETATION	N/A	SEED ALL DISTURBED AREAS
C - FINAL STABILIZATION	N/A	ESTABLISH PERENNIAL VEGETATION	N/A	SEED ALL DISTURBED AREAS
	C4	INSTALL SOD	N/A	INSTALL SOD AS INDICATED ON PLANS

GRADING LEGEND

- 999 FINISHED GRADE MAJOR CONTOUR
- 999 FINISHED GRADE MINOR CONTOUR
- 999 EXISTING GRADE MAJOR CONTOUR
- 999 EXISTING GRADE MINOR CONTOUR

- SILT FENCE
- INLET PROTECTION
- SOD
- CONSTRUCTION ENTRANCE
- BIODEGRADABLE LOG

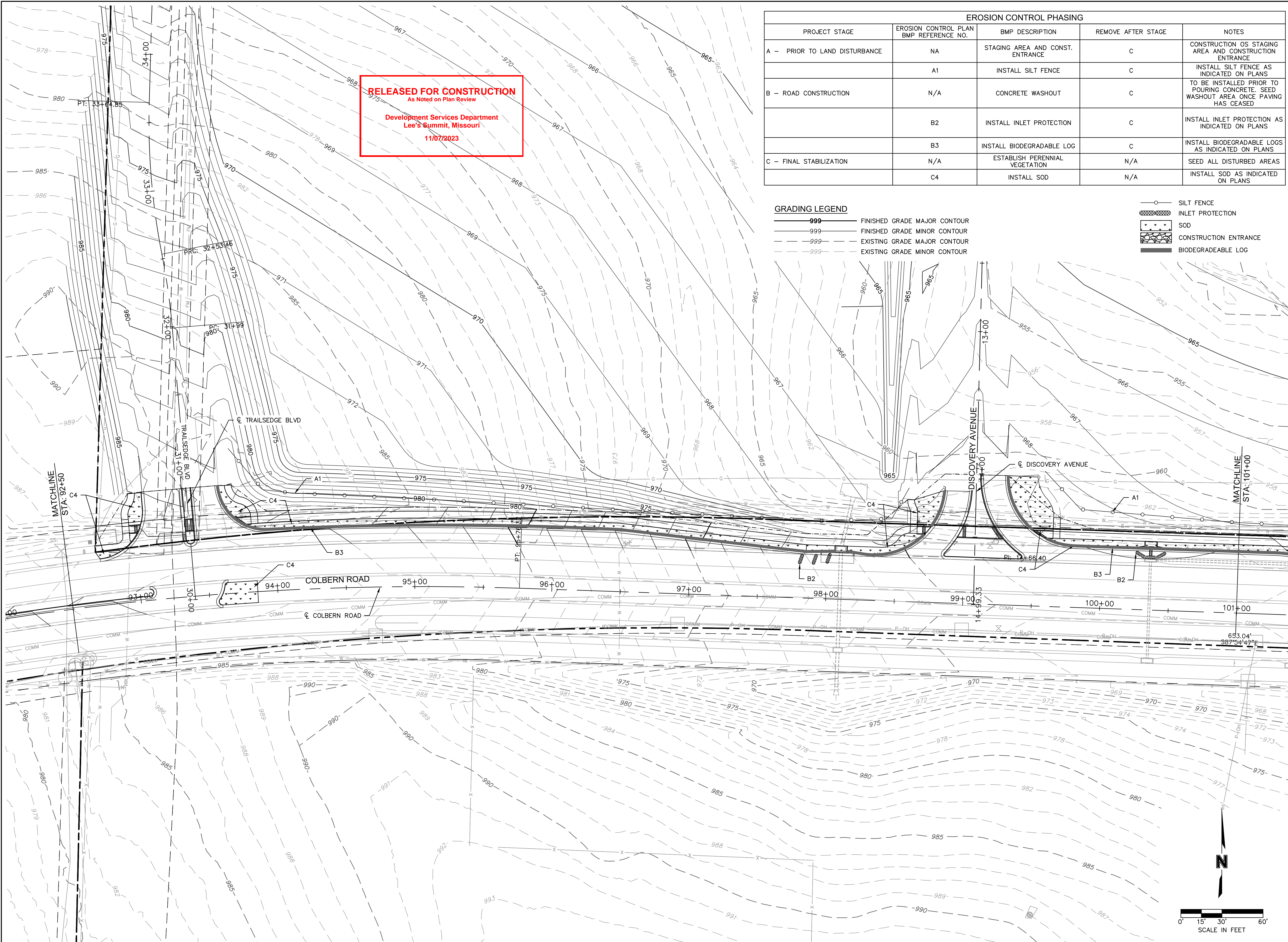


REV. NO.	DATE	REVISIONS DESCRIPTION
1	10/18/2023	CITY COMMENTS ON 10/05/2023

EROSION CONTROL PLANS
 THE VILLAGE AT DISCOVERY PARK
 COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

drawn by: BJW
 checked by: KLV
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: ERC01_D02104643
 date: 7/14/2023

DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final Plans\Sheets\RD\PKY\T.ERC01_D02104643.dwg
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EROSION CONTROL PHASING				
PROJECT STAGE	EROSION CONTROL PLAN BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES
A - PRIOR TO LAND DISTURBANCE	NA	STAGING AREA AND CONST. ENTRANCE	C	CONSTRUCTION OF STAGING AREA AND CONSTRUCTION ENTRANCE
	A1	INSTALL SILT FENCE	C	INSTALL SILT FENCE AS INDICATED ON PLANS
				TO BE INSTALLED PRIOR TO POURING CONCRETE. SEED WASHOUT AREA ONCE PAVING HAS CEASED
B - ROAD CONSTRUCTION	N/A	CONCRETE WASHOUT	C	
	B2	INSTALL INLET PROTECTION	C	INSTALL INLET PROTECTION AS INDICATED ON PLANS
	B3	INSTALL BIODEGRADABLE LOG	C	INSTALL BIODEGRADABLE LOGS AS INDICATED ON PLANS
C - FINAL STABILIZATION	N/A	ESTABLISH PERENNIAL VEGETATION	N/A	SEED ALL DISTURBED AREAS
	C4	INSTALL SOD	N/A	INSTALL SOD AS INDICATED ON PLANS

GRADING LEGEND

	FINISHED GRADE MAJOR CONTOUR
	FINISHED GRADE MINOR CONTOUR
	EXISTING GRADE MAJOR CONTOUR
	EXISTING GRADE MINOR CONTOUR

- SILT FENCE
- INLET PROTECTION
- SOD
- CONSTRUCTION ENTRANCE
- BIODEGRADABLE LOG

Olsson - Civil Engineering
 Missouri Certificate of Authority #001592
 1301 Burlington Street
 North Kansas City, MO 64116
 TEL 816.361.1177
 www.olson.com



REV. NO.	DATE	REVISIONS DESCRIPTION

EROSION CONTROL PLANS
 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

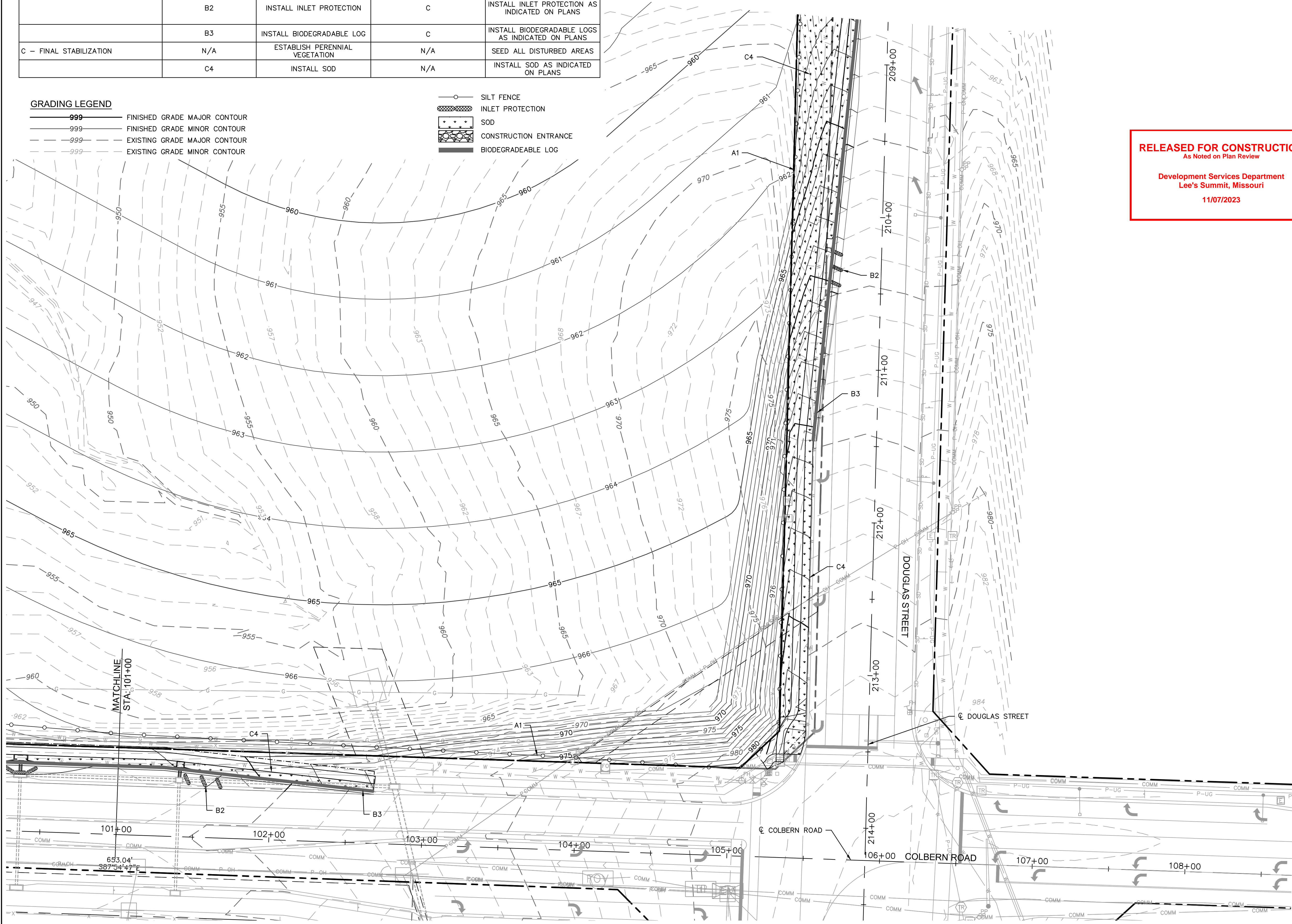
drawn by: BLW
 checked by: KIW
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: ERC01_D02104643
 date: 7/14/2023

EROSION CONTROL PHASING				
PROJECT STAGE	EROSION CONTROL PLAN BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES
A - PRIOR TO LAND DISTURBANCE	NA	STAGING AREA AND CONST. ENTRANCE	C	CONSTRUCTION STAGING AREA AND CONSTRUCTION ENTRANCE
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	B3	INSTALL BIODEGRADABLE LOG	C	INSTALL BIODEGRADABLE LOGS AS INDICATED ON PLANS
	N/A	ESTABLISH PERENNIAL VEGETATION	N/A	SEED ALL DISTURBED AREAS
C - FINAL STABILIZATION	C4	INSTALL SOD	N/A	INSTALL SOD AS INDICATED ON PLANS

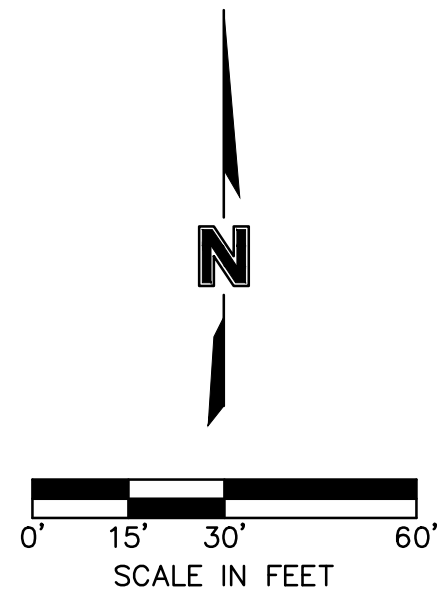
GRADING LEGEND

- FINISHED GRADE MAJOR CONTOUR
- FINISHED GRADE MINOR CONTOUR
- EXISTING GRADE MAJOR CONTOUR
- EXISTING GRADE MINOR CONTOUR

- SILT FENCE
- INLET PROTECTION
- SOD
- CONSTRUCTION ENTRANCE
- BIODEGRADABLE LOG



RELEASED FOR CONSTRUCTION
 As Noted on Plan Review
 Development Services Department
 Lee's Summit, Missouri
 11/07/2023



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REV. NO.	DATE	REVISIONS DESCRIPTION

EROSION CONTROL PLANS
 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI
 2023

drawn by: BJW
 checked by: KLG
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: ERC01_D02104643
 date: 7/14/2023

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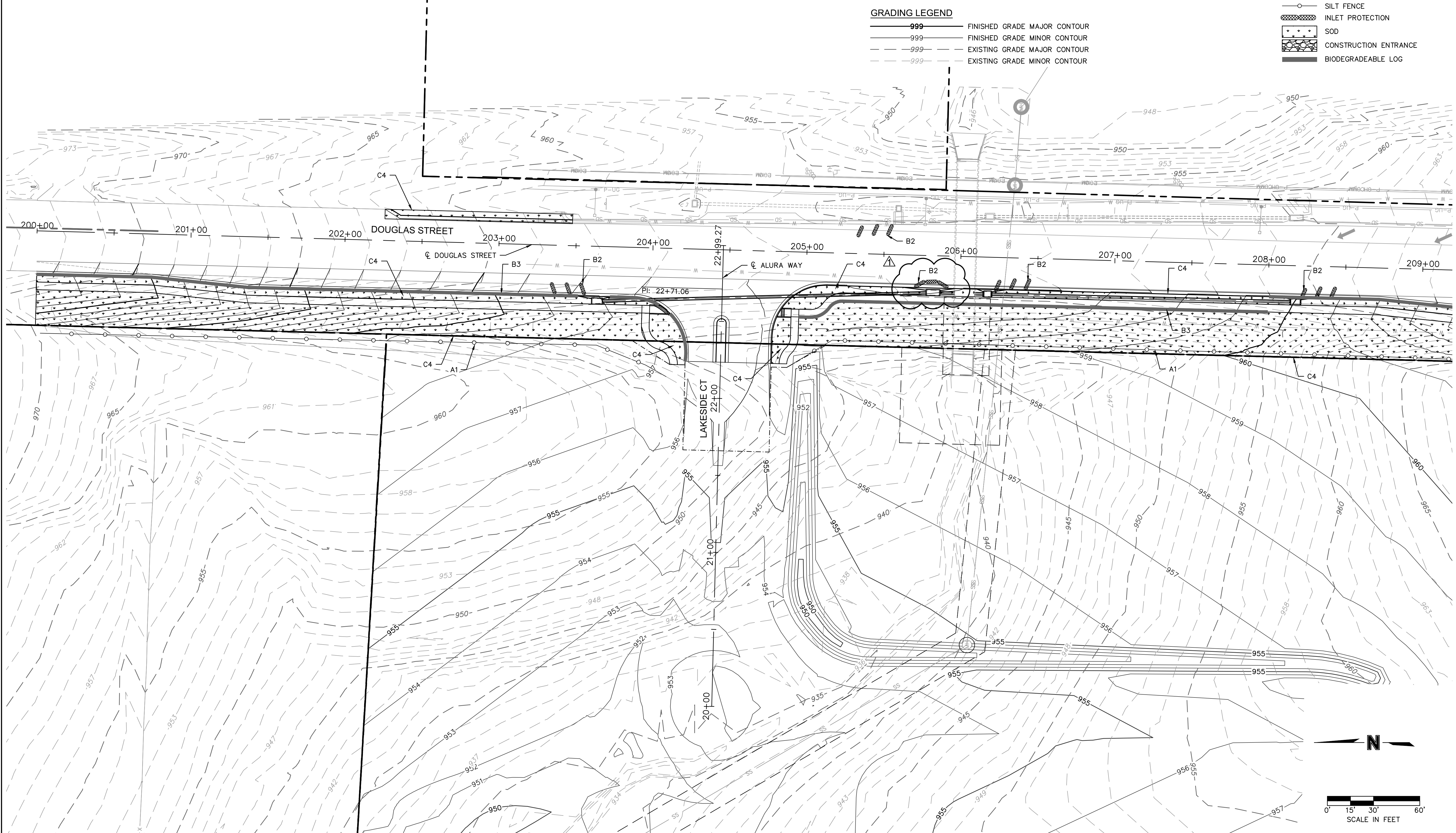
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 11/07/2023

EROSION CONTROL PHASING				
PROJECT STAGE	EROSION CONTROL PLAN BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES
A - PRIOR TO LAND DISTURBANCE	NA	STAGING AREA AND CONST. ENTRANCE	C	CONSTRUCTION OS STAGING AREA AND CONSTRUCTION ENTRANCE
	A1	INSTALL SILT FENCE	C	INSTALL SILT FENCE AS INDICATED ON PLANS
B - ROAD CONSTRUCTION	N/A	CONCRETE WASHOUT	C	TO BE INSTALLED PRIOR TO POURING CONCRETE. SEED WASHOUT AREA ONCE PAVING HAS CEASED
	B2	INSTALL INLET PROTECTION	C	INSTALL INLET PROTECTION AS INDICATED ON PLANS
	B3	INSTALL BIODEGRADABLE LOG	C	INSTALL BIODEGRADABLE LOGS AS INDICATED ON PLANS
C - FINAL STABILIZATION	N/A	ESTABLISH PERENNIAL VEGETATION	N/A	SEED ALL DISTURBED AREAS
	C4	INSTALL SOD	N/A	INSTALL SOD AS INDICATED ON PLANS

GRADING LEGEND

- 999— FINISHED GRADE MAJOR CONTOUR
- 999— FINISHED GRADE MINOR CONTOUR
- - -999- - - EXISTING GRADE MAJOR CONTOUR
- - -999- - - EXISTING GRADE MINOR CONTOUR

- SILT FENCE
- ▨ INLET PROTECTION
- ▩ SOD
- ▧ CONSTRUCTION ENTRANCE
- ▩ BIODEGRADABLE LOG

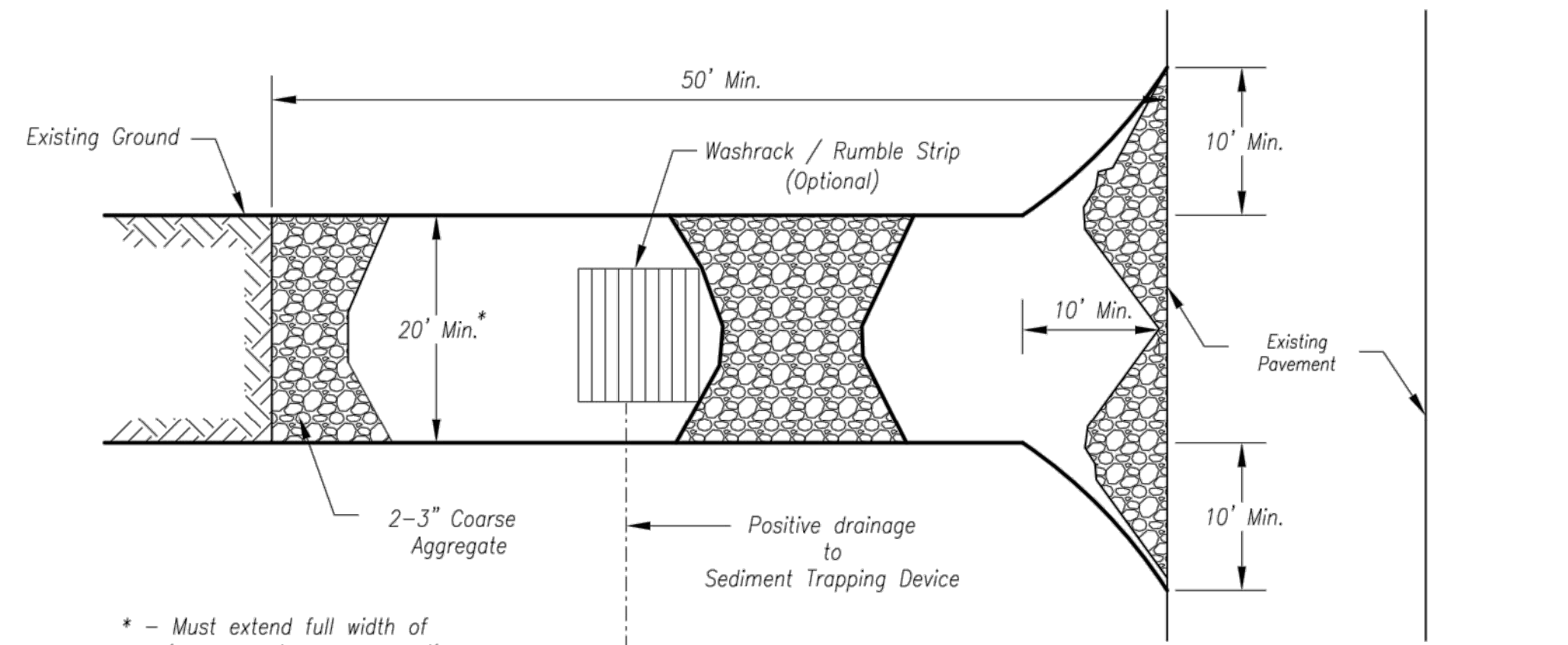


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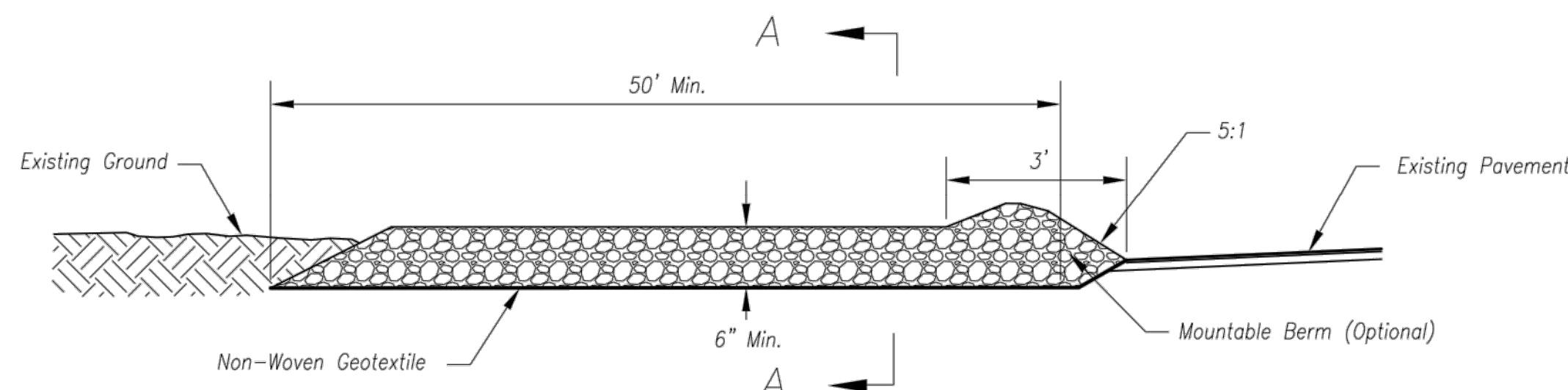
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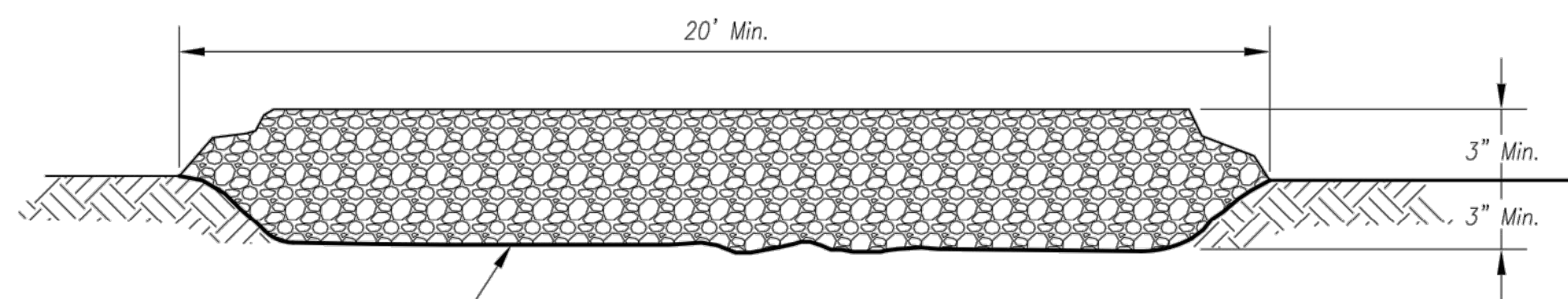
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Plan View
Not to Scale



Side Elevation
Not to Scale



Section A-A
Not to Scale

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6- to 8-inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

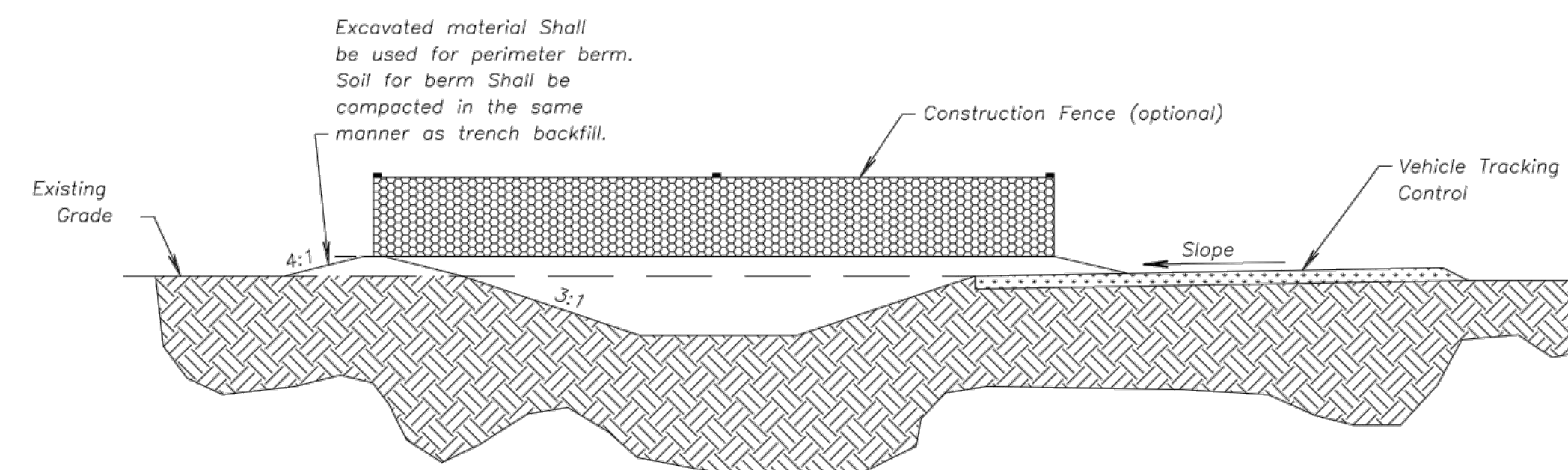
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

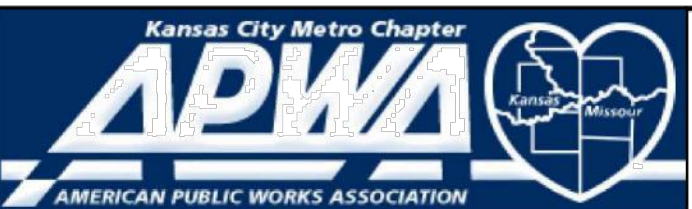
1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



CONCRETE WASHOUT

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 Kansas City Metro Chapter AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT	STANDARD DRAWING NUMBER ESC-01 ADOPTED: 10/24/2016

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

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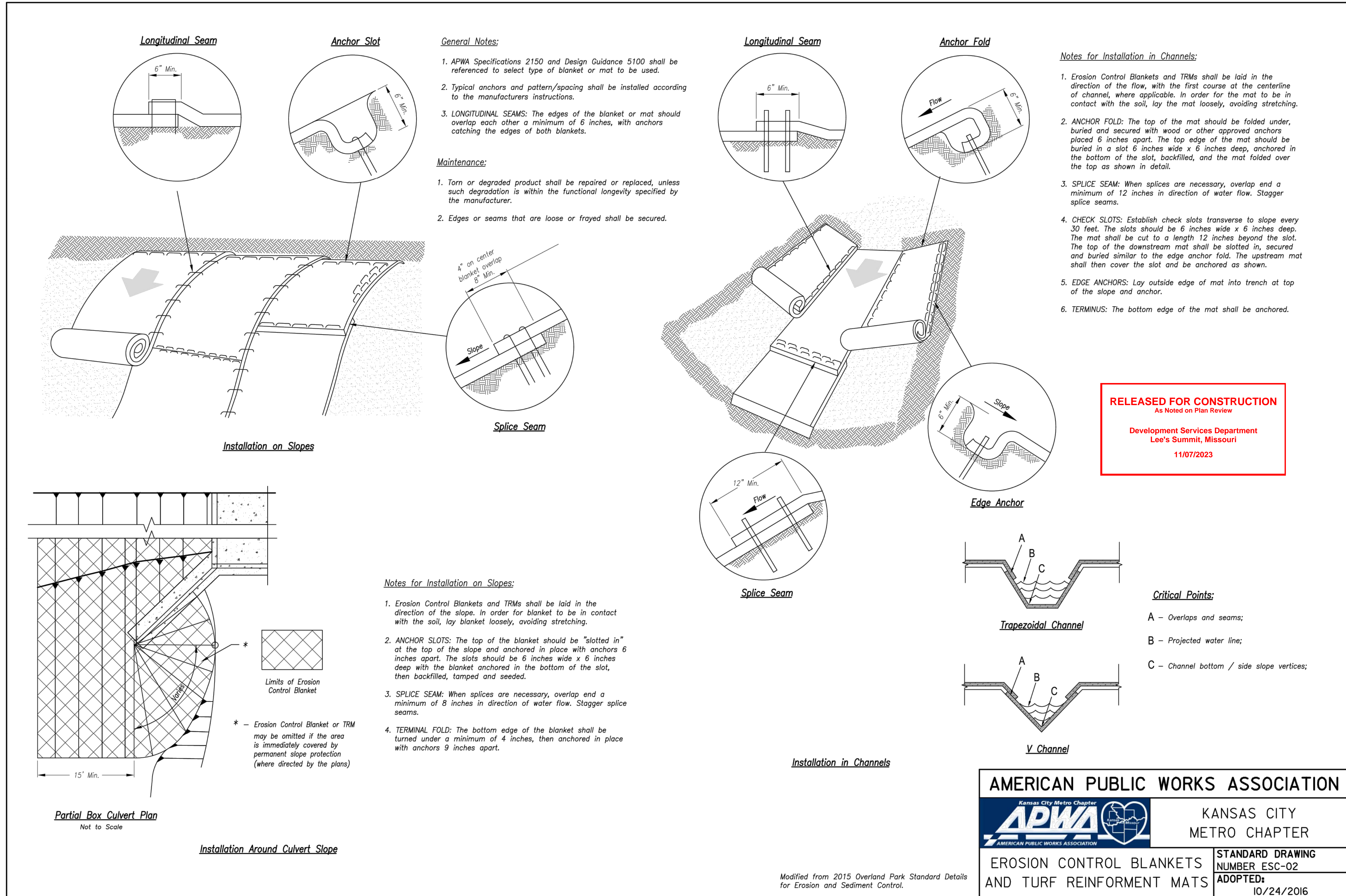


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EROSION CONTROL DETAILS
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 COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI
 2023

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 checked by: KLV
 approved by: JFG
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General Notes:

1. APWA Specifications 2150 and Design Guidance 5100 shall be referenced to select type of blanket or mat to be used.
2. Typical anchors and pattern/spacing shall be installed according to the manufacturers instructions.
3. LONGITUDINAL SEAMS: The edges of the blanket or mat should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.

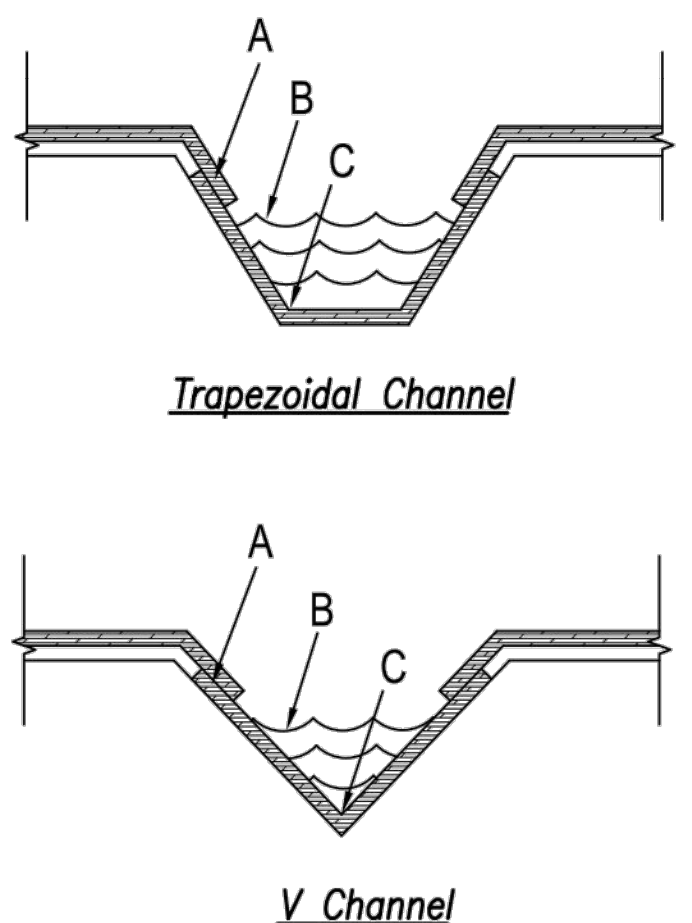
Maintenance:

1. Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.
2. Edges or seams that are loose or frayed shall be secured.

Notes for Installation in Channels:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.
2. ANCHOR FOLD: The top of the mat should be folded under, buried and secured with wood or other approved anchors placed 6 inches apart. The top edge of the mat should be buried in a slot 6 inches wide x 6 inches deep, anchored in the bottom of the slot, backfilled, and the mat folded over the top as shown in detail.
3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.
4. CHECK SLOTS: Establish check slots transverse to slope every 30 feet. The slots should be 6 inches wide x 6 inches deep. The mat shall be cut to a length 12 inches beyond the slot. The top of the downstream mat shall be slotted in, secured and buried similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.
5. EDGE ANCHORS: Lay outside edge of mat into trench at top of the slope and anchor.
6. TERMINUS: The bottom edge of the mat shall be anchored.

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Critical Points:

- A - Overlaps and seams;
- B - Projected water line;
- C - Channel bottom / side slope vertices;

AMERICAN PUBLIC WORKS ASSOCIATION

Kansas City Metro Chapter

APWA

AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

EROSION CONTROL BLANKETS AND TURF REINFORCEMENT MATS

STANDARD DRAWING NUMBER ESC-02 ADOPTED: 10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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NUMBER
PE-3018010499
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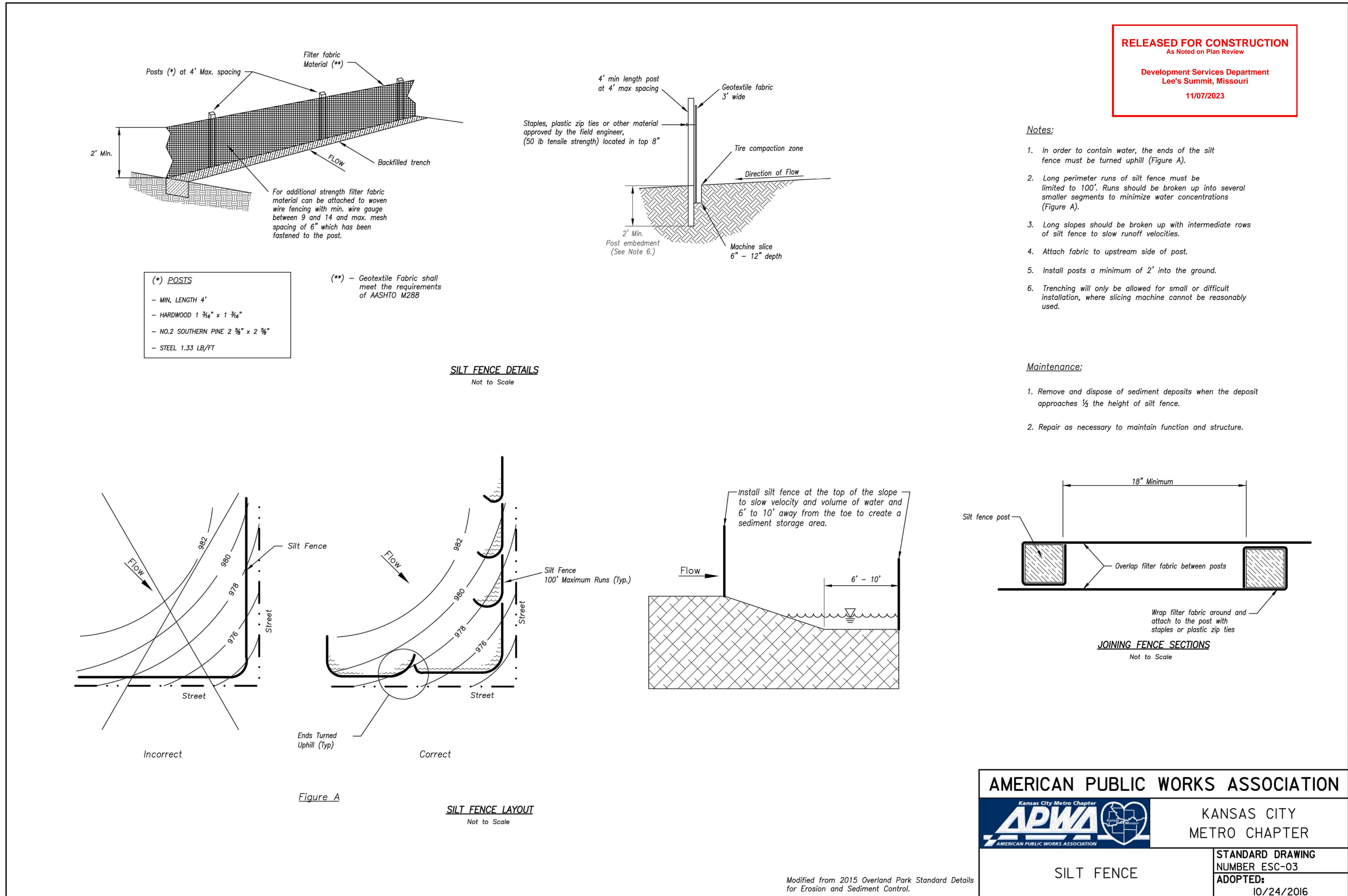
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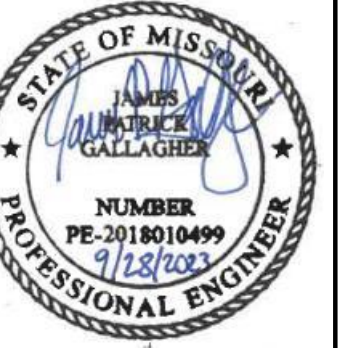


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- Notes:**
- In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
 - Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
 - Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
 - Attach fabric to upstream side of post.
 - Install posts a minimum of 2' into the ground.
 - Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

- Maintenance:**
- Remove and dispose of sediment deposits when the deposit approaches 1/2 the height of silt fence.
 - Repair as necessary to maintain function and structure.

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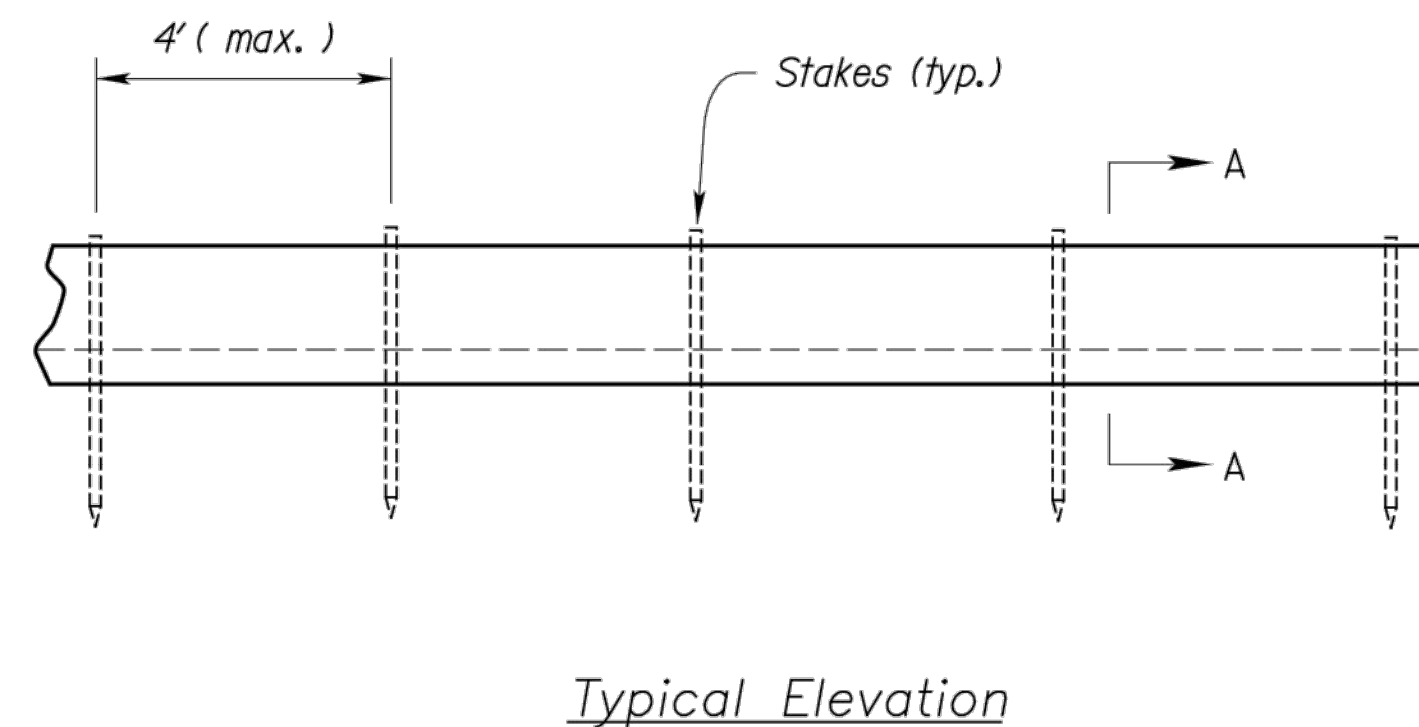
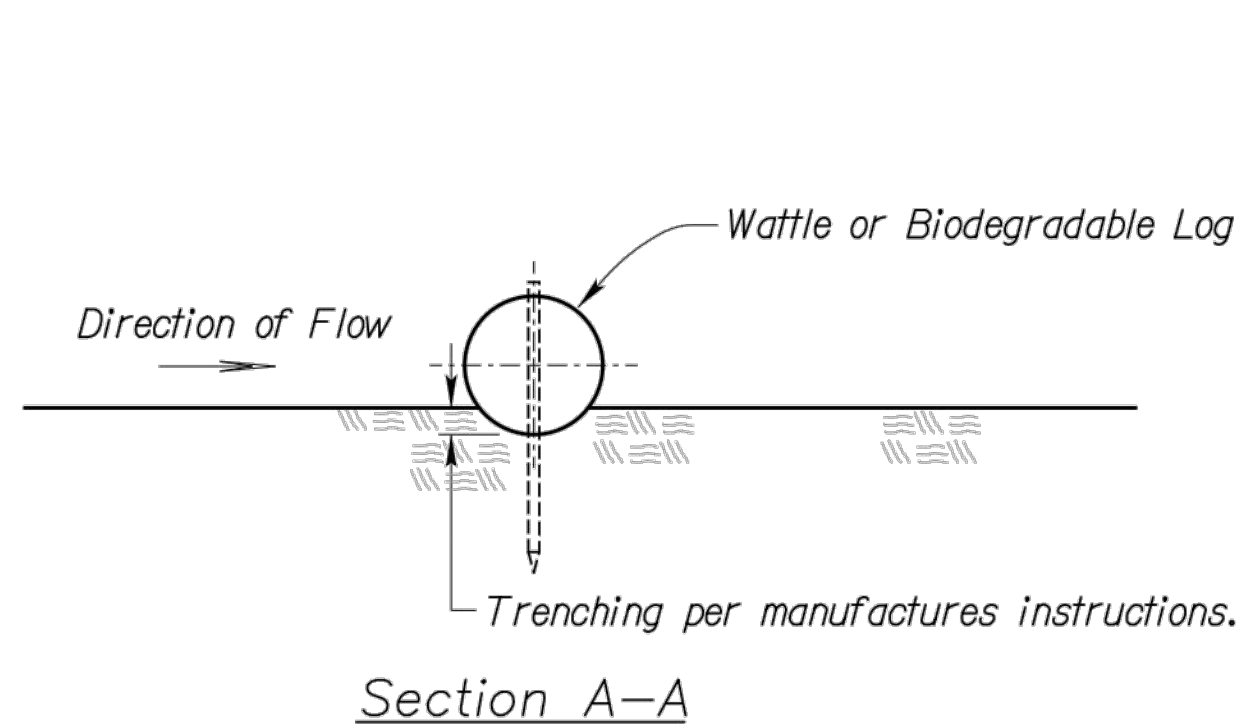


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WATTLES AND BIODEGRADABLE LOG

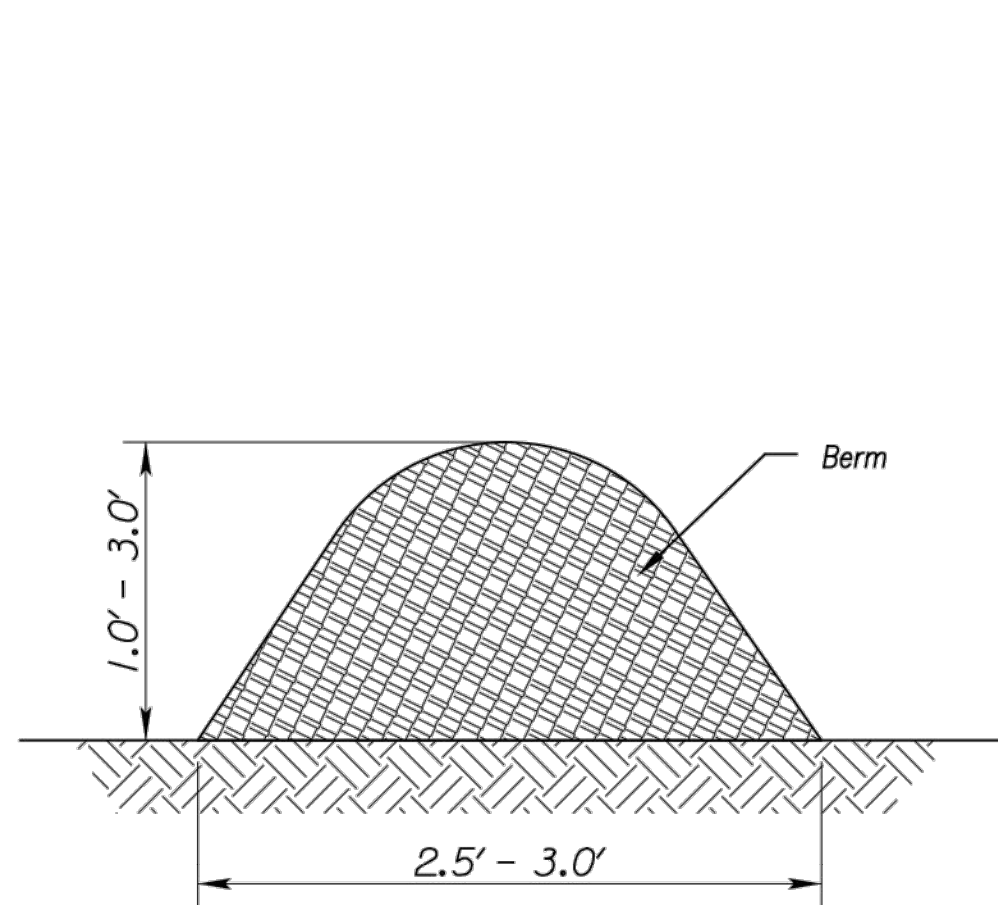


Figure 1
(Perimeter Control)

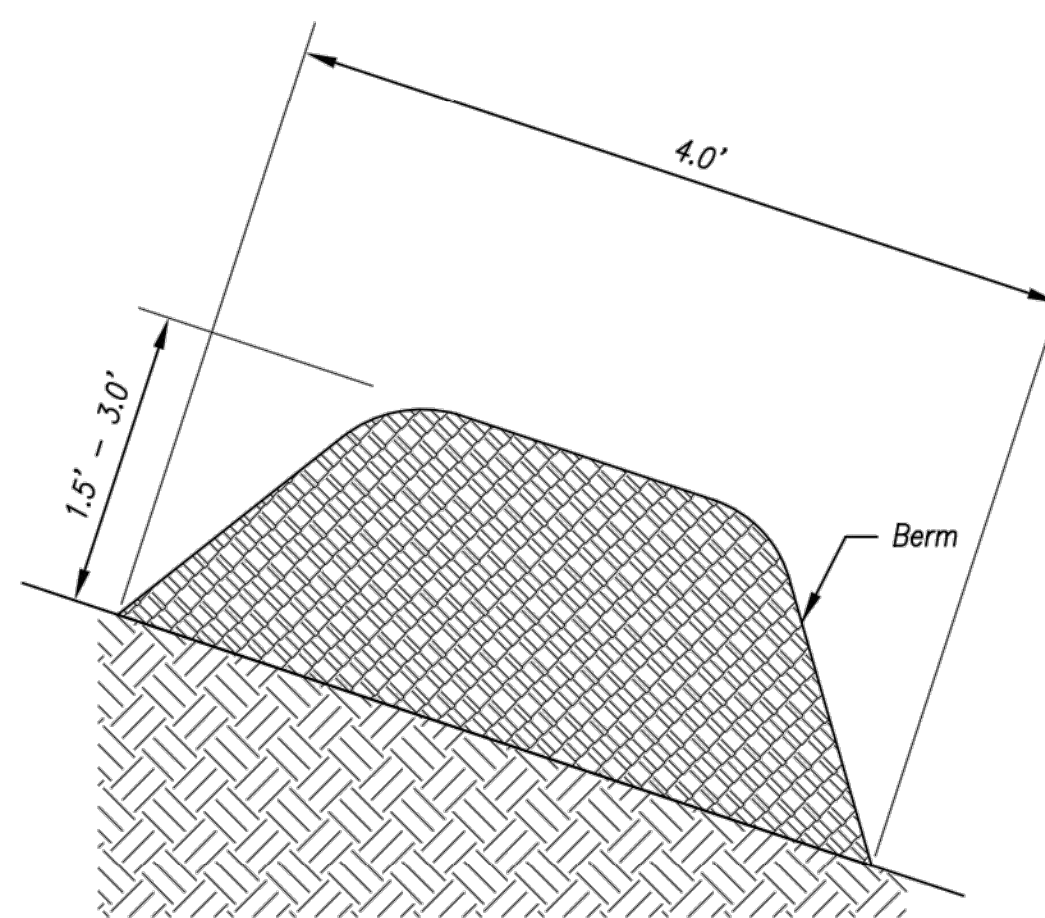


Figure 2
(Steep Slopes)

MULCH OR COMPOST FILTER BERMS

Notes for Wattles and Biodegradable Log Slope Protection:

1. The Slope barriers shall be placed along contour lines, with a short section turned up grade at each end of the barrier. The maximum length of the slope barrier shall not exceed 250 feet, and the barrier ends need to be staggered.
2. Install wattles and biodegradable logs per manufacturer's instructions.
3. Spacing of stakes per manufacturer's instructions with 4' max. spacing. Length of stakes shall be a minimum of 2 times the diameter of the log with minimum of 24".

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Notes for Mulch and Compost Filter Berm:

1. The sediment control berm shall be placed uncompacted in a windrow at locations shown on the plans or as directed by the engineer.
2. Parallel to the base of the slope, or around the perimeter of other affected areas, construct a 1 to 3 foot high by 2.5 to 3 foot wide berm (see Figure 1). For maximum water treatment ability or for steep slopes, construct a 1.5 to 3 foot high trapezoidal berm that is a minimum of 4 feet wide at the base (see Figure 2). In extreme conditions, or where specified by the engineer, a second berm shall be constructed at the top of the slope. Engineer will specify berm requirements.
3. If berm is to be left as permanent or part of the natural landscape, the compost berm may be seeded during application for permanent vegetation.
4. Do not use compost or wood mulch berms in any runoff channels or concentrated flow areas.
5. Wood mulch shall consist of tree and shrub debris resulting from clearing and grubbing and shall be ground by the mechanical means such as a chipper, hammermill, tub grinder or other approved method. Mulch sizing varies with a maximum width of 2" and a maximum length of 10".

Maintenance for Mulch and Compost Filter Berm:

1. Berm shall be reshaped and material added as necessary to maintain function and dimensions.
2. Breaches in the berm shall be repaired promptly.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
WATTLES/Biodegradable LOG AND MULCH/COMPOST FILTER BERM	STANDARD DRAWING NUMBER ESC-04 ADOPTED: 10/24/2016

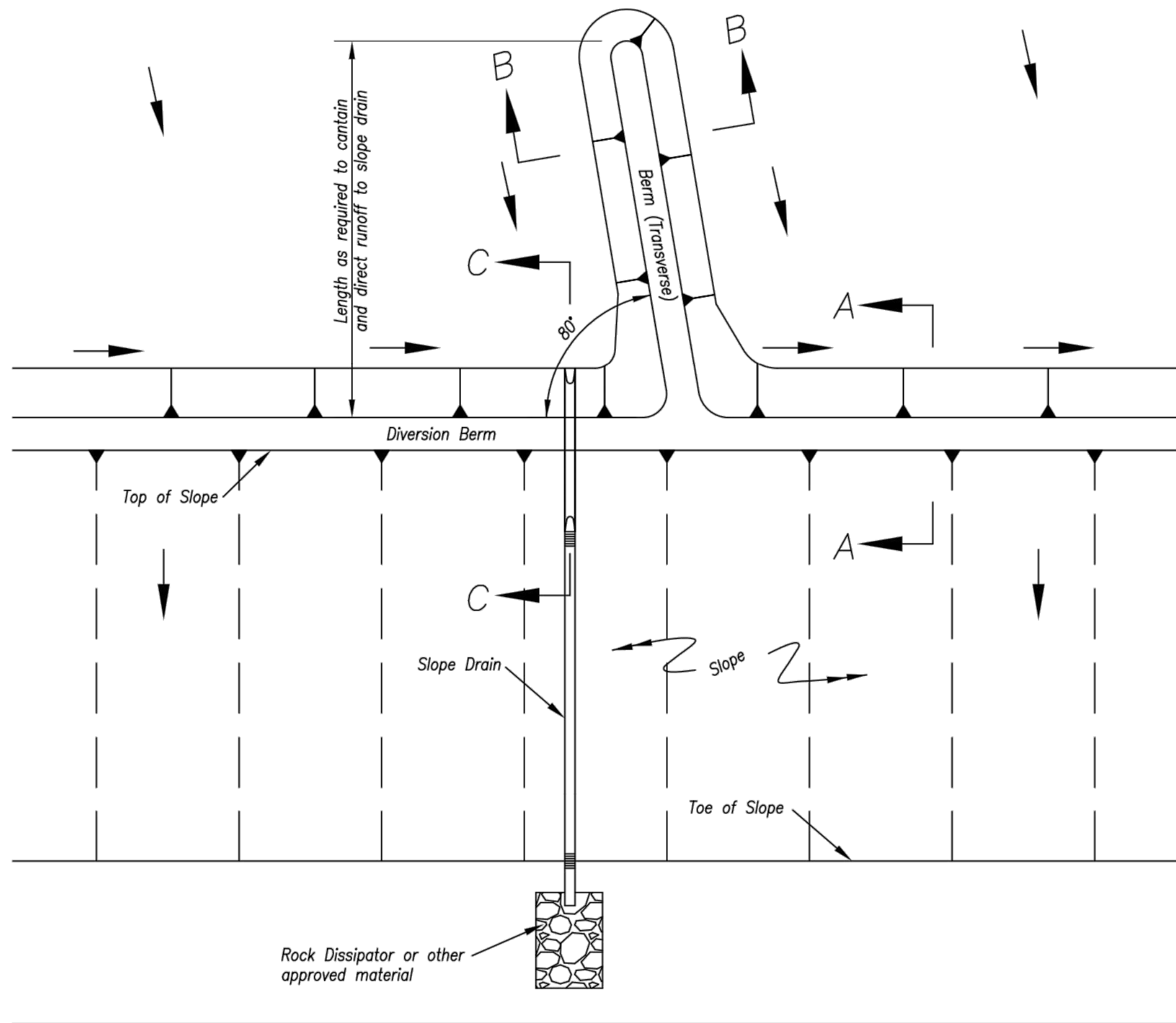


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TYPICAL PLAN VIEW OF DIVERSION BERM AND SLOPE DRAIN

Notes for Diversion Berm:

- Slope drains are optional, but may be required by the engineer if the berm is at the top of a steep slope.
- Diversion berms must be installed as a first step in the land-disturbing activity and must be functional prior to upslope land disturbance.
- The berm should be adequately compacted to prevent failure.
- Temporary or permanent seeding and mulch shall be applied to the berm immediately following its construction.
- Place the berm so to minimize damages by construction operations and traffic.
- The berm must discharge to a temporary sediment trap or stabilized area.
- All trees, brush, stumps, obstructions and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of diversion.
- The diversion shall be excavated or shaped to line, grade and cross-section as required to meet the criteria specified herein, free of irregularities which will impede flow.
- Fills shall be compacted as needed to prevent unequal settlement that would cause damage in the completed diversion. Fill shall be composed of soil which is free from excessive organic debris, rocks or other objectionable materials.

Maintenance:

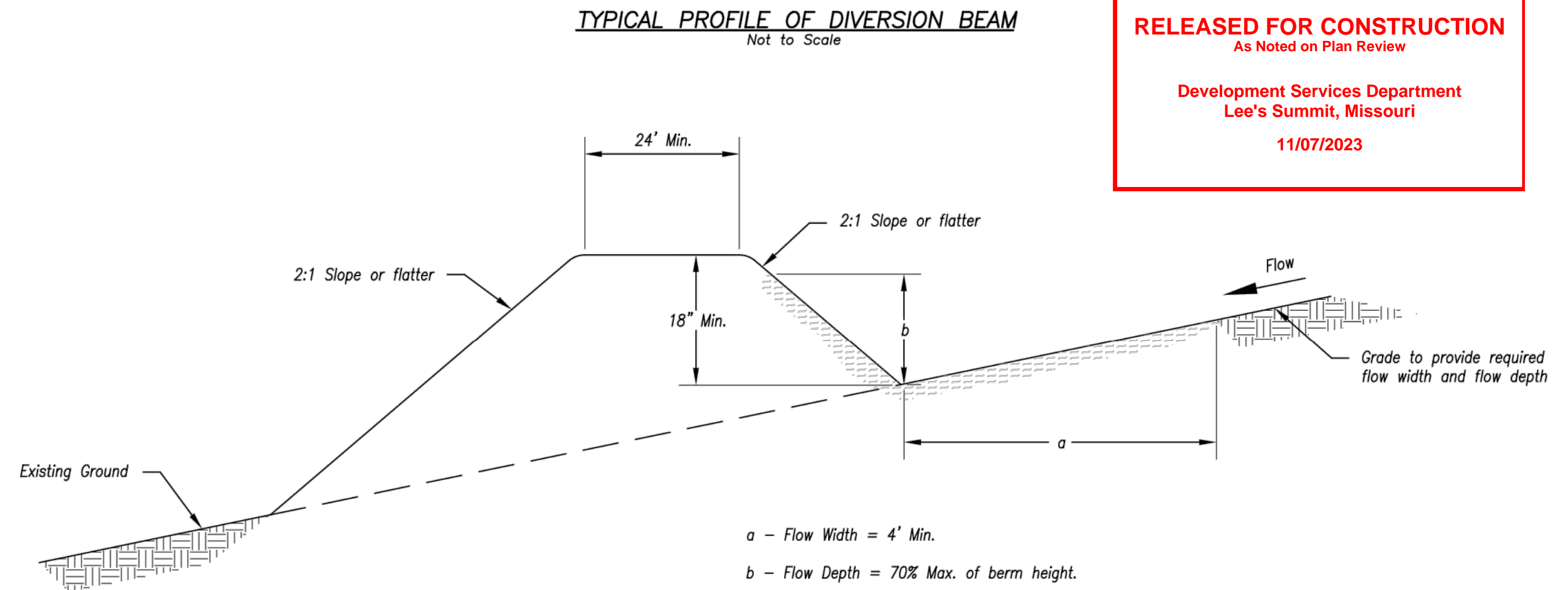
- Berm shall be reshaped, compacted, and stabilized as necessary to maintain its function.
- Breaches in the berm shall be repaired immediately.

Notes for Slope Drain:

- Slope Drain and Diversion Berm may be used on either project foreslopes or project backslopes.
- Discharge of Slope Drains shall be into stabilized ditch or area, or into Sediment Basin.
- Pipe shall be secured in place as approved by Engineer.

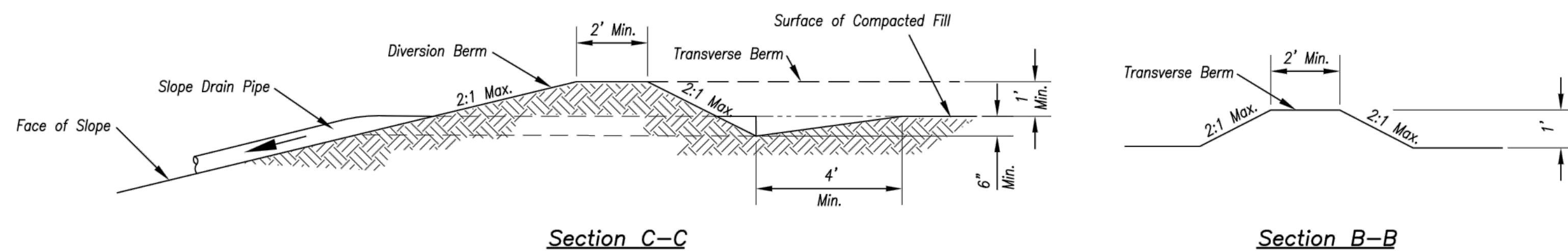
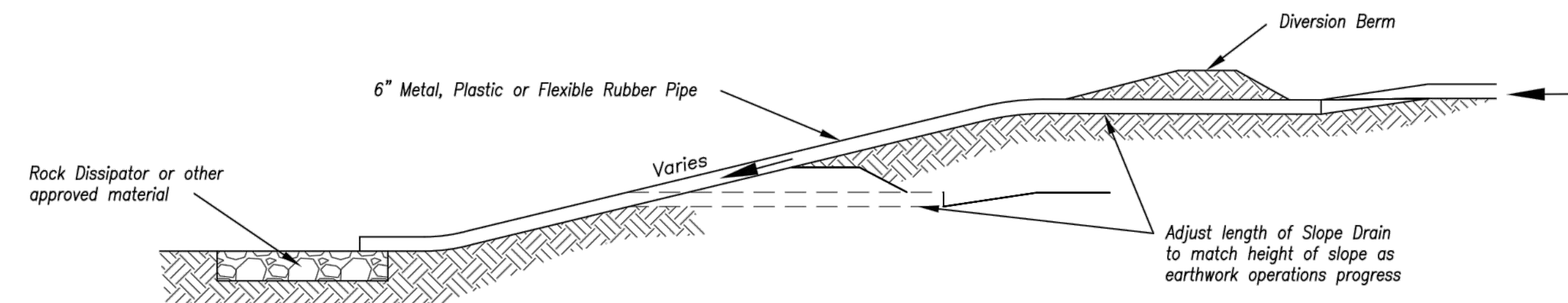
Maintenance:

- Accumulation of any visible sediment at the inlet and outlet shall be removed promptly.
- Outlet conditions shall be repaired if scour is observed. Leaking or damaged section of pipe shall be repaired immediately.
- Barriers directing water to the inlet shall be monitored for continuity and effectiveness.



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TYPICAL PROFILE OF DIVERSION BERM



TYPICAL PROFILE OF DIVERSION BERM WITH SLOPE DRAIN

AMERICAN PUBLIC WORKS ASSOCIATION	
KANSAS CITY METRO CHAPTER	
DIVERSION BERMS AND SLOPE DRAINS	STANDARD DRAWING NUMBER ESC-05 ADOPTED: 10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

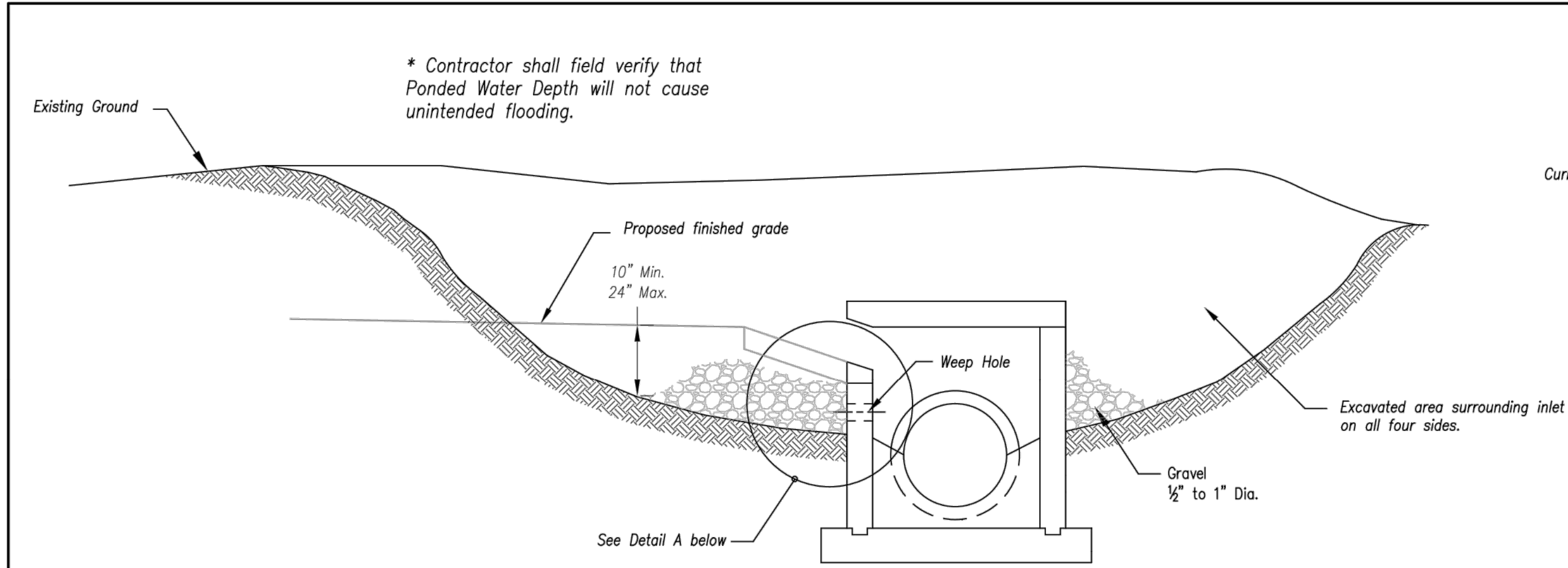


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* Contractor shall field verify that Pondered Water Depth will not cause unintended flooding.

Existing Ground

Proposed finished grade

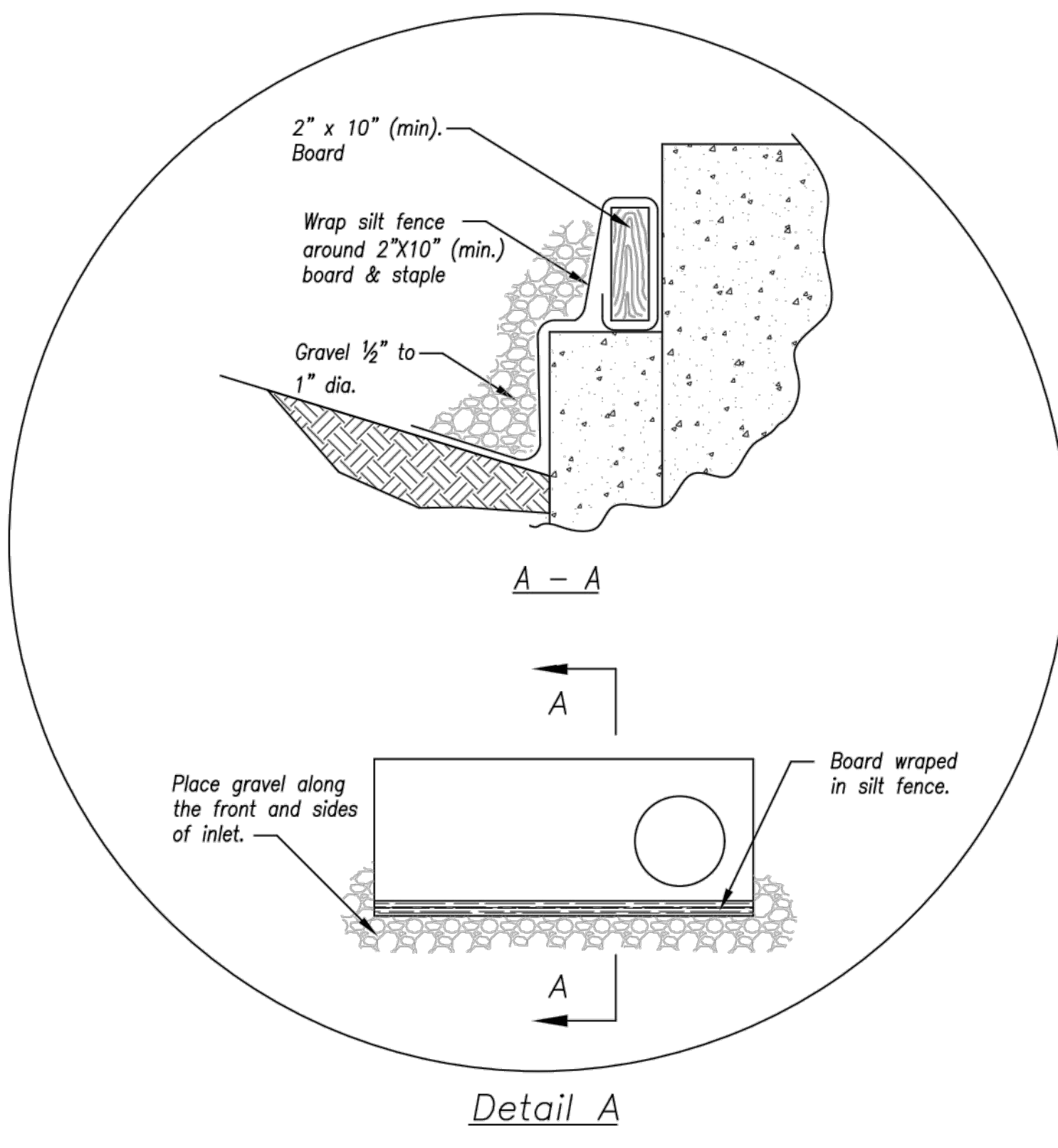
10" Min.
24" Max.

Weep Hole

Excavated area surrounding inlet on all four sides.

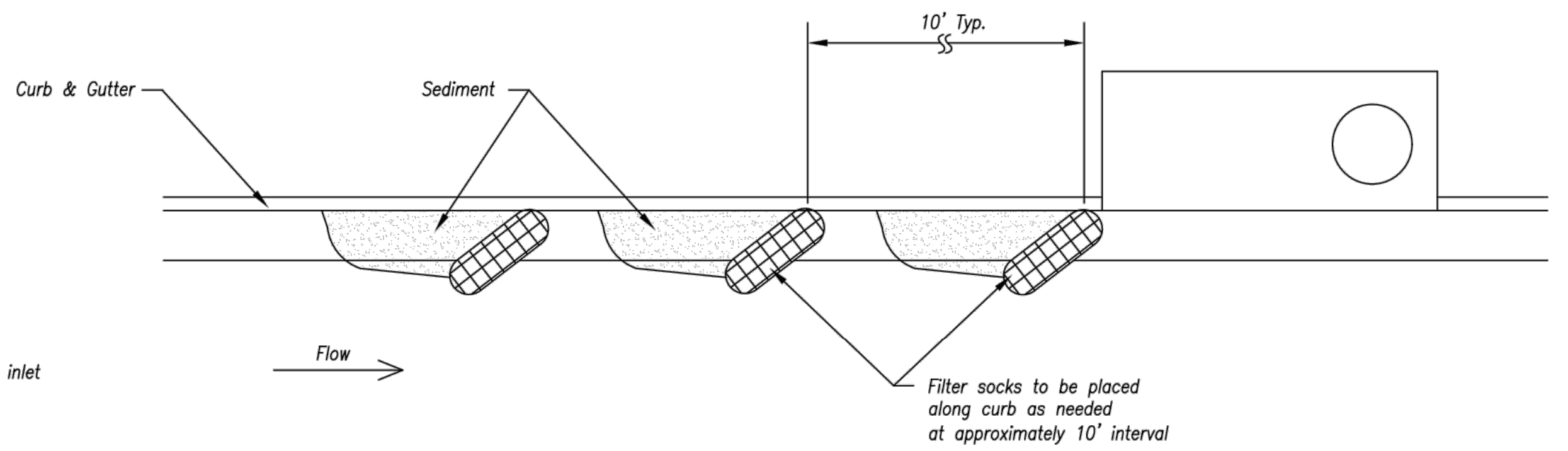
Gravel 1/2" to 1" Dia.

See Detail A below



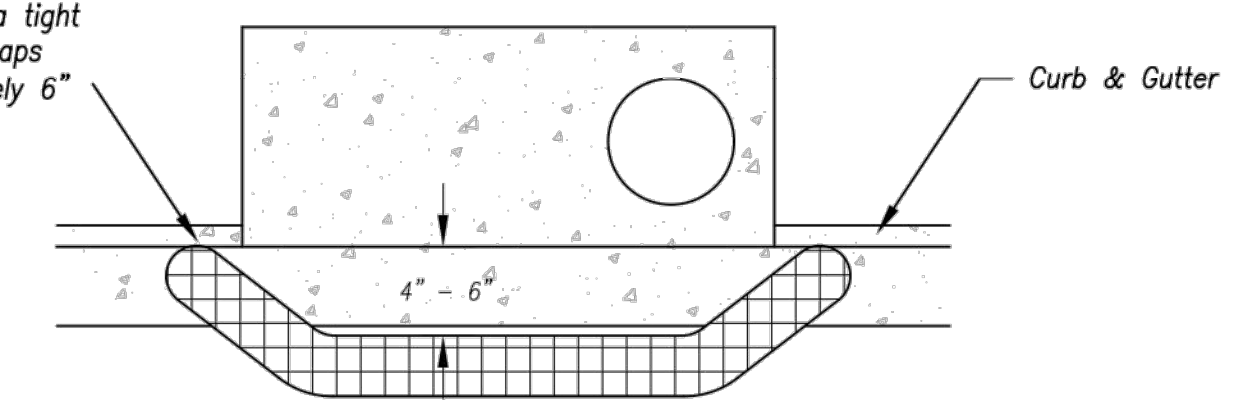
Detail A

EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

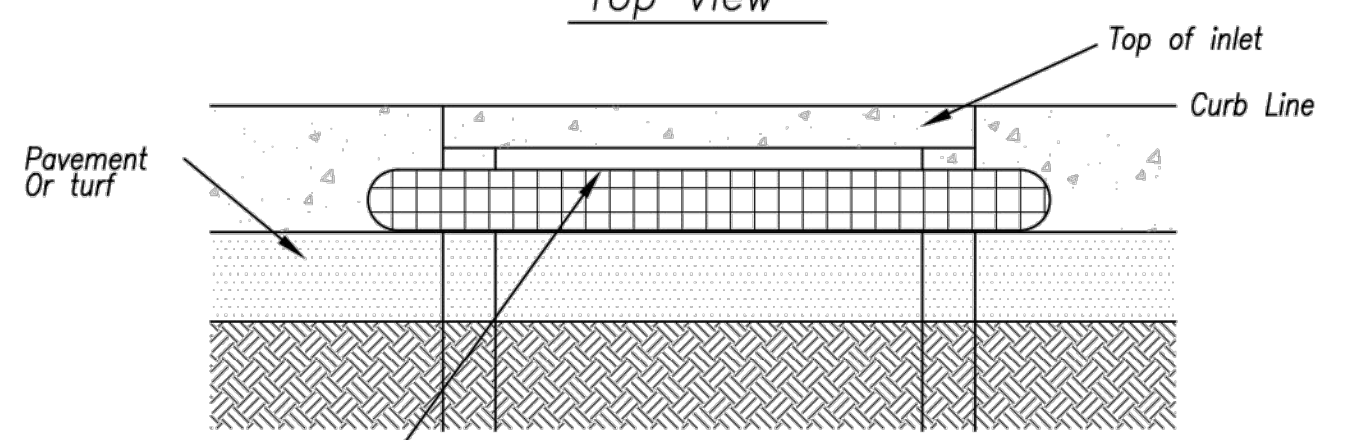


On Grade Curb Inlet Protection

Filter sock is to have a tight curb contact with no gaps and extend approximately 6" beyond inlet opening.



Top View



Front View

Sump Inlet Sediment Filter

LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

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AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION	STANDARD DRAWING NUMBER ESC-06 ADOPTED: 10/24/2016

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LEE'S SUMMIT, MISSOURI

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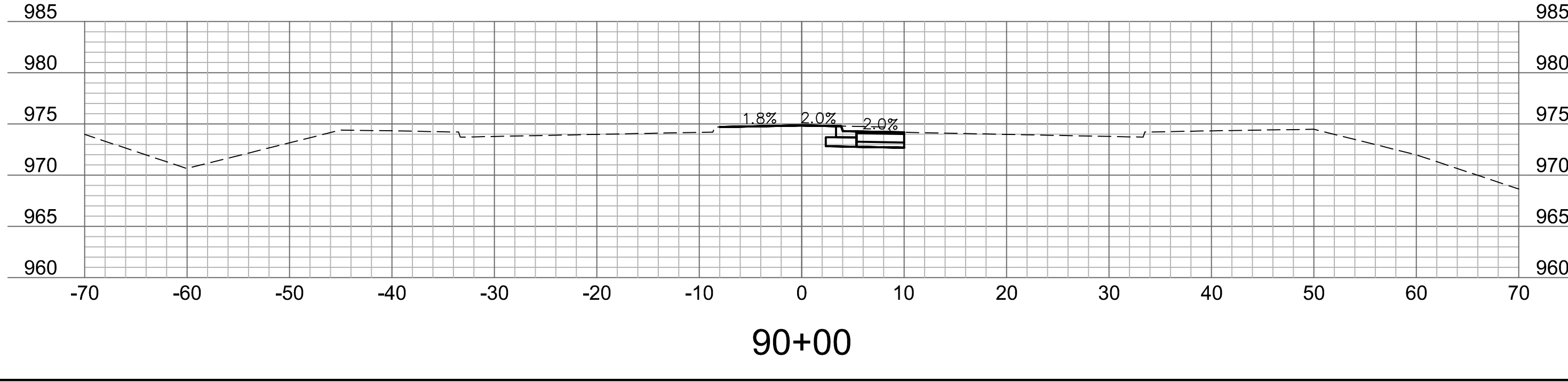
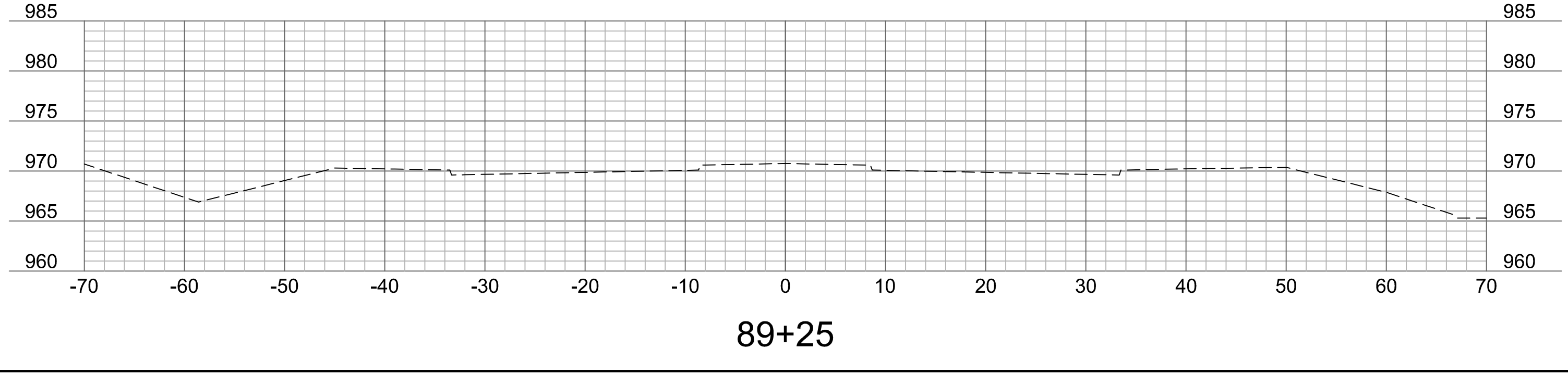
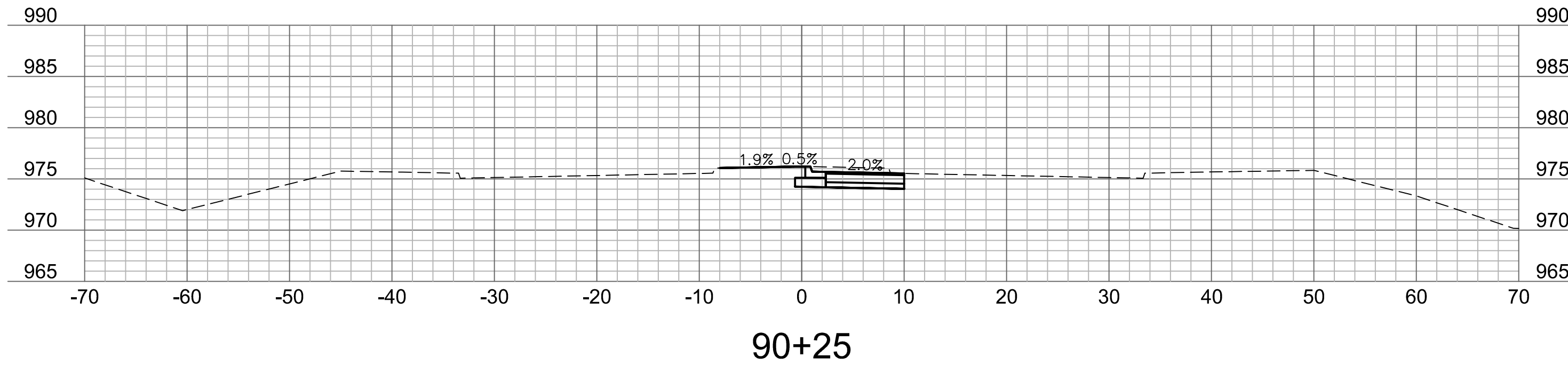
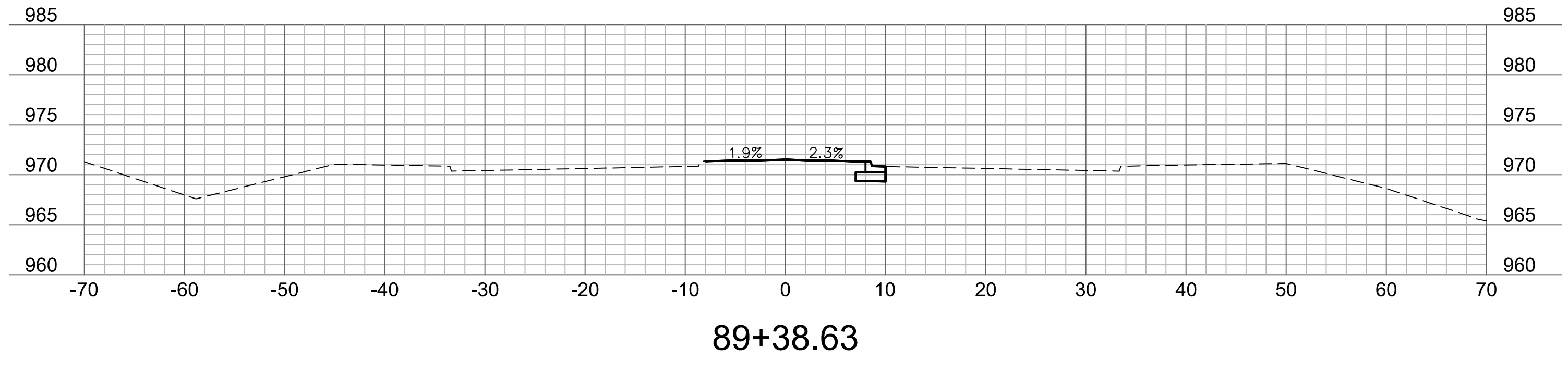
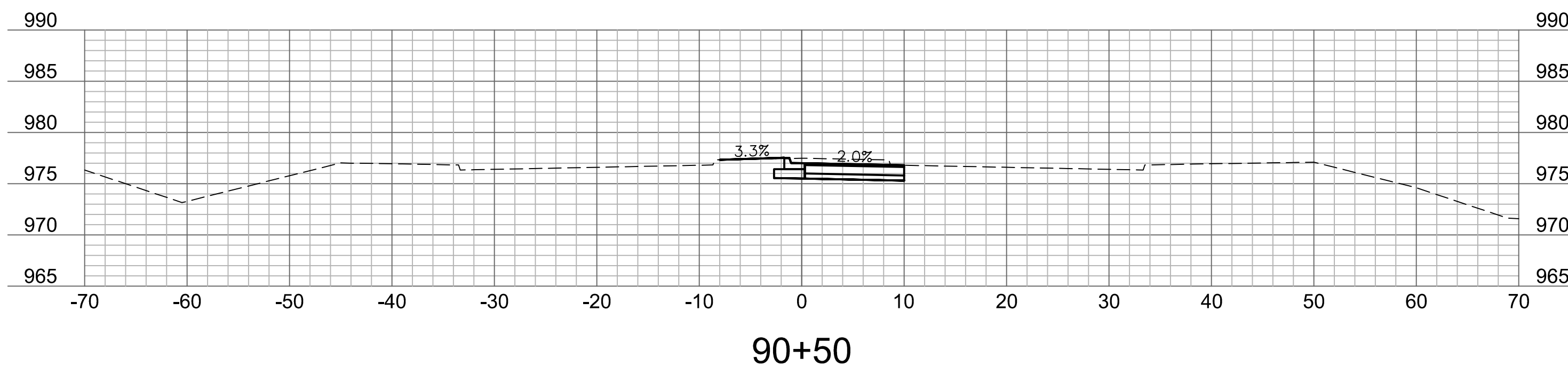
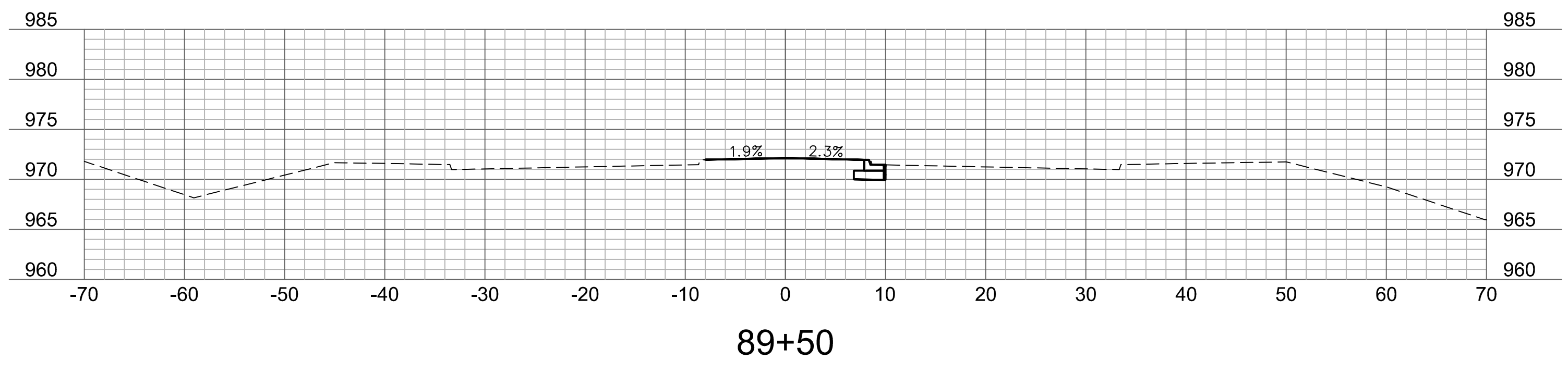
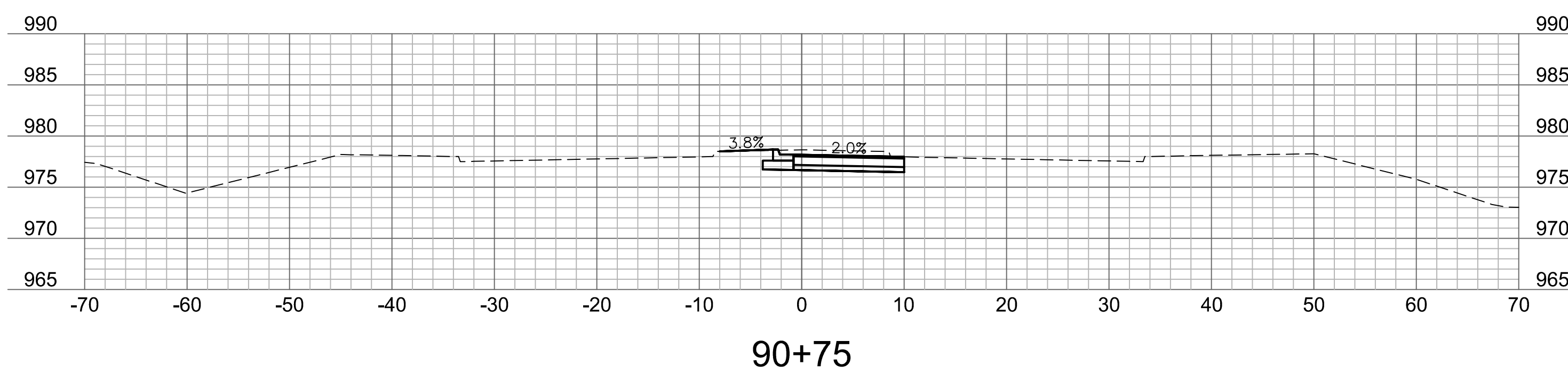
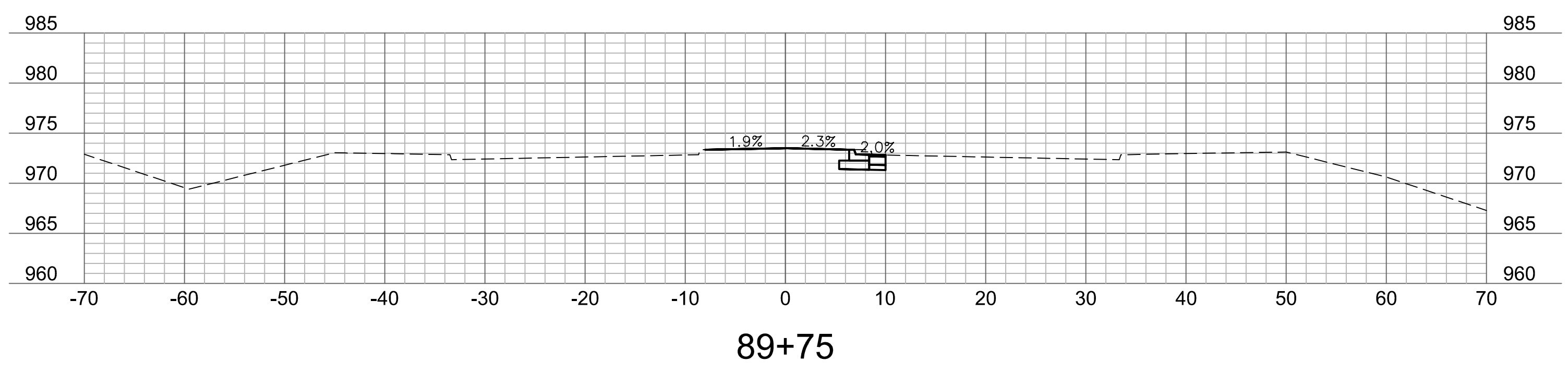
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 LEE'S SUMMIT, MISSOURI

drawn by: BJW
 checked by: KLIW
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: XSC01_D02104643
 date: 7/14/2023



USER: kwilliams2
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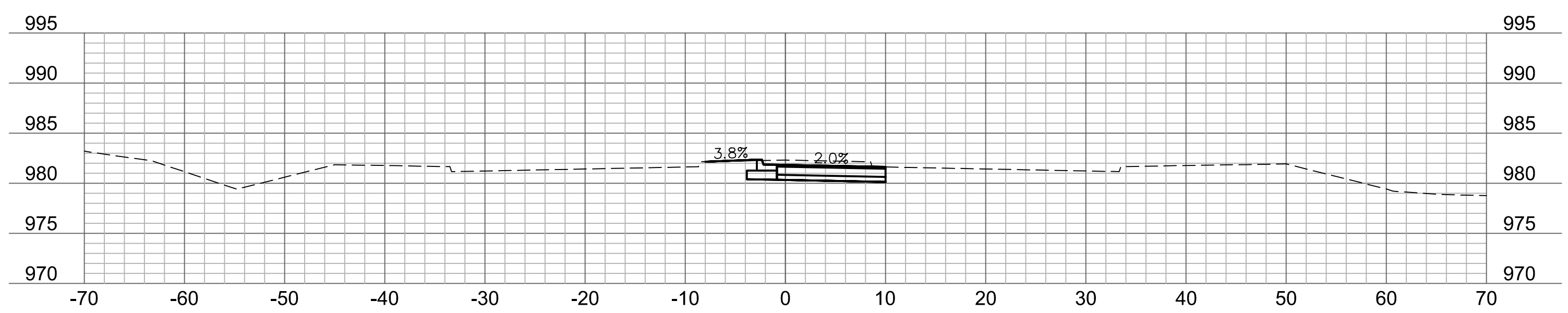
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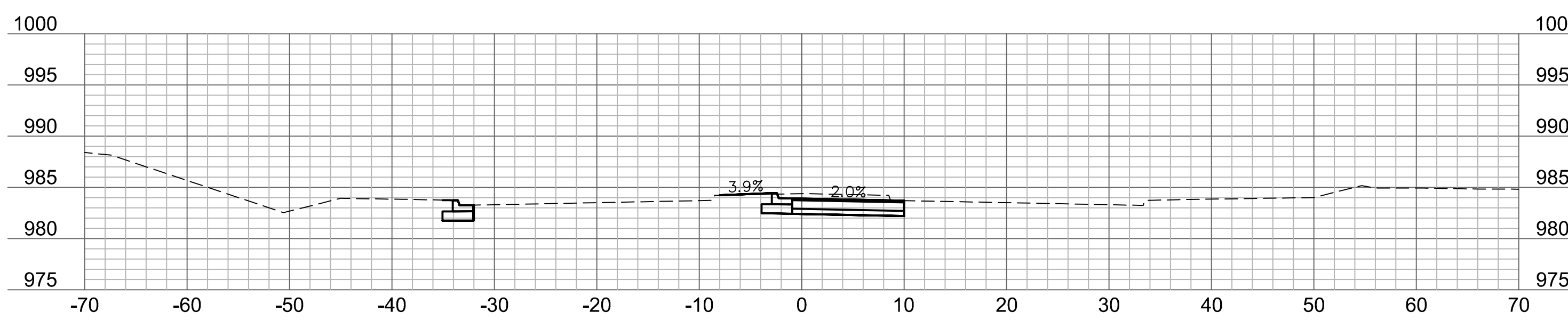
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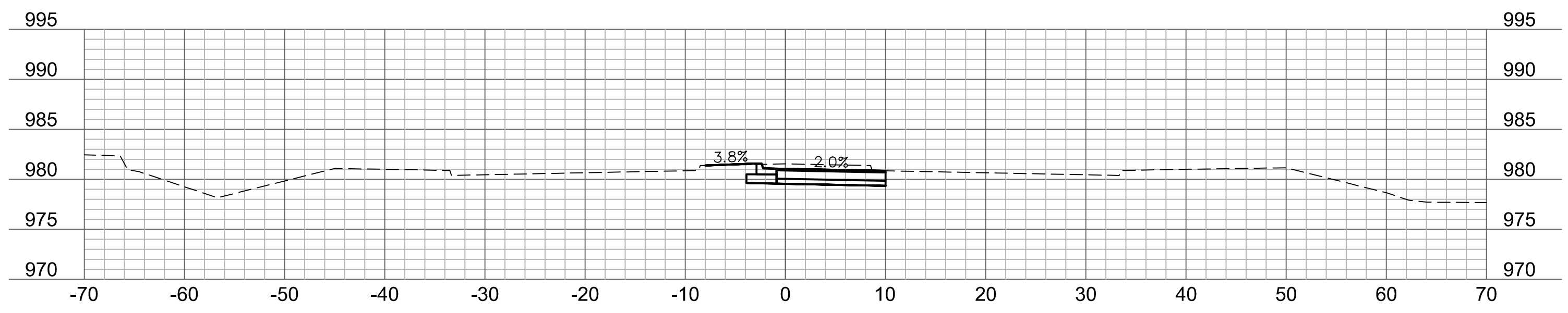
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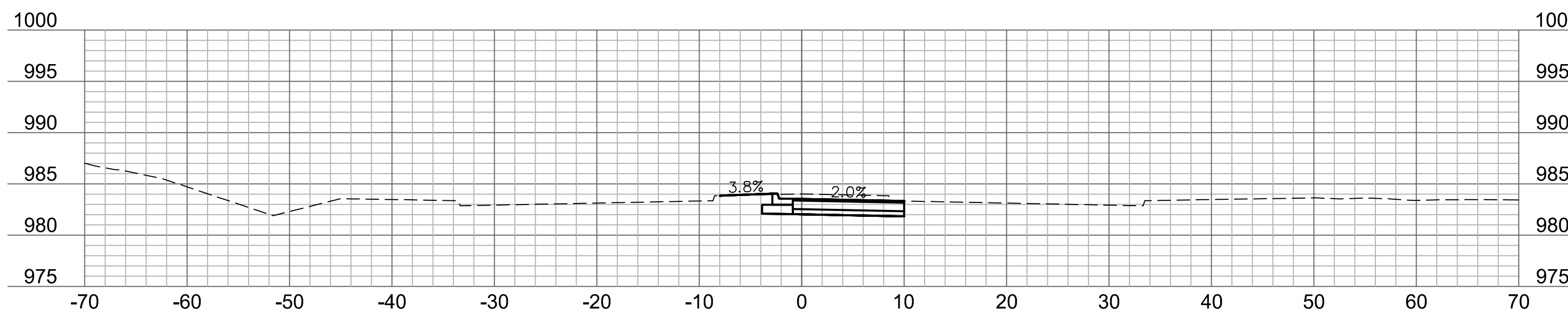
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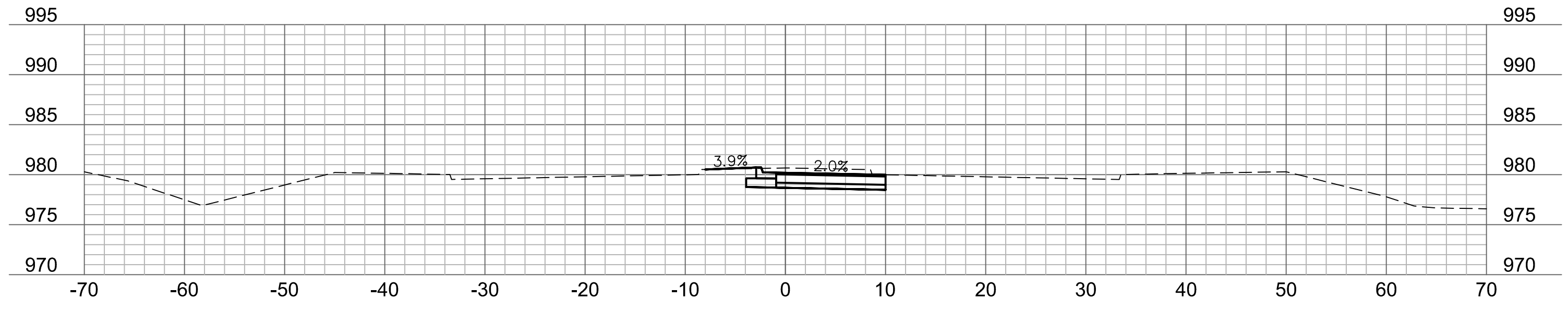
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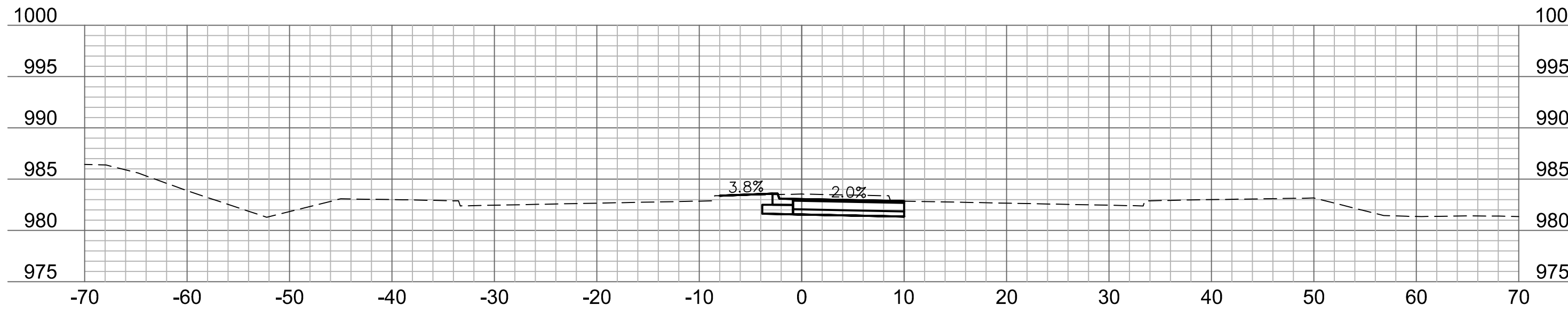
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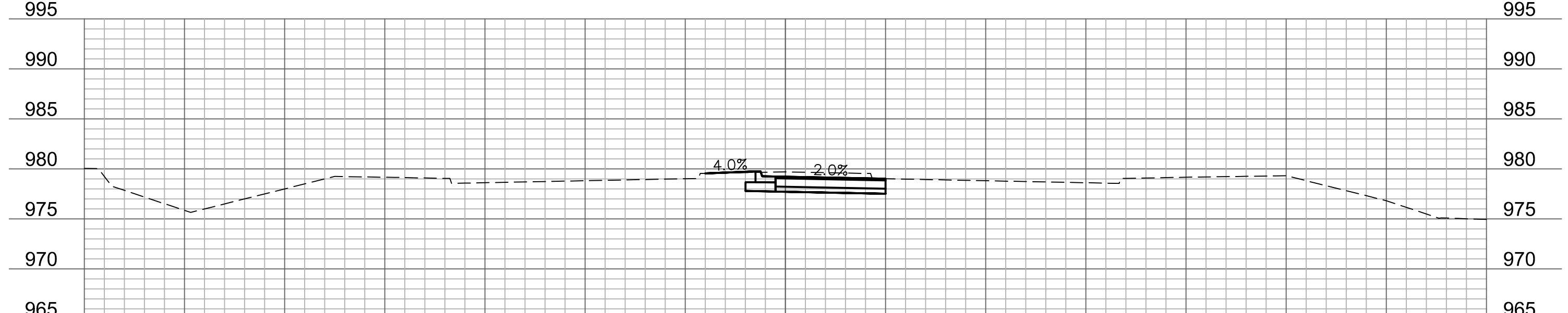
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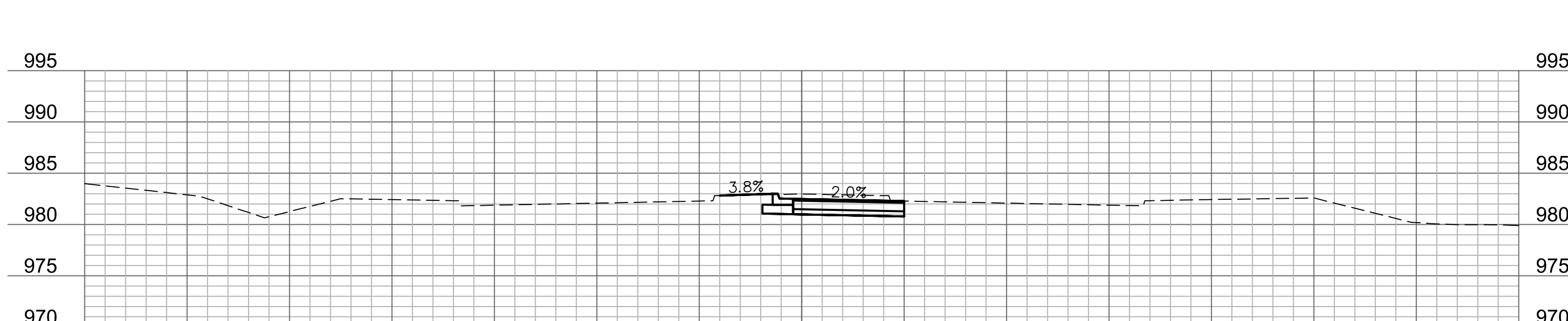
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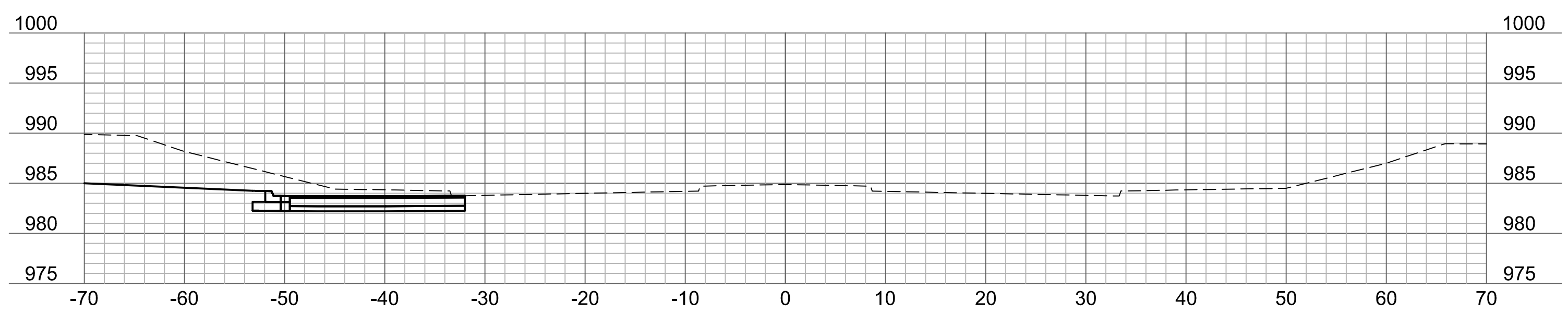
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THE VILLAGE AT DISCOVERY PARK
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
LEE'S SUMMIT, MISSOURI

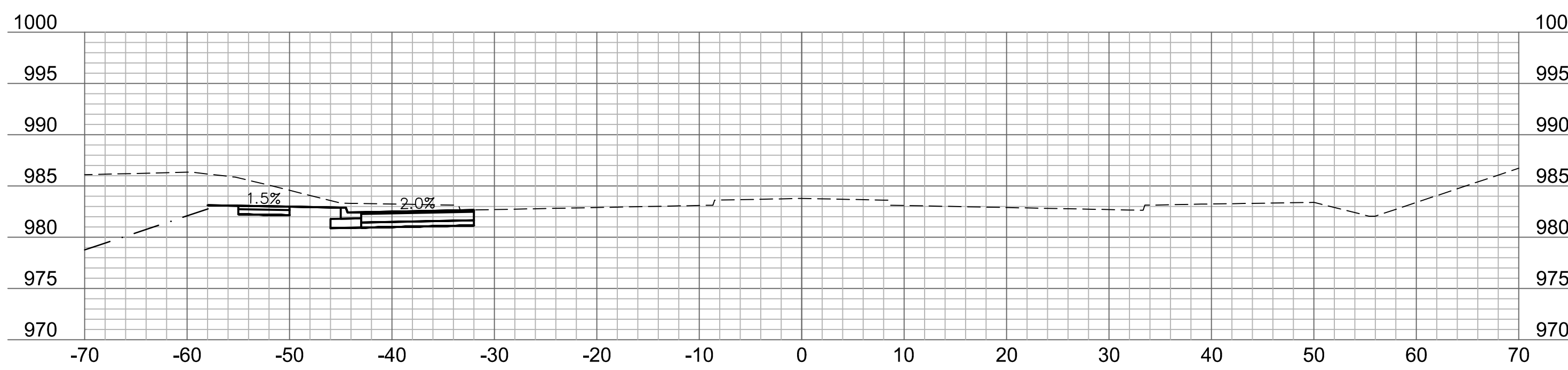
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approved by: JFG
QA/QC by: JJW
project no.: 021-04643
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date: 7/14/2023

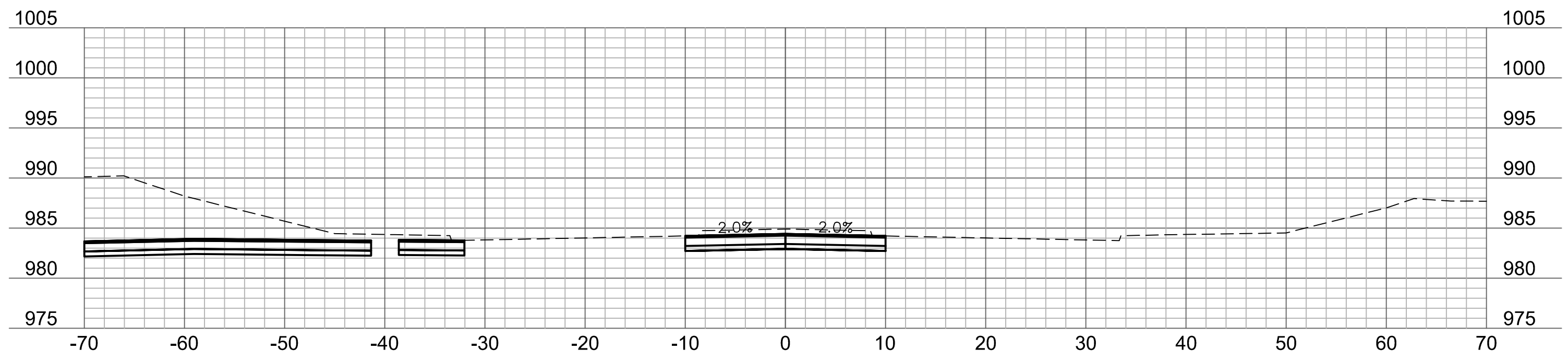
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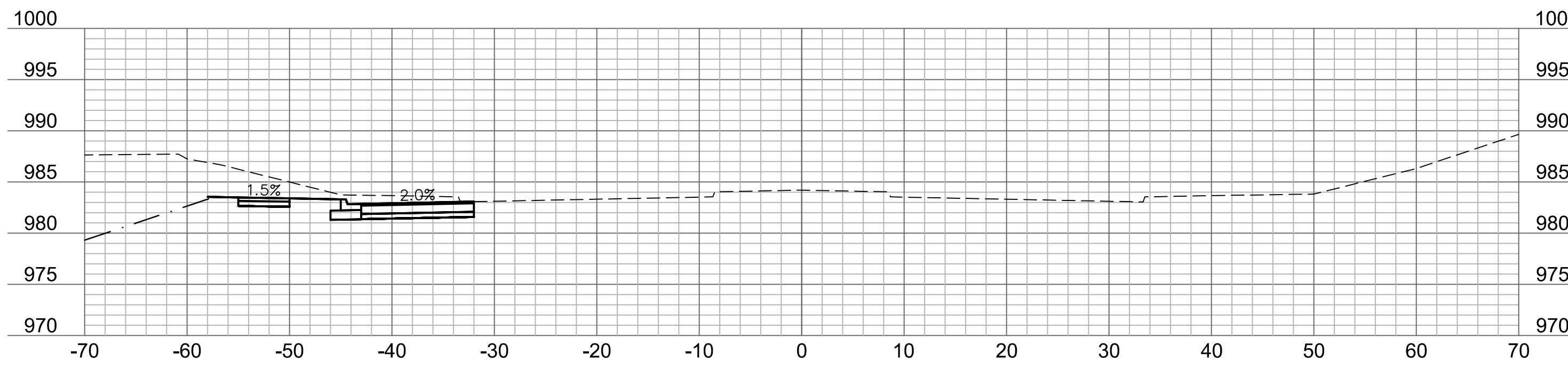
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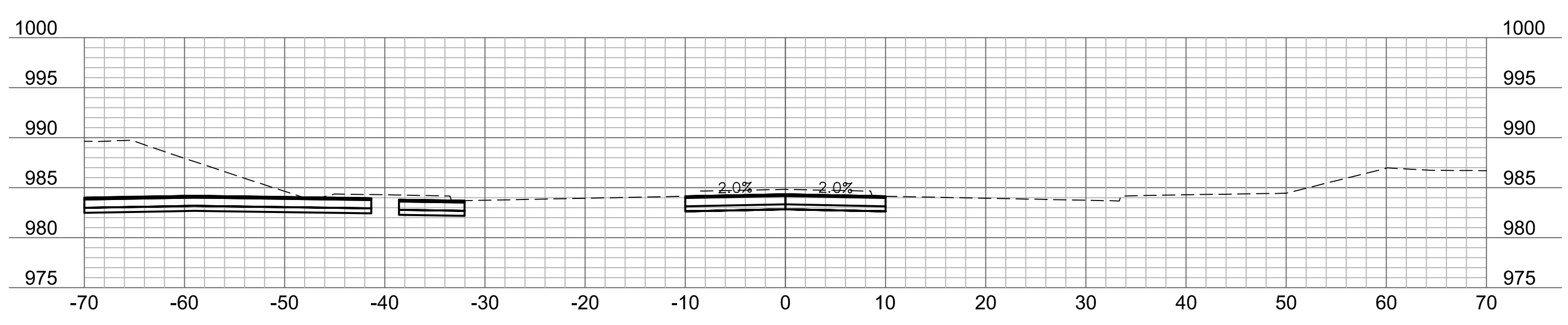
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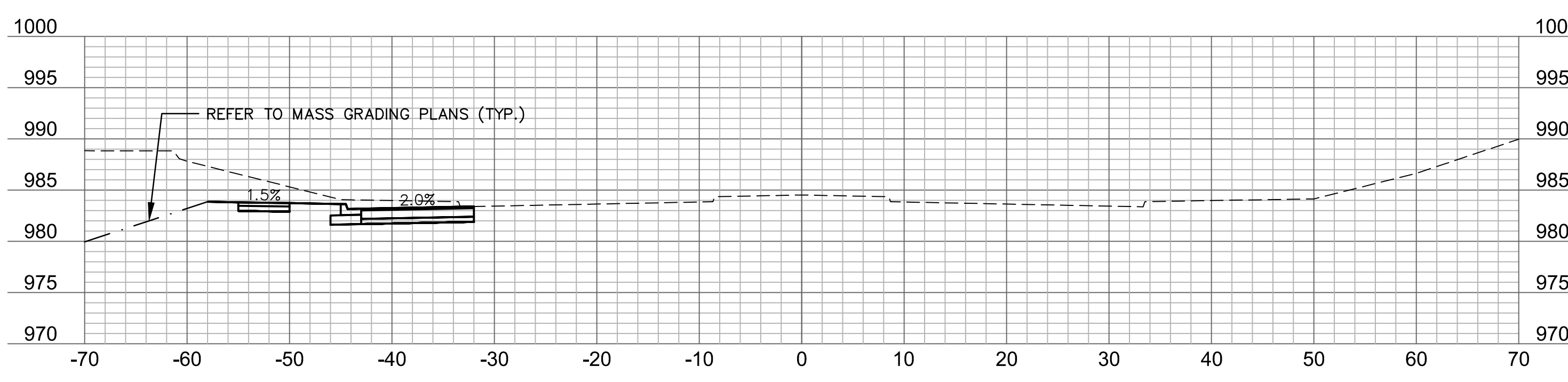
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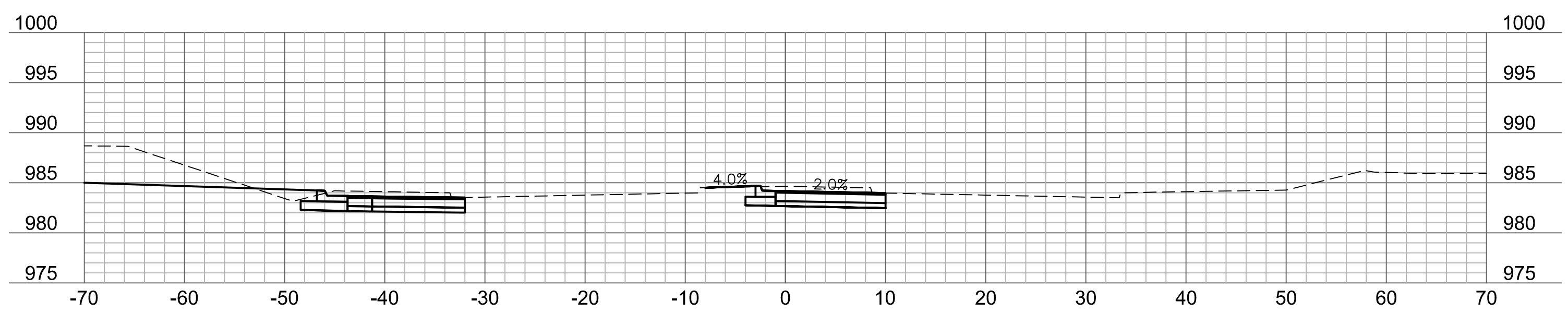
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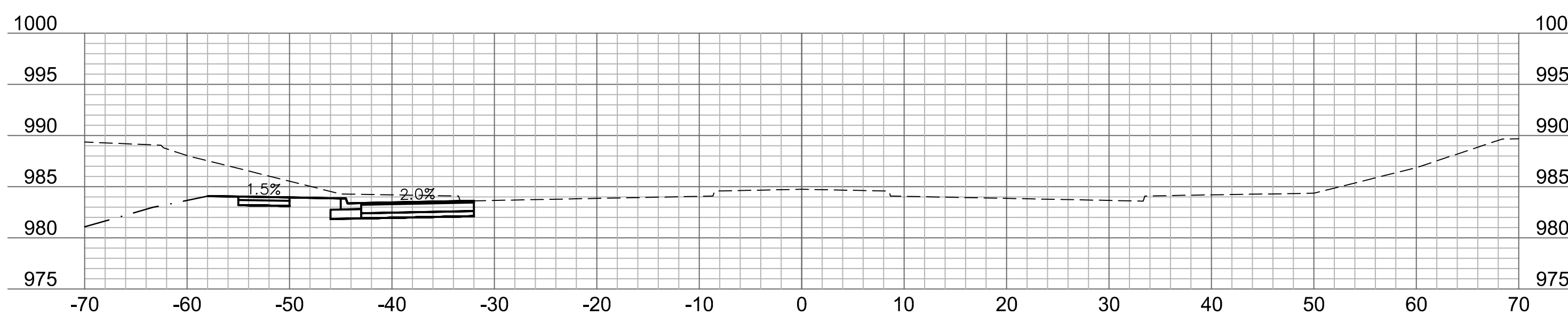
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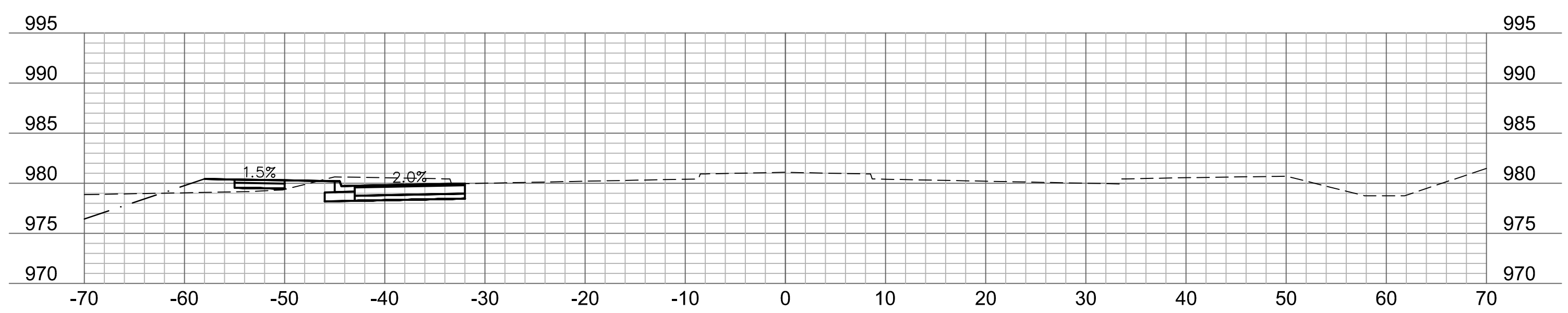
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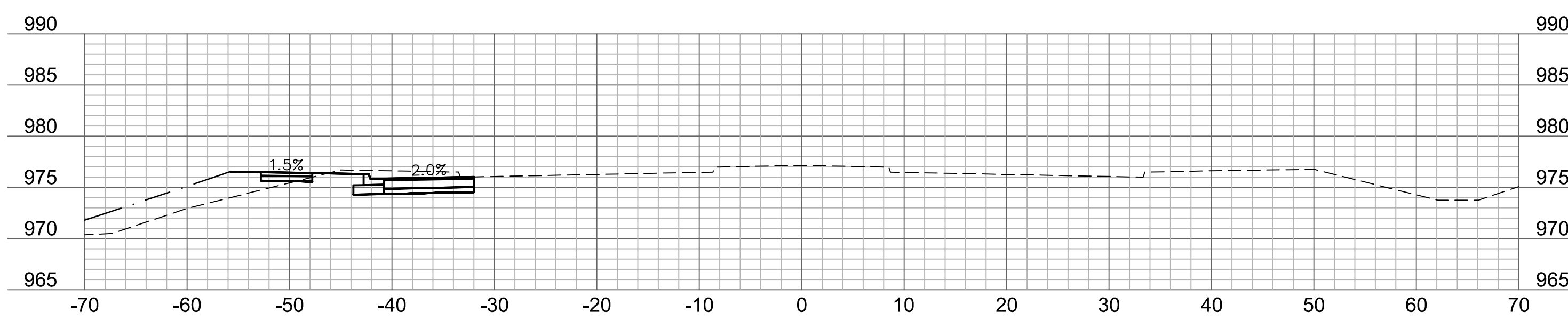
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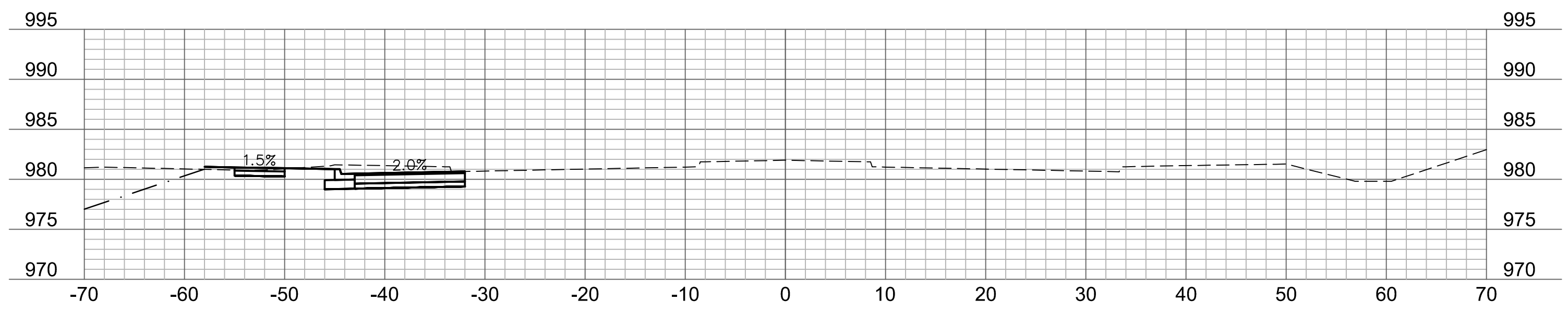
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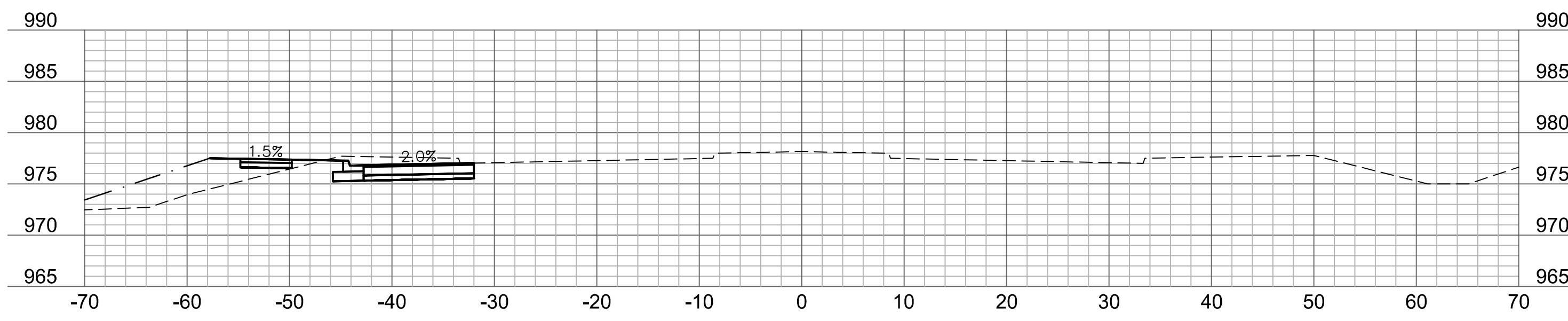
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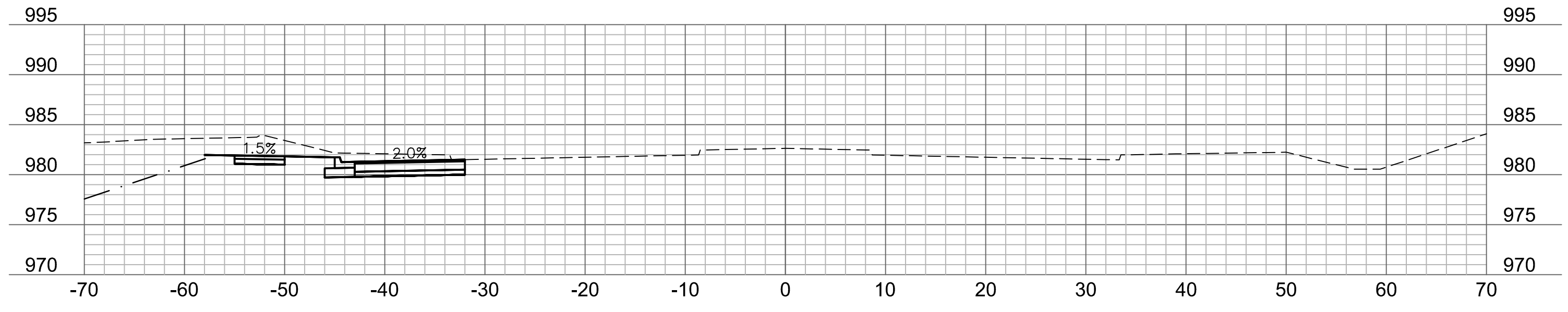
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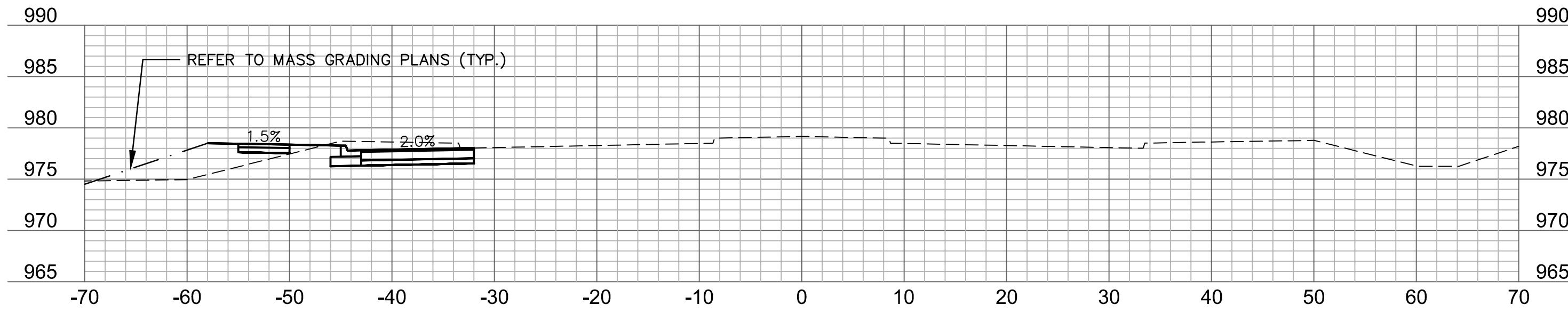
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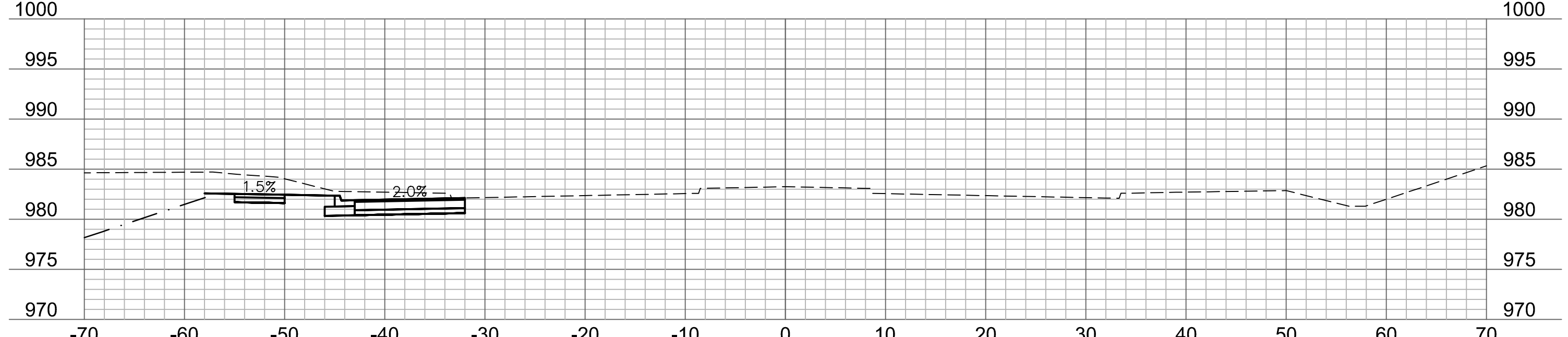
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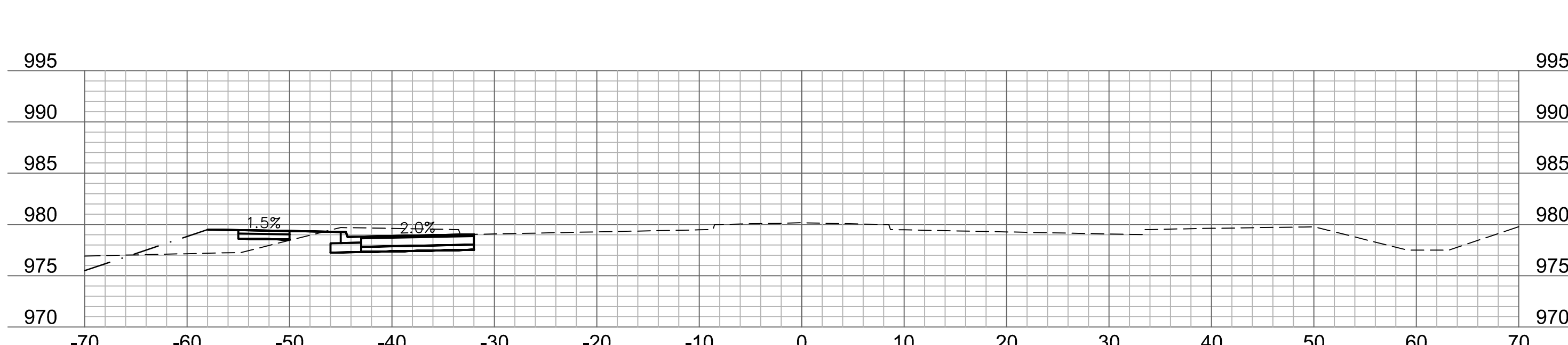
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 LEE'S SUMMIT, MISSOURI

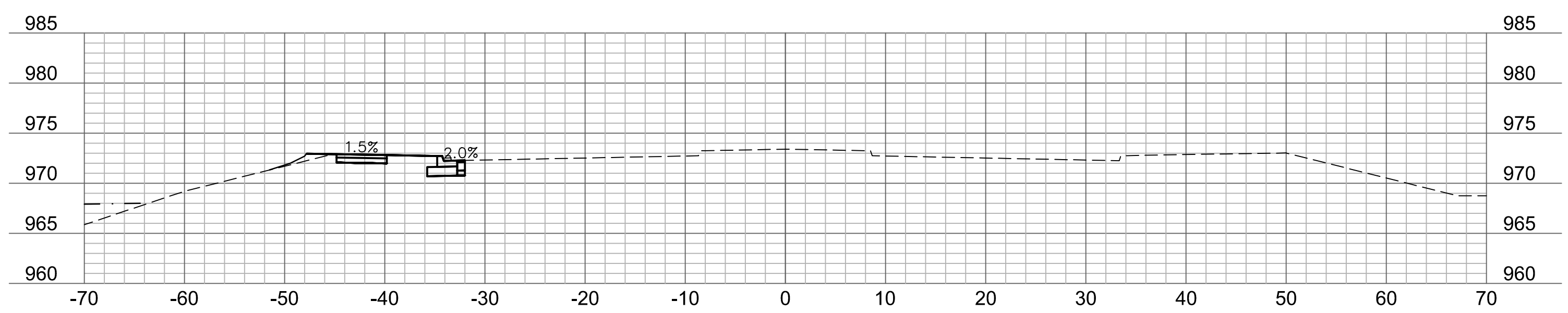
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 checked by: KLIW
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: XSC01_D02104643
 date: 7/14/2023

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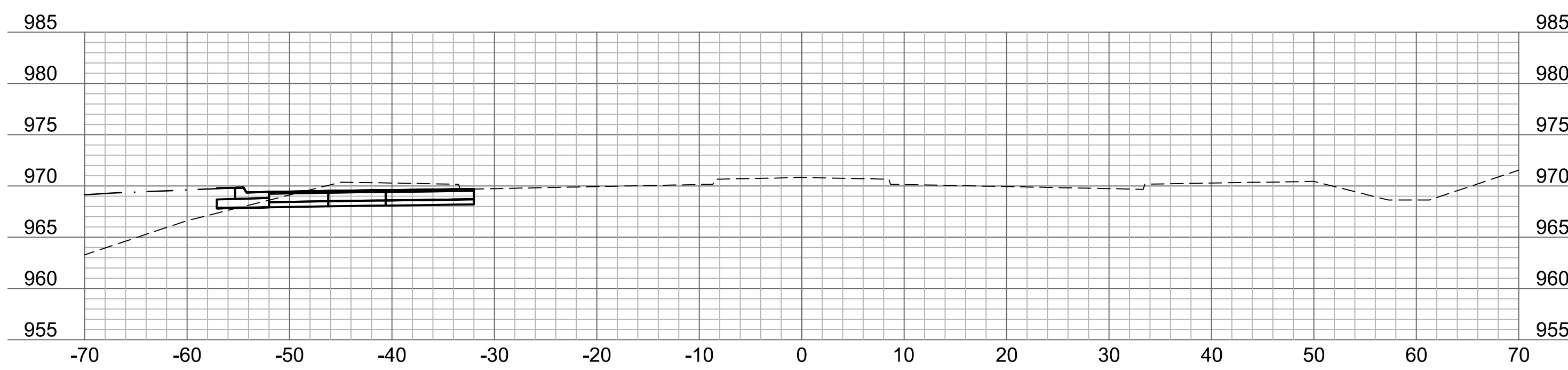
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 Lee's Summit, Missouri
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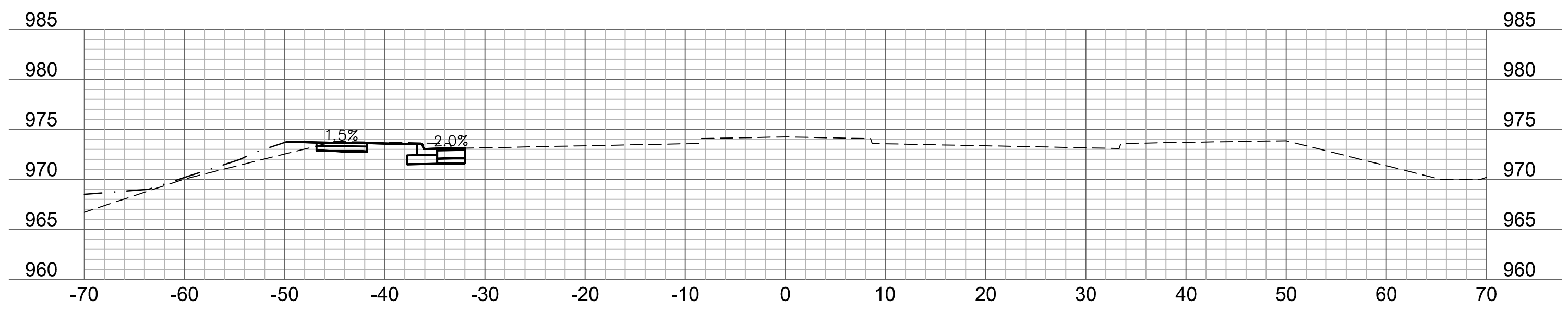
Olsson - Civil Engineering
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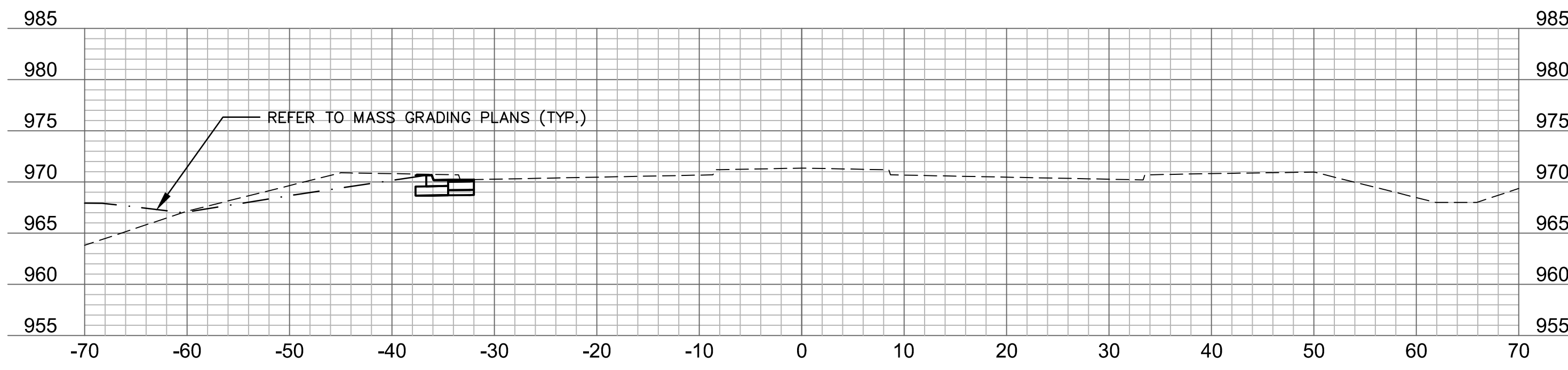
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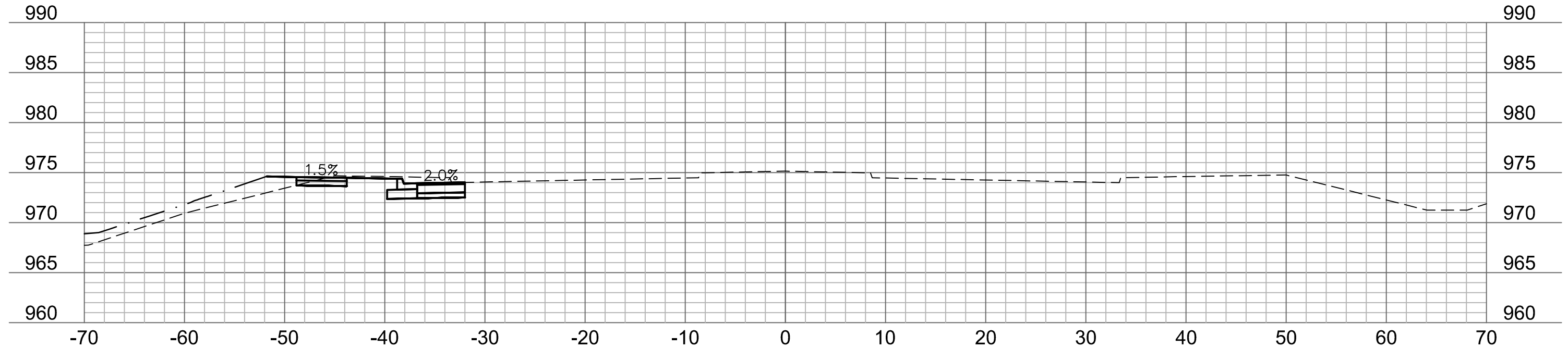
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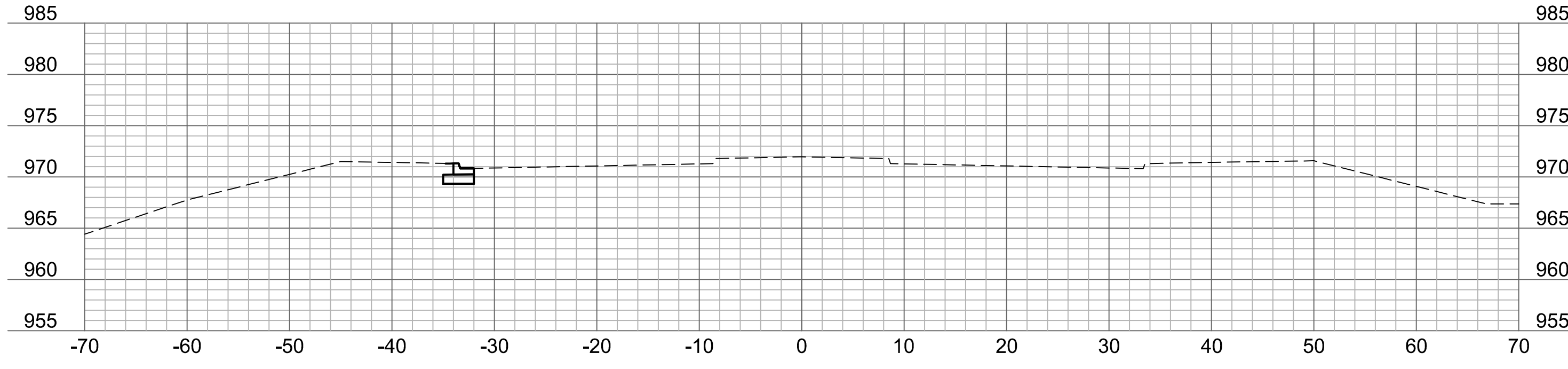
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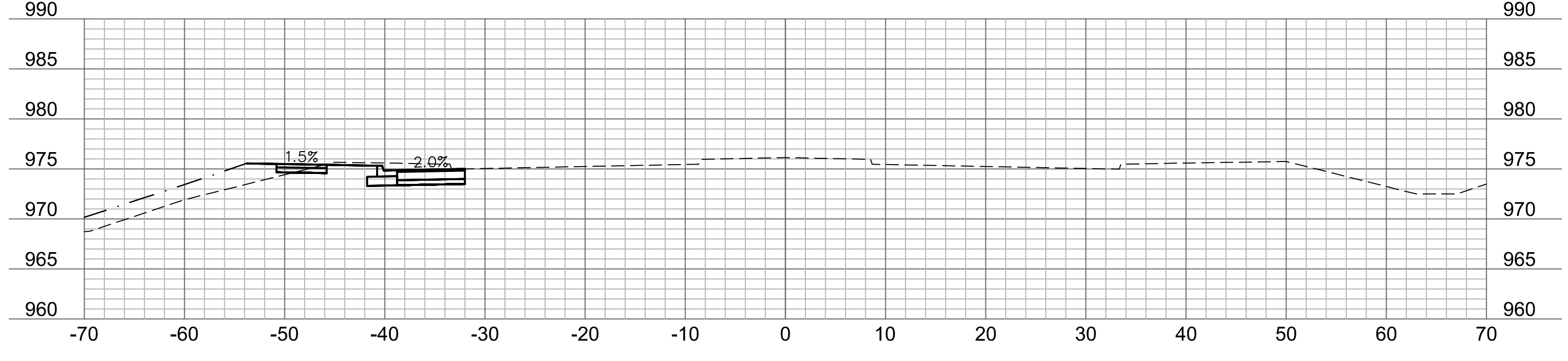
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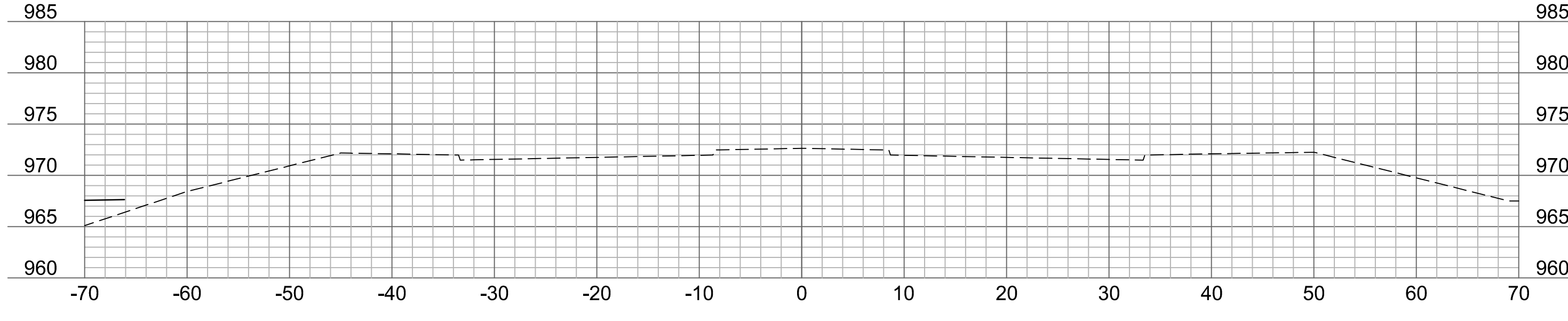
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 THE VILLAGE AT DISCOVERY PARK
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 LEE'S SUMMIT, MISSOURI

drawn by: BJW
 checked by: KLIW
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: XSC01_D02104643
 date: 7/14/2023

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 DATE: Oct 20, 2023 2:55pm
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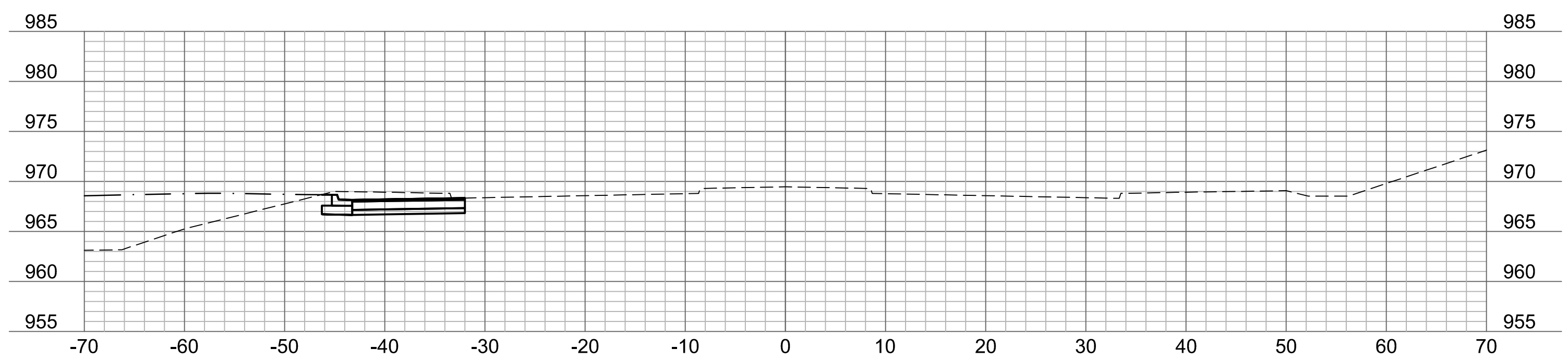
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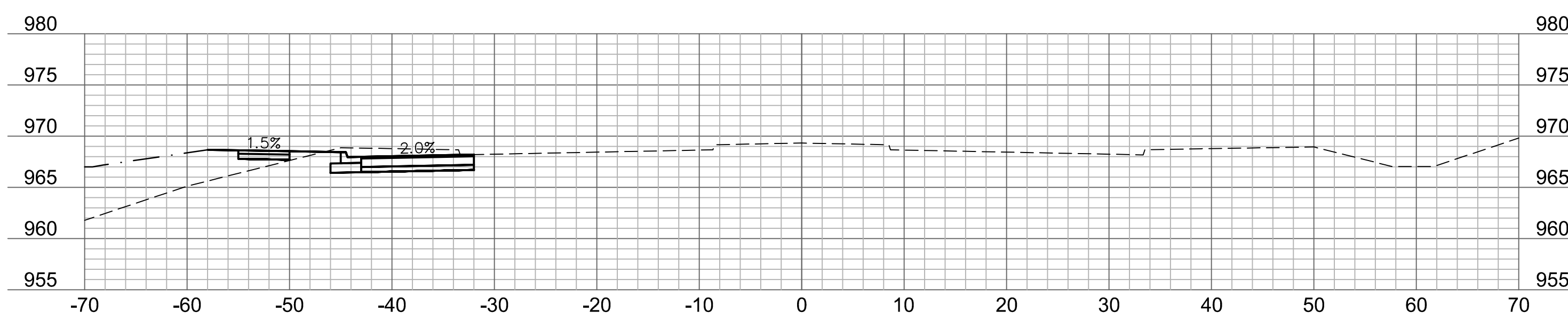
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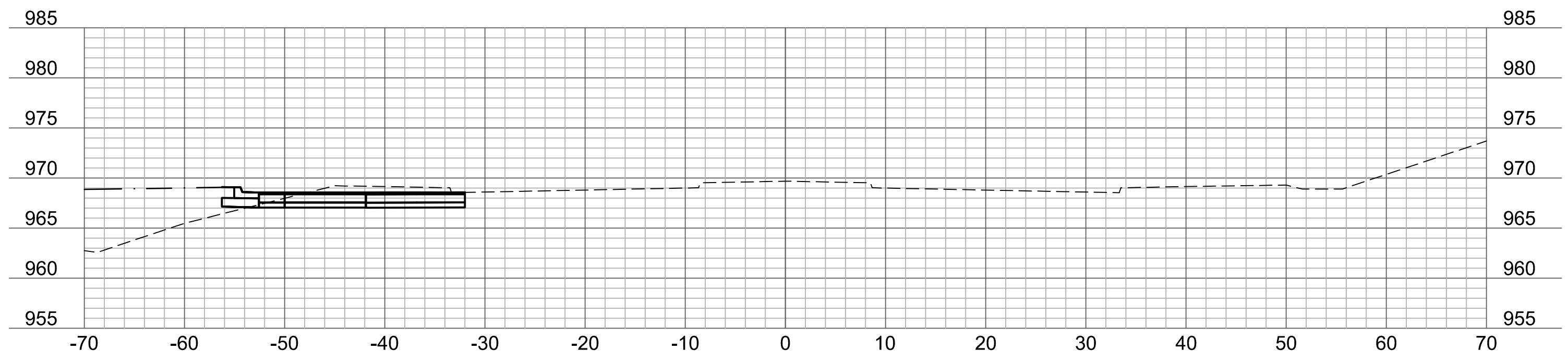
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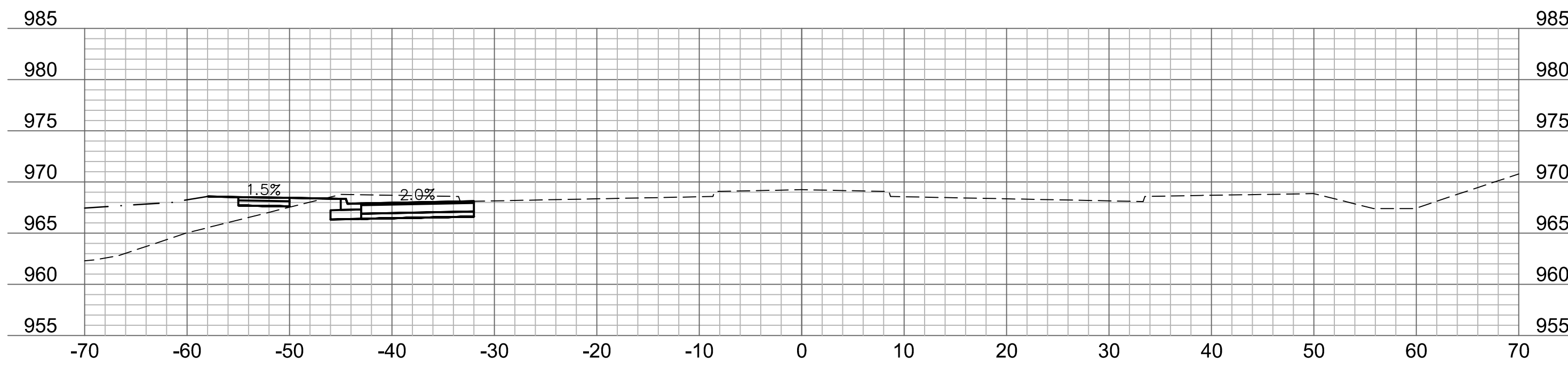
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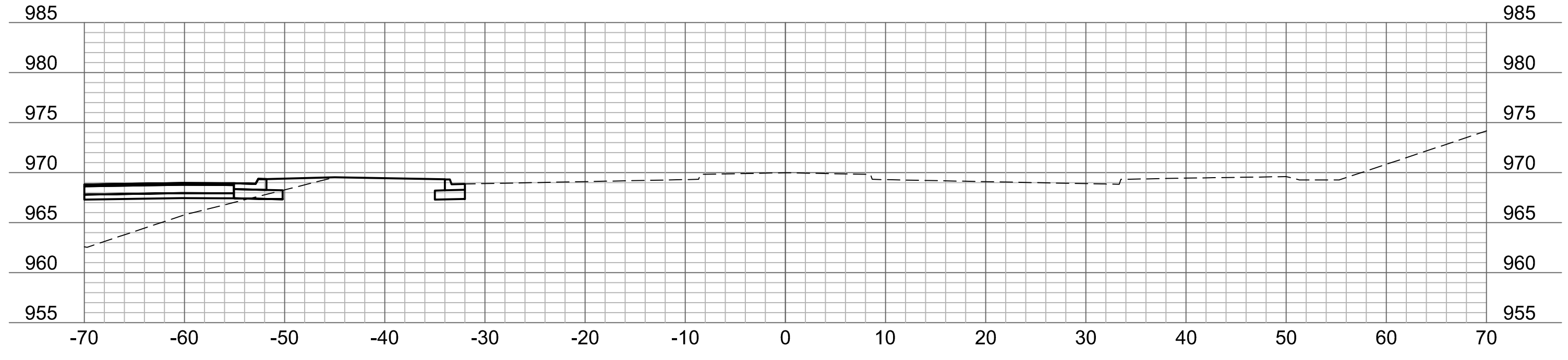
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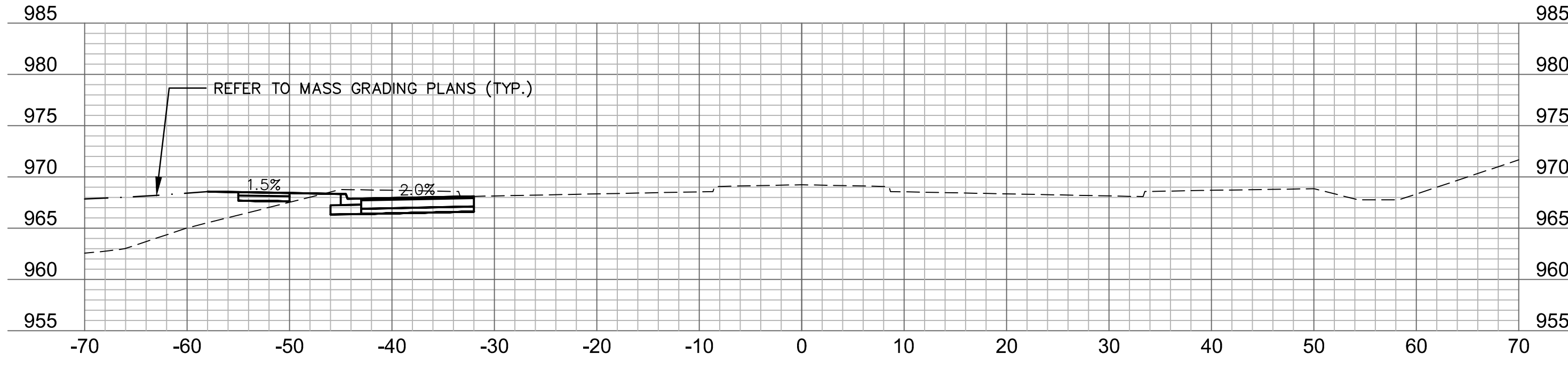
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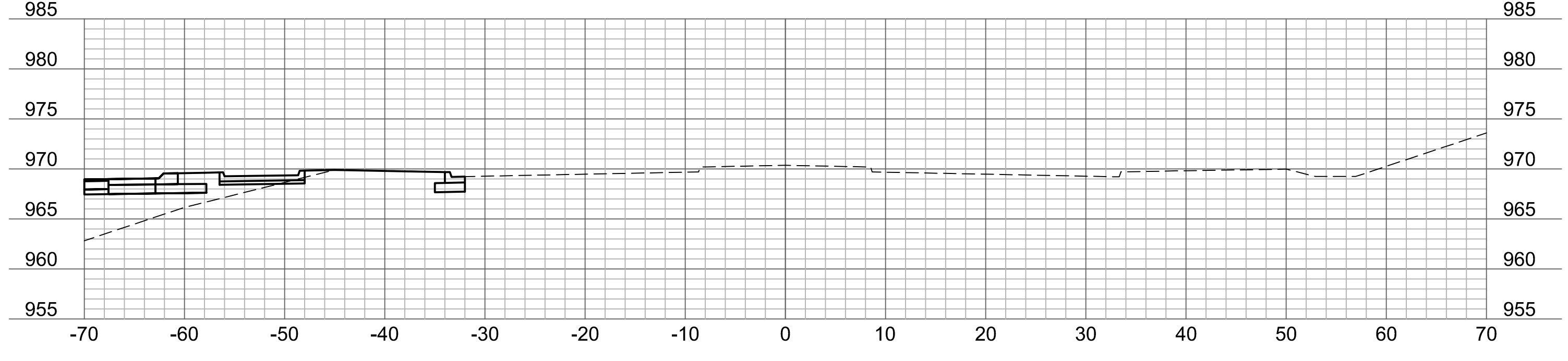
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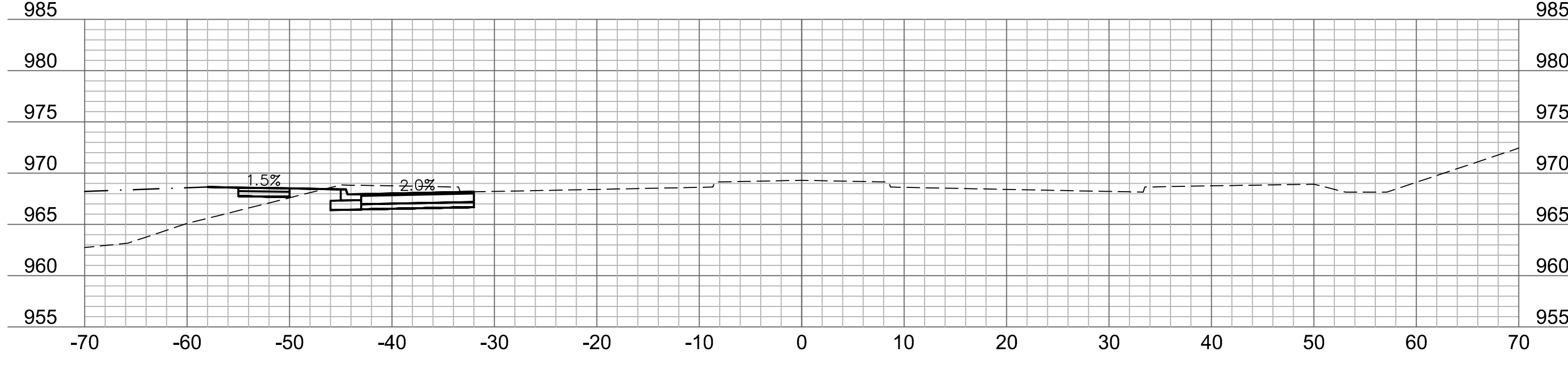
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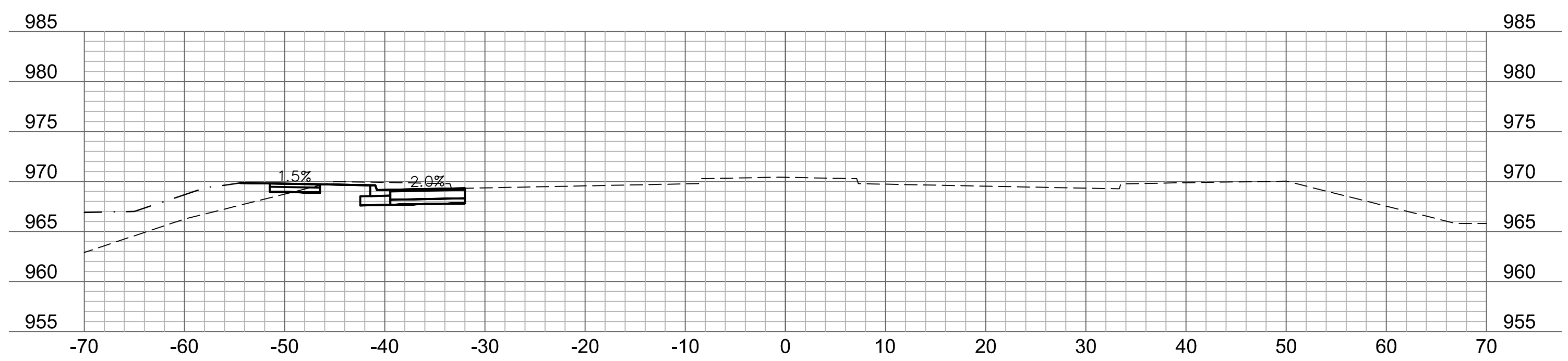


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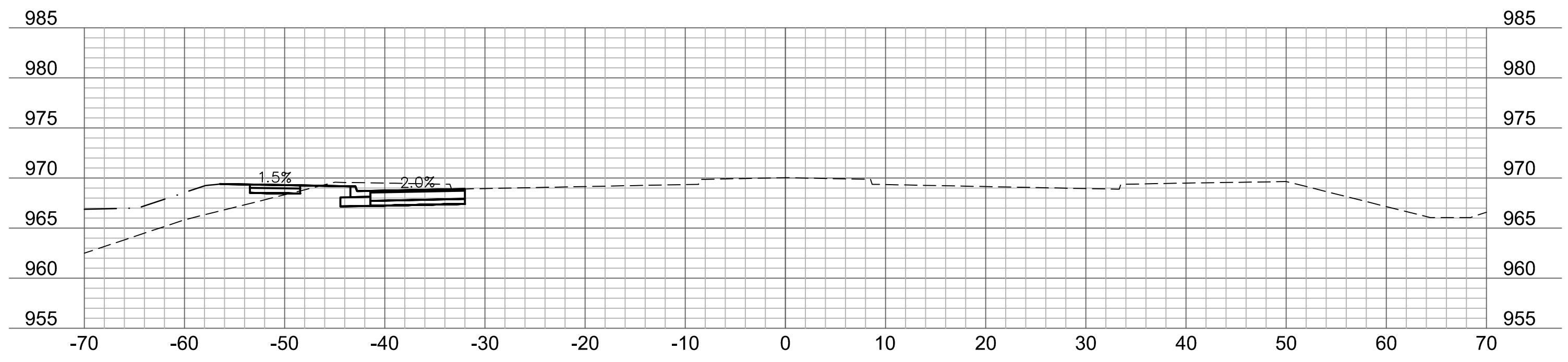
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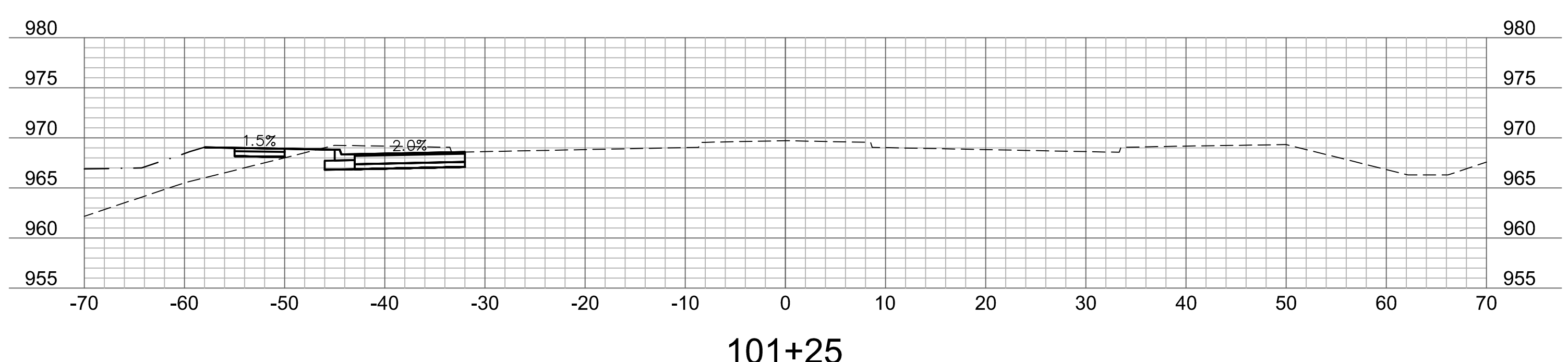
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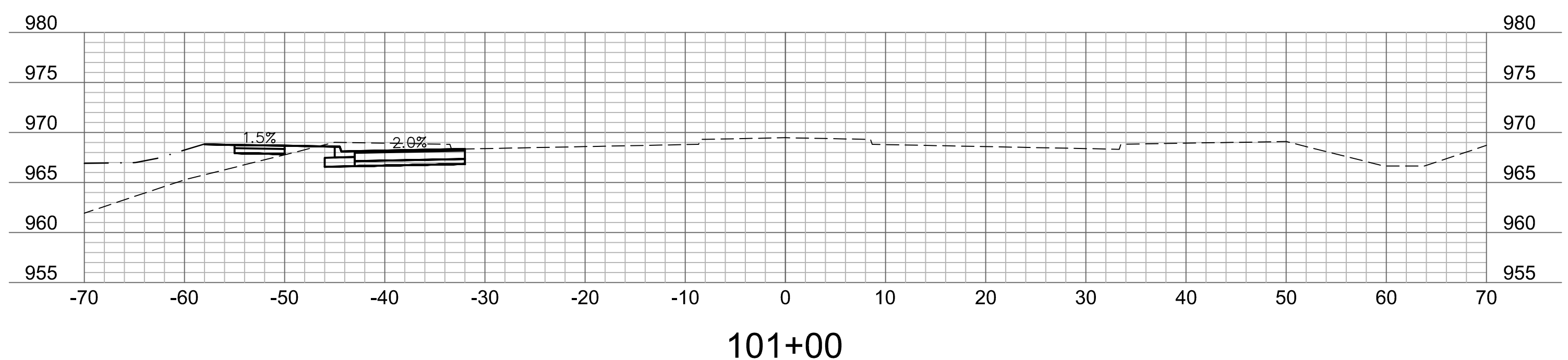
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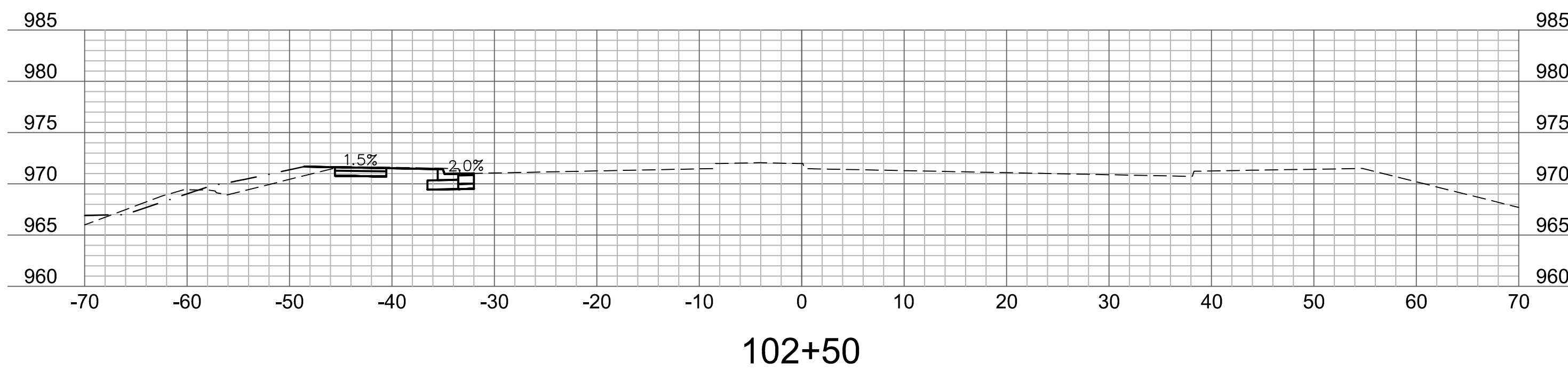
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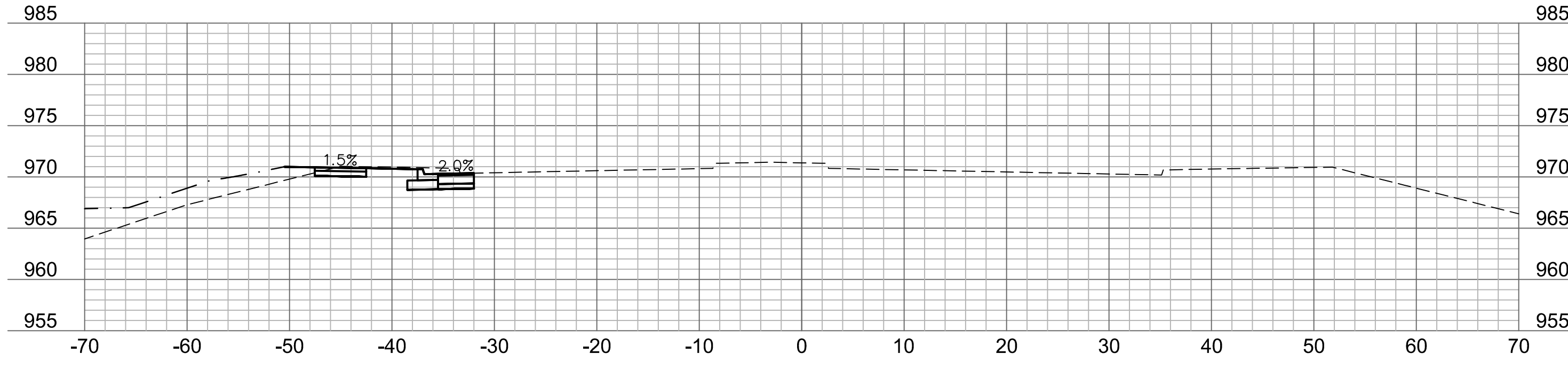
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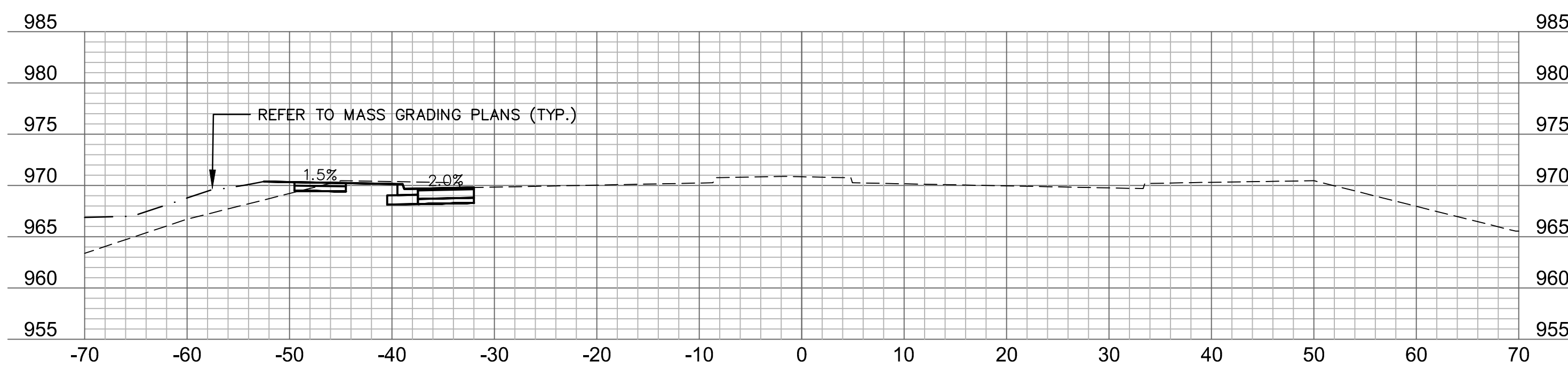
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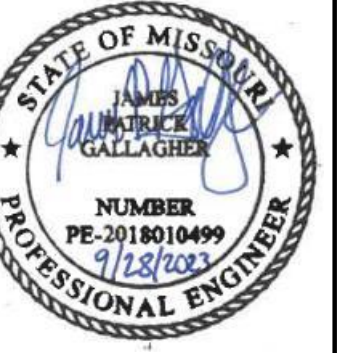
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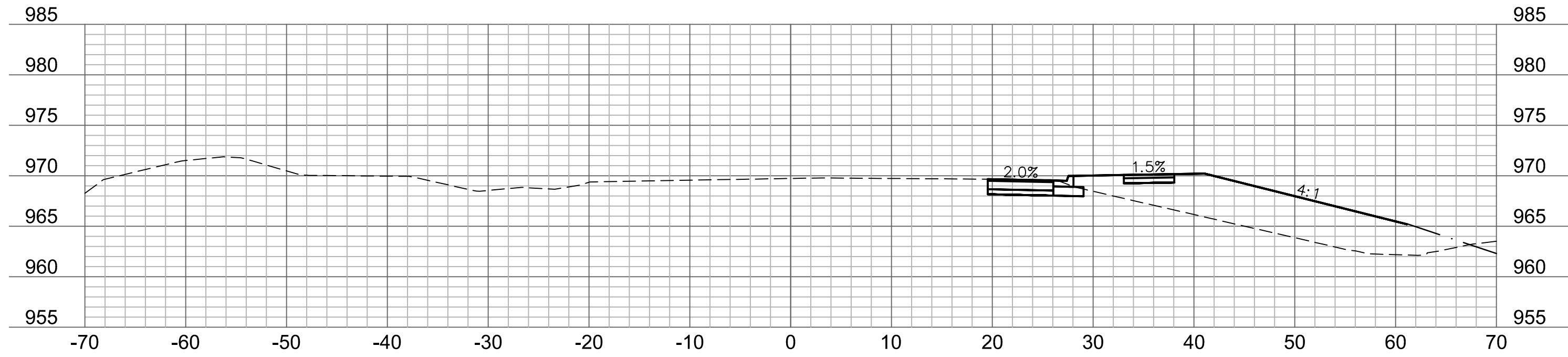
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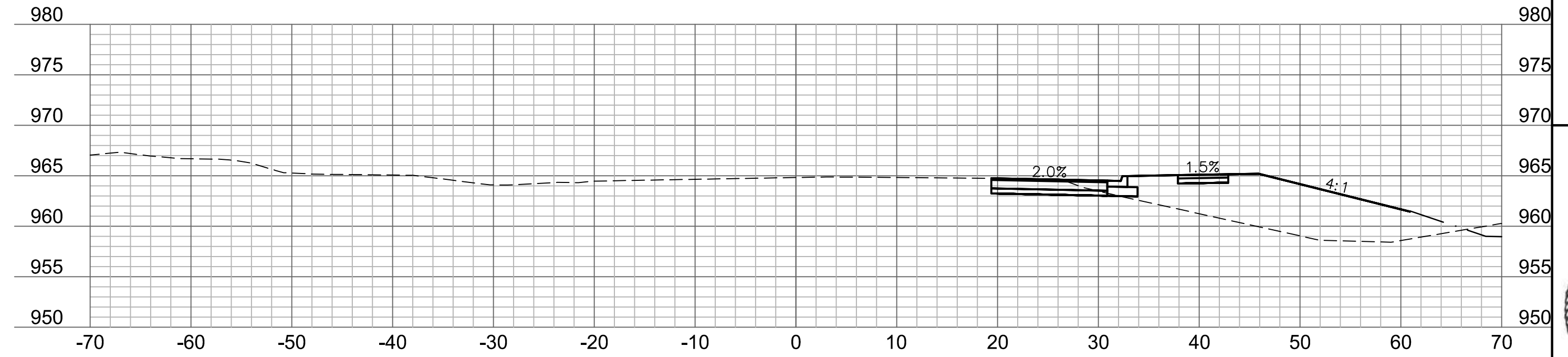


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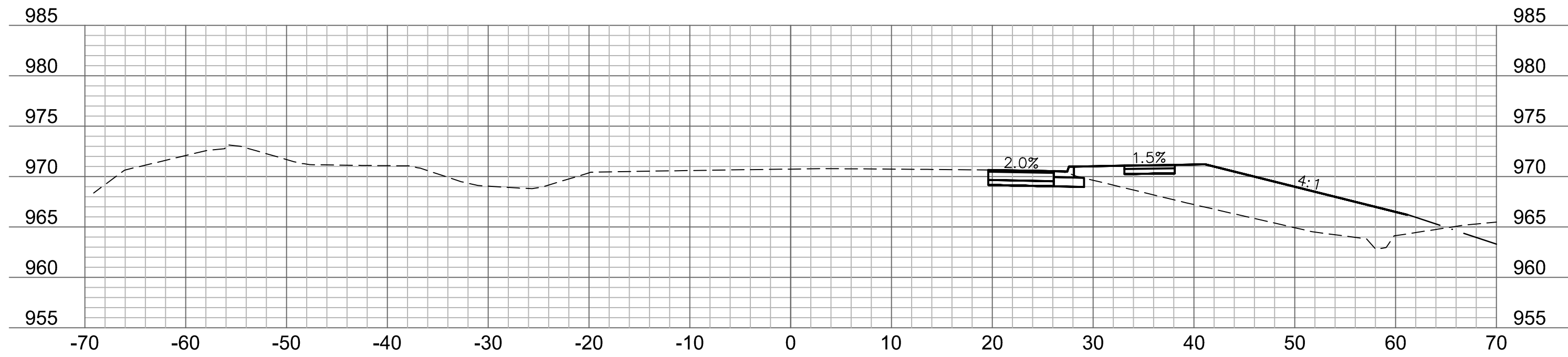
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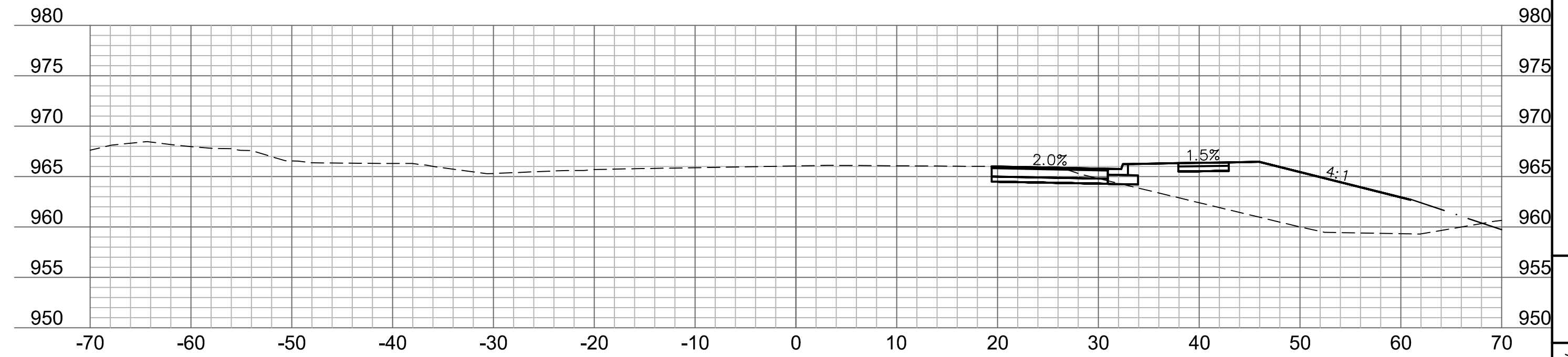
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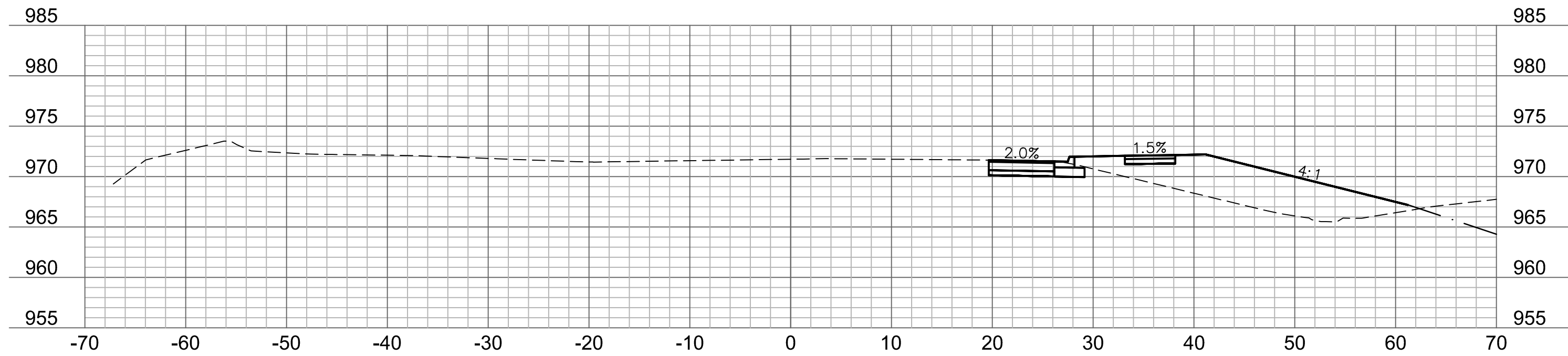
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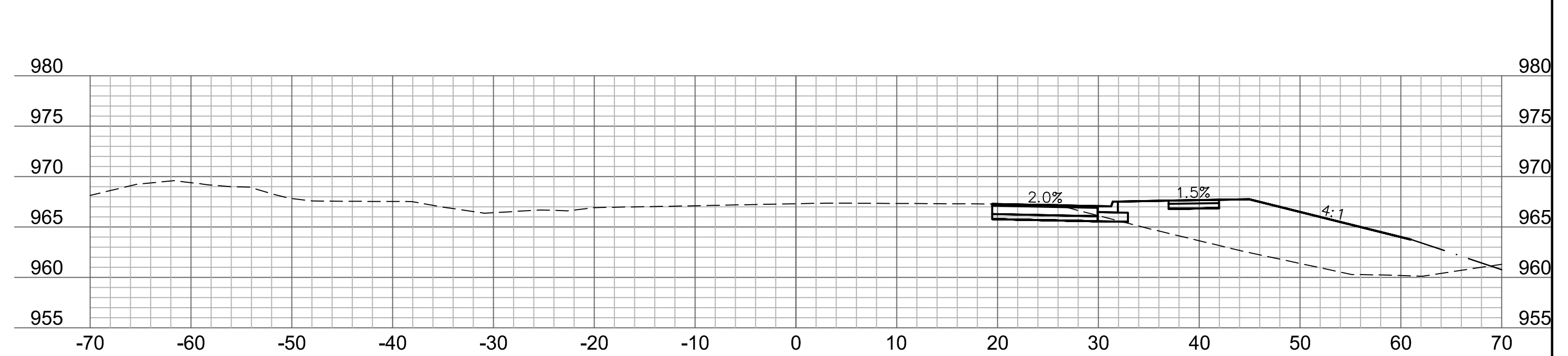
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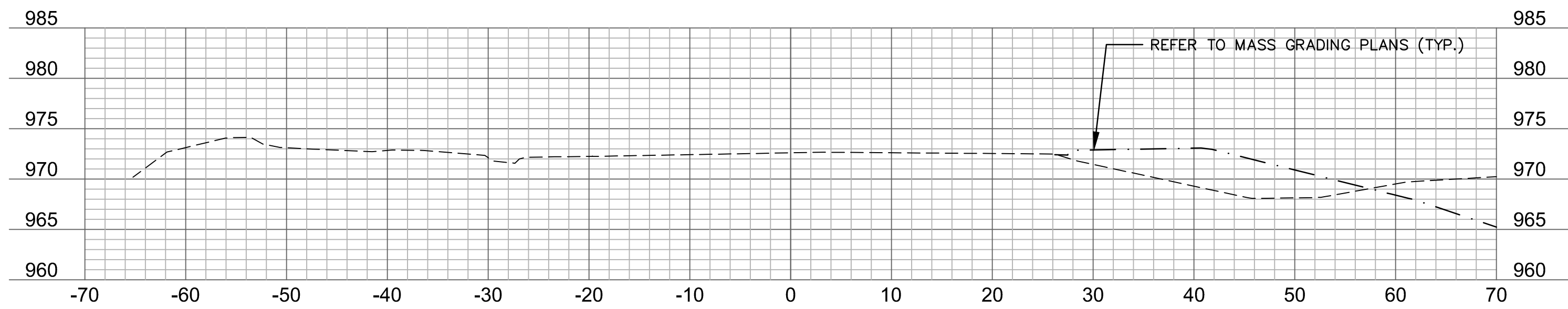
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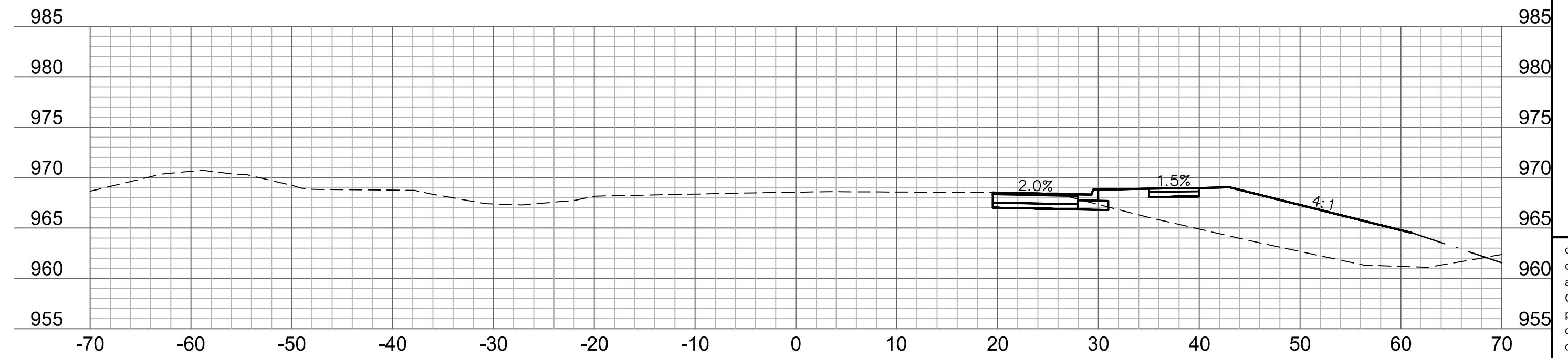
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201+25



200+00



201+00

REV. NO.	DATE	REVISIONS DESCRIPTION

CROSS SECTIONS
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 THE VILLAGE AT DISCOVERY PARK
 COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

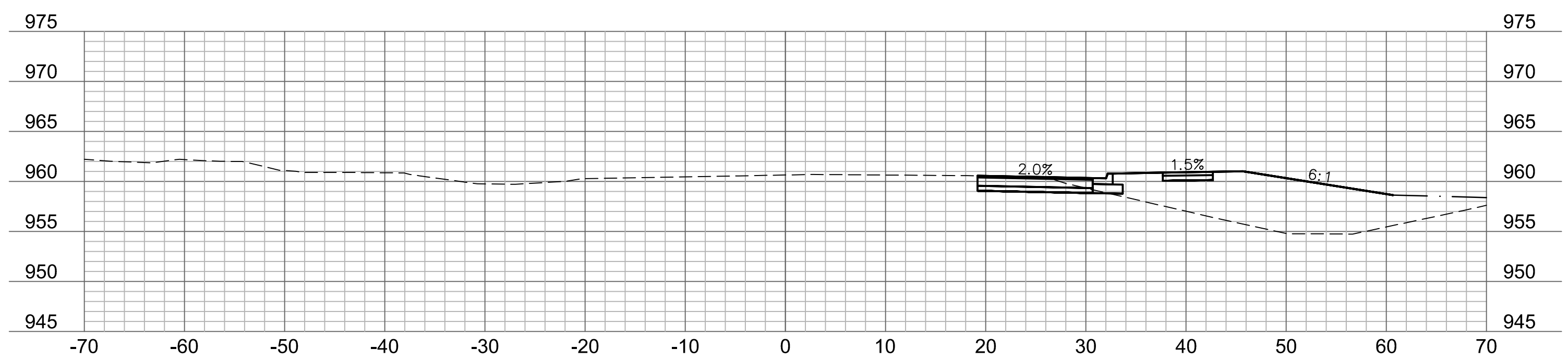
drawn by: BJW
 checked by: KLIW
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: XSC01_D02104643
 date: 7/14/2023

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As Noted on Plan Review

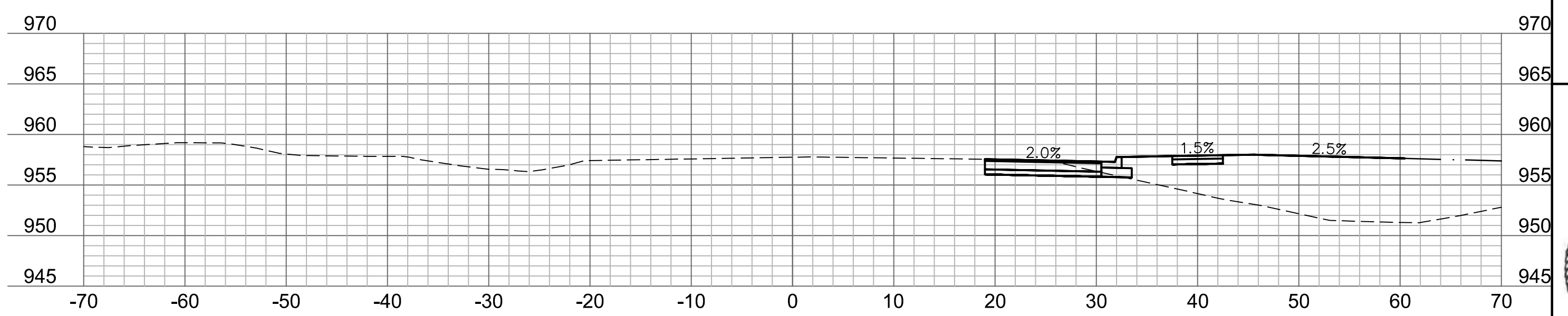
Development Services Department
Lee's Summit, Missouri
11/07/2023

olsson

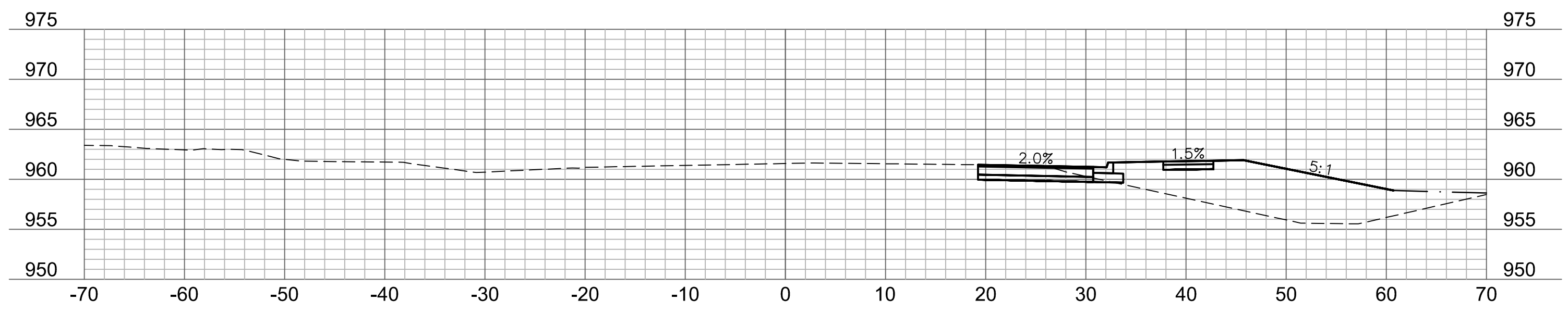
Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177 www.olsosn.com



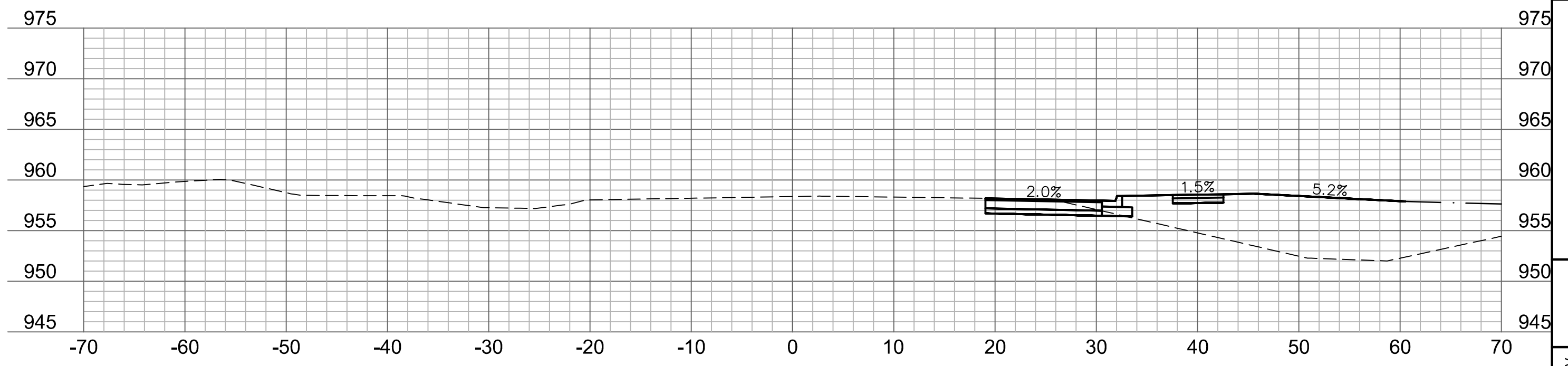
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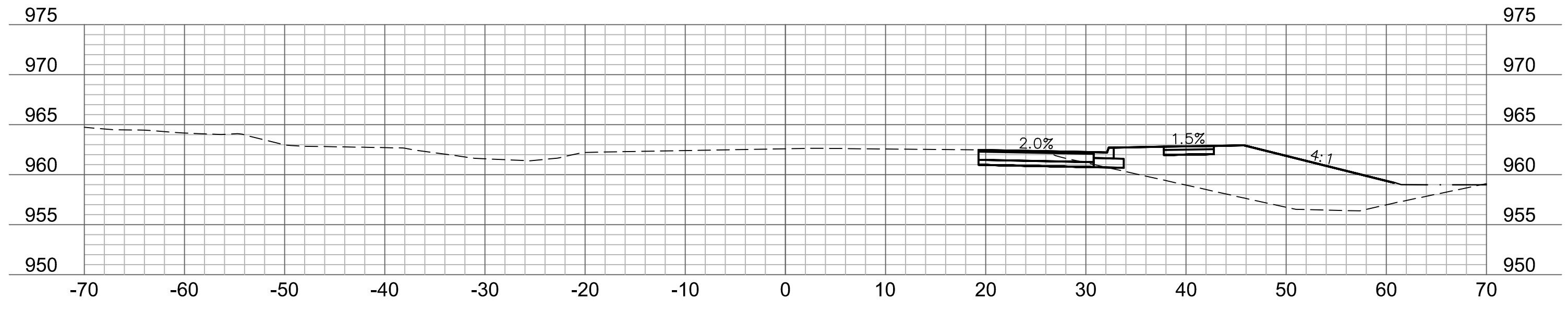
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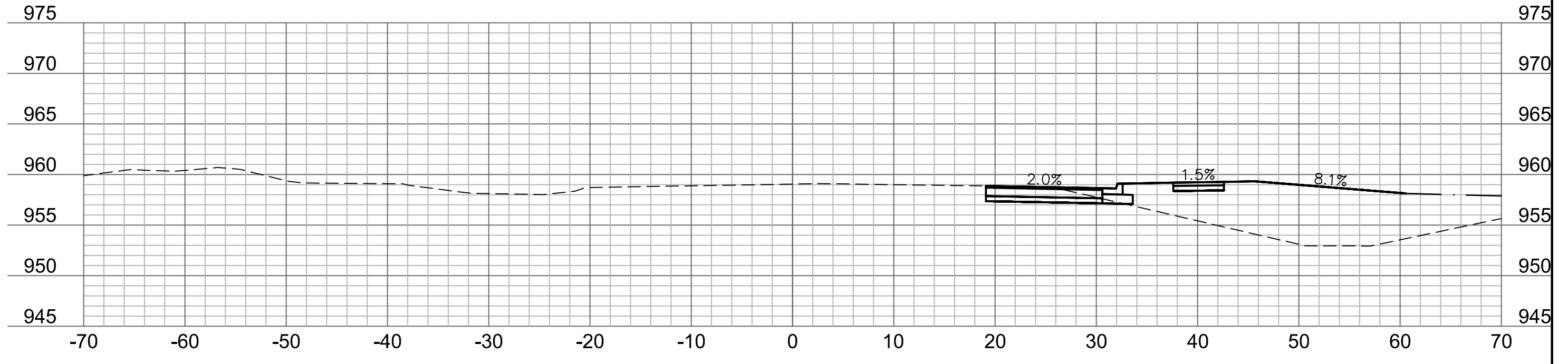
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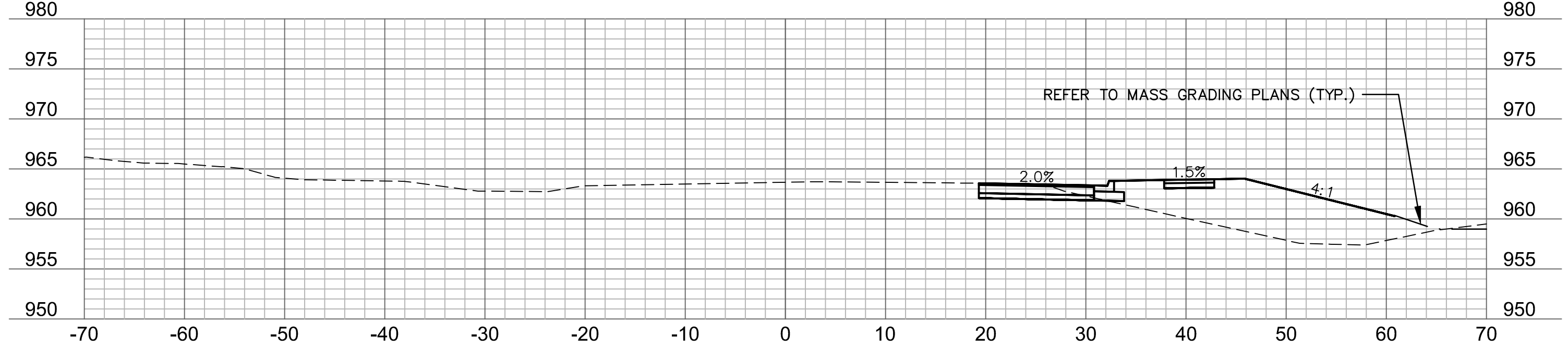
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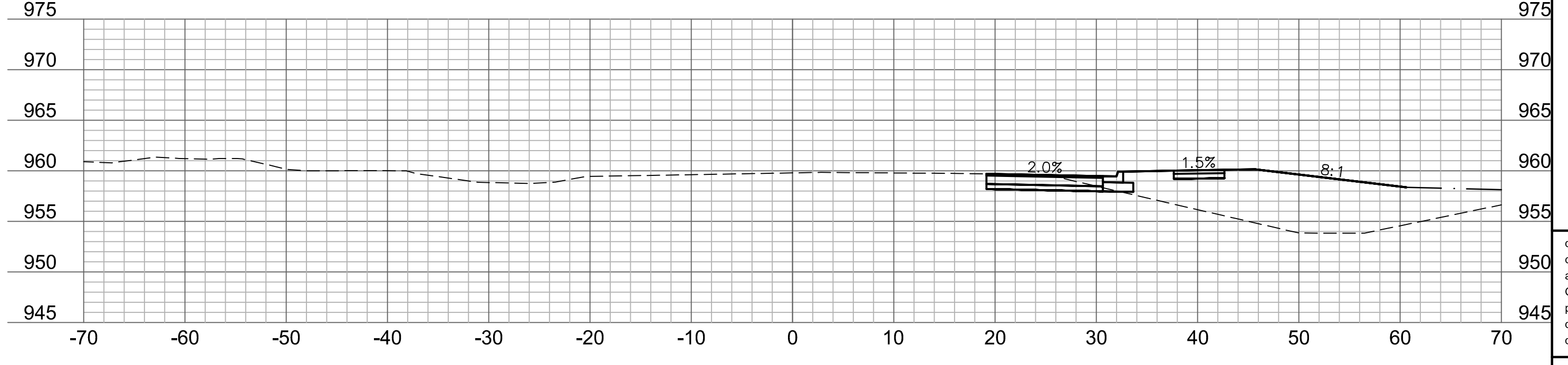
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202+00



203+00

REV. NO.	DATE	REVISIONS DESCRIPTION

CROSS SECTIONS
DOUGLAS STREET

THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2023

drawn by: BJW
checked by: KLIW
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: XSC01_D02104643
date: 7/14/2023

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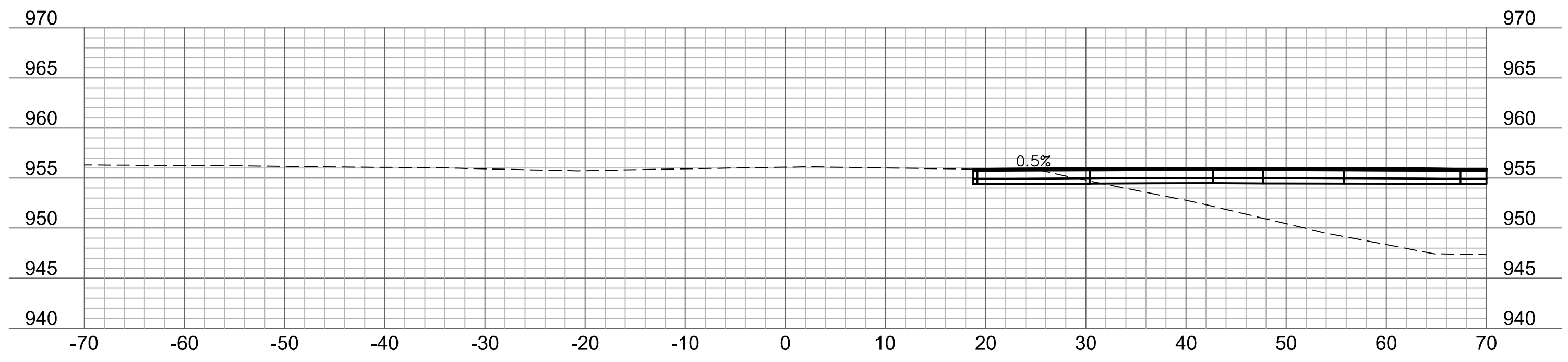
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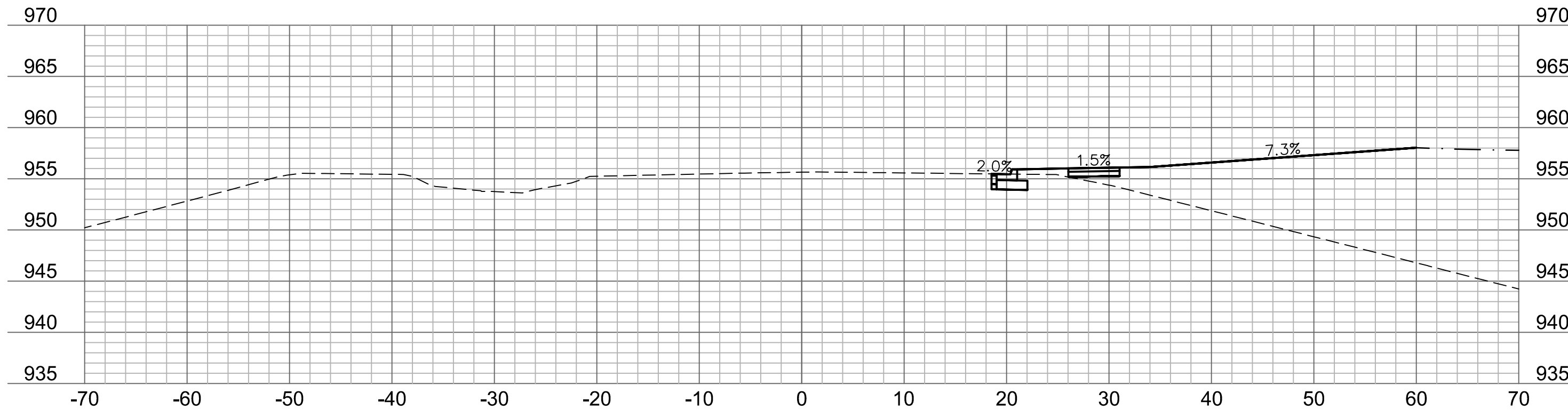
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1	10/18/2023	CITY COMMENTS ON 10/05/2023

CROSS SECTIONS
 DOUGLAS STREET
 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

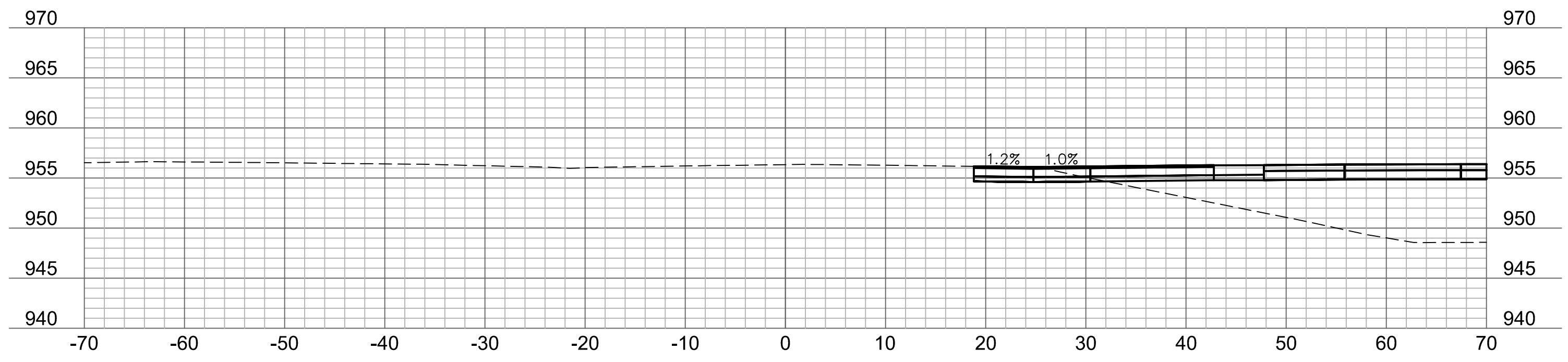
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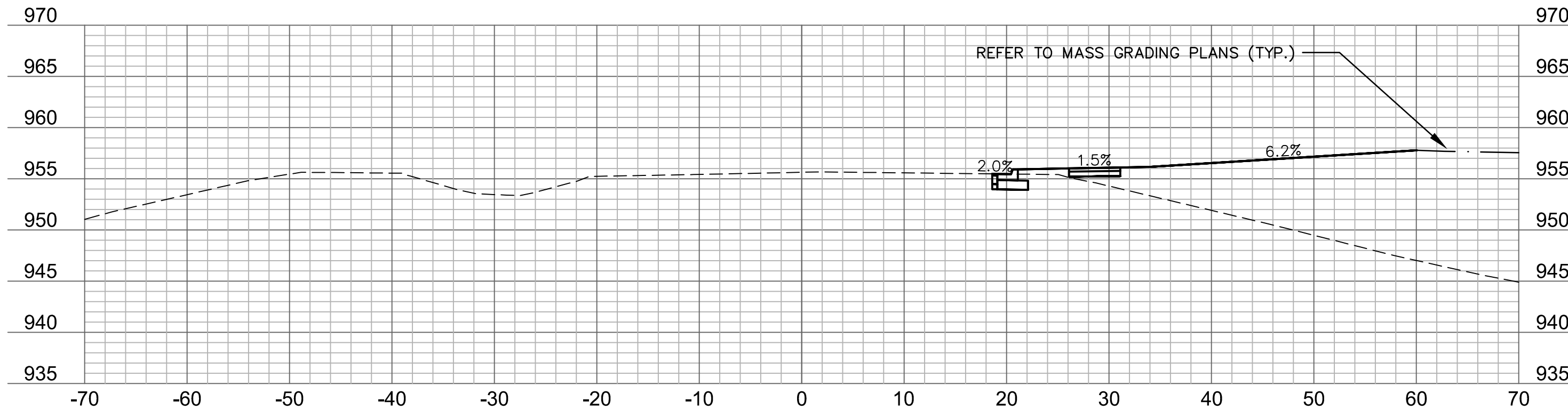
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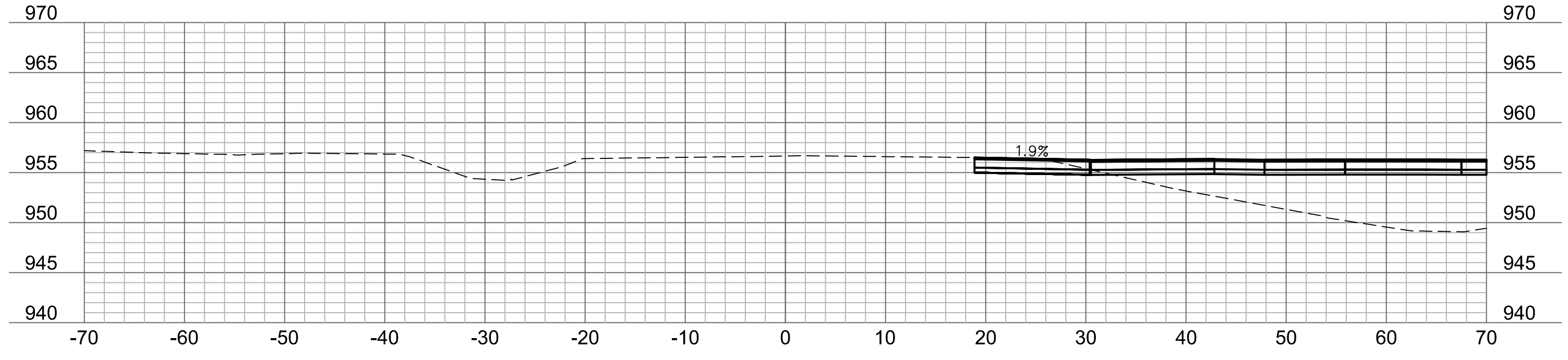
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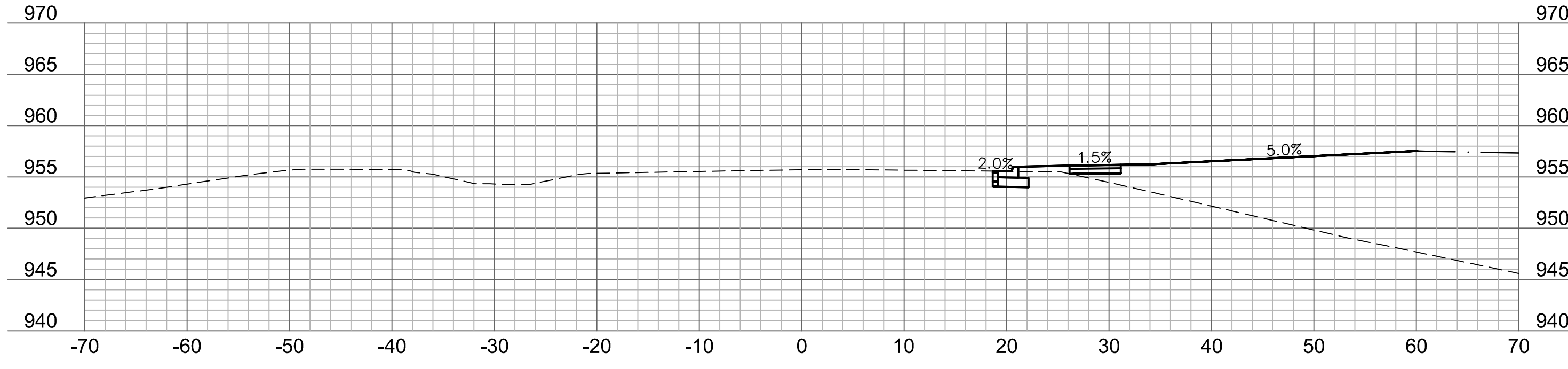
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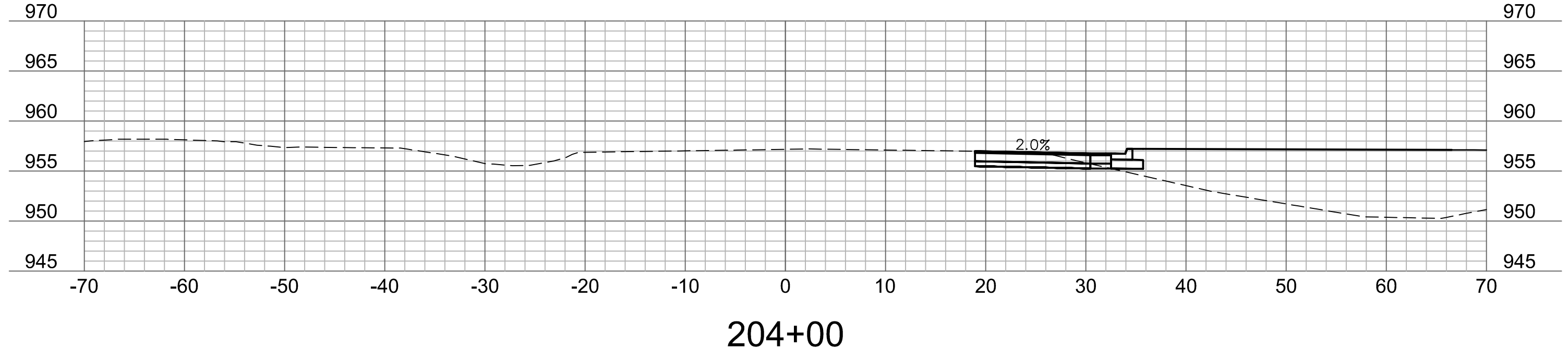
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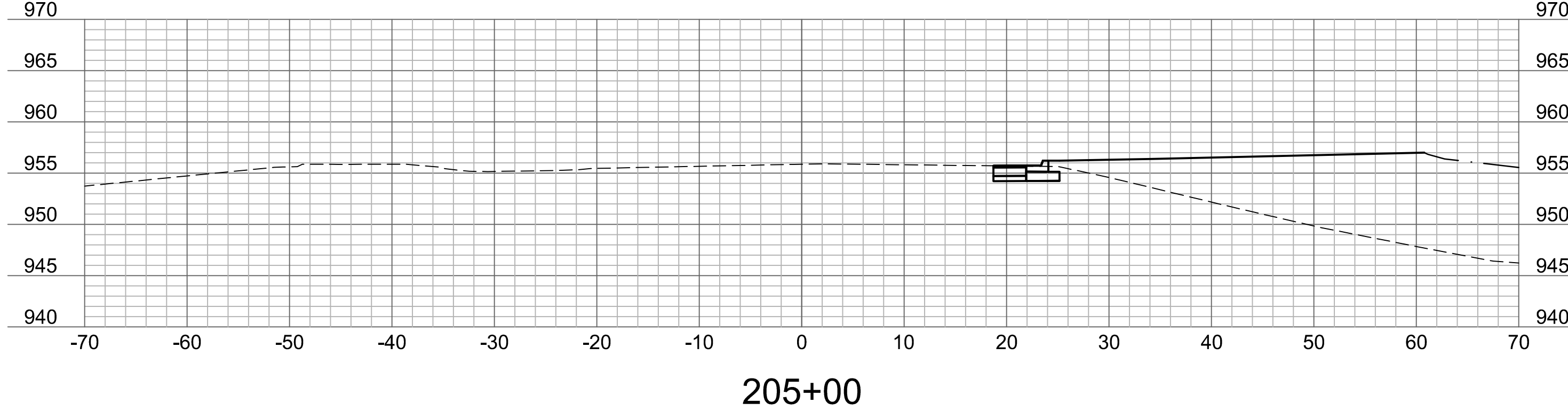
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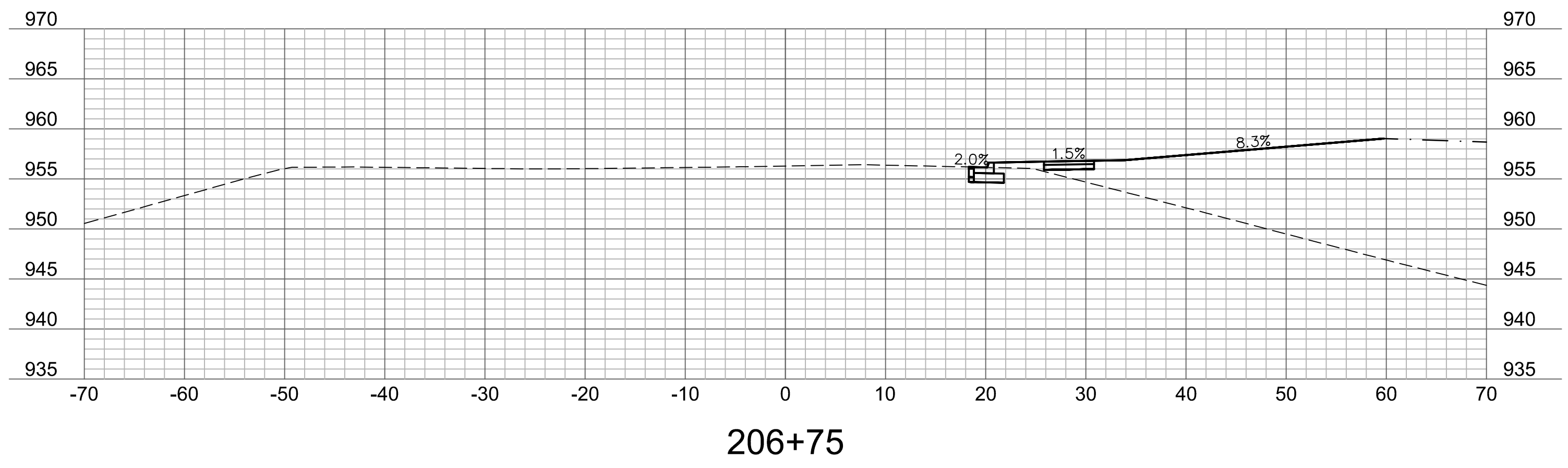
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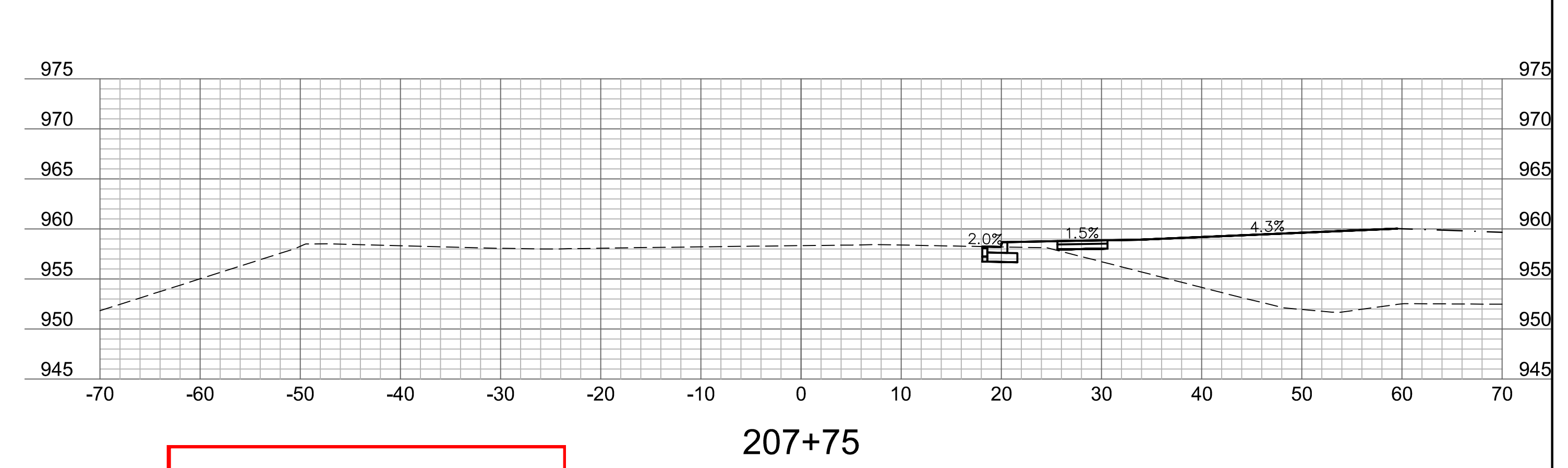
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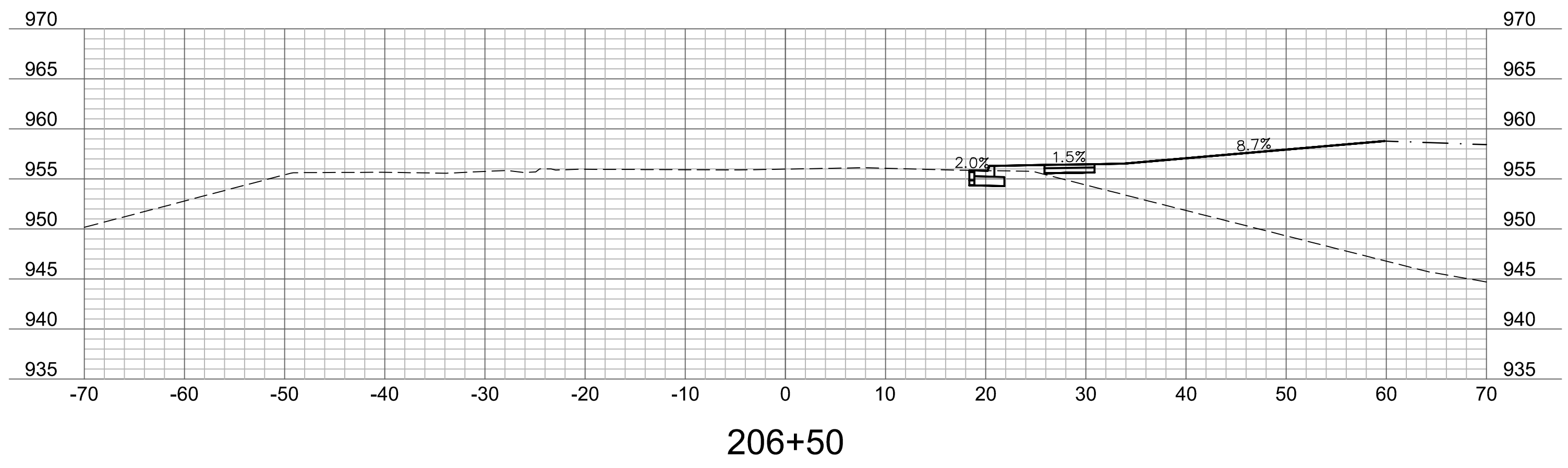


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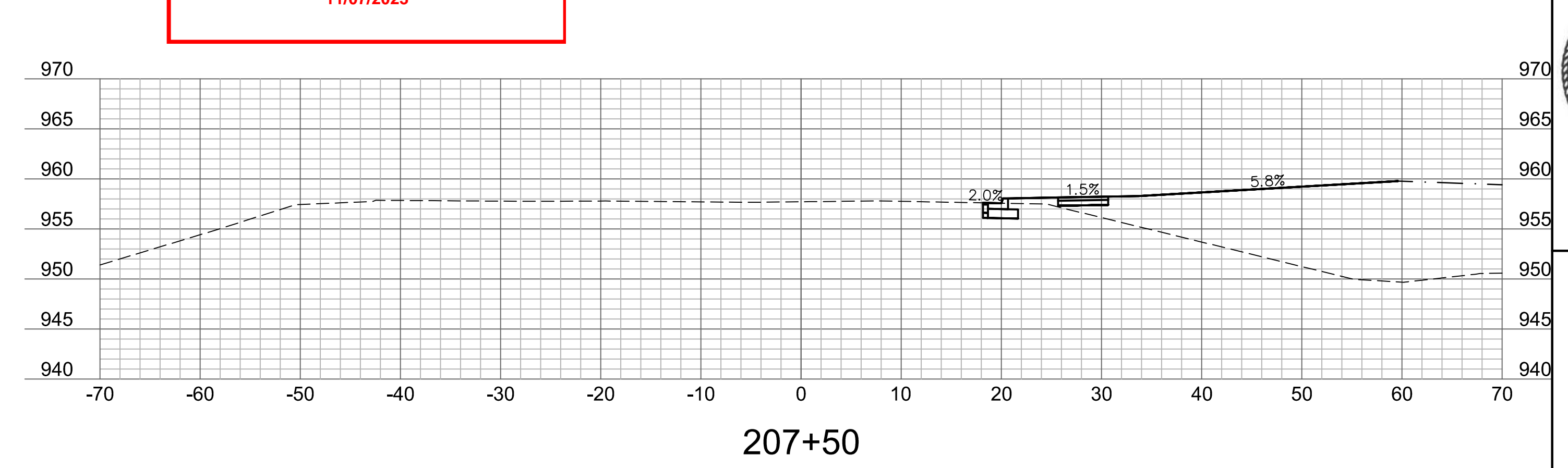


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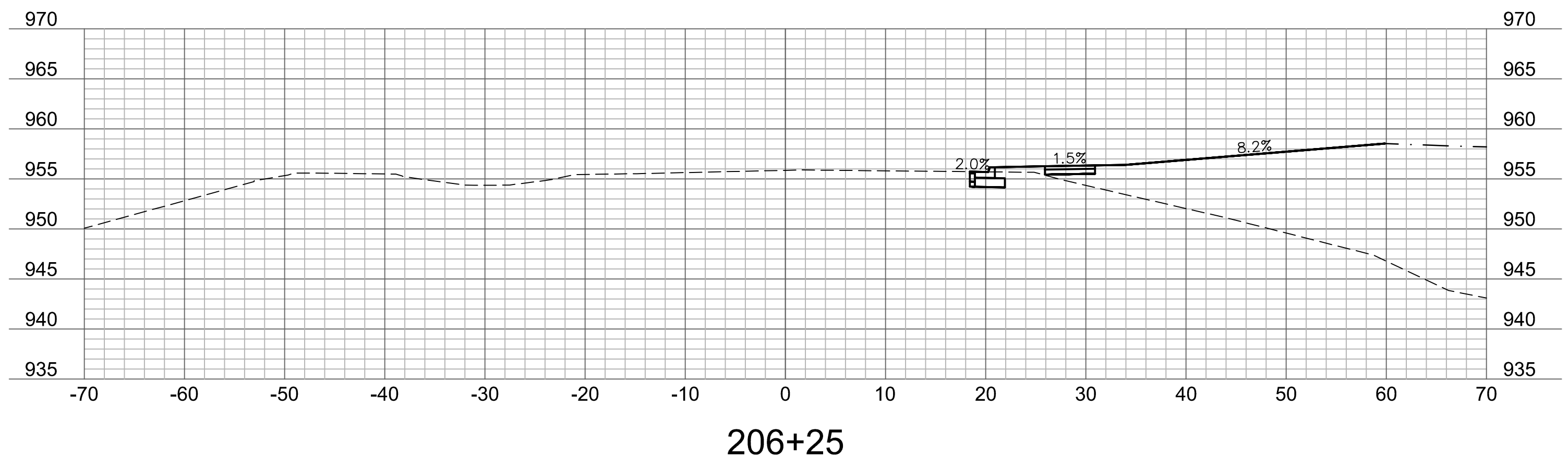
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 Development Services Department
 Lee's Summit, Missouri
 11/07/2023



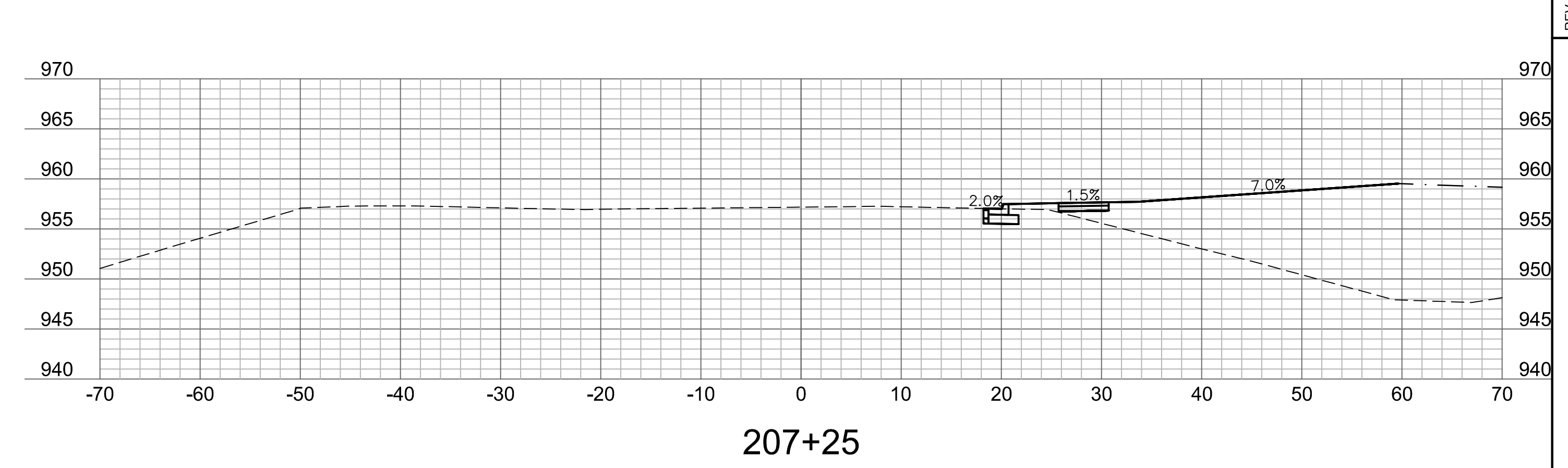
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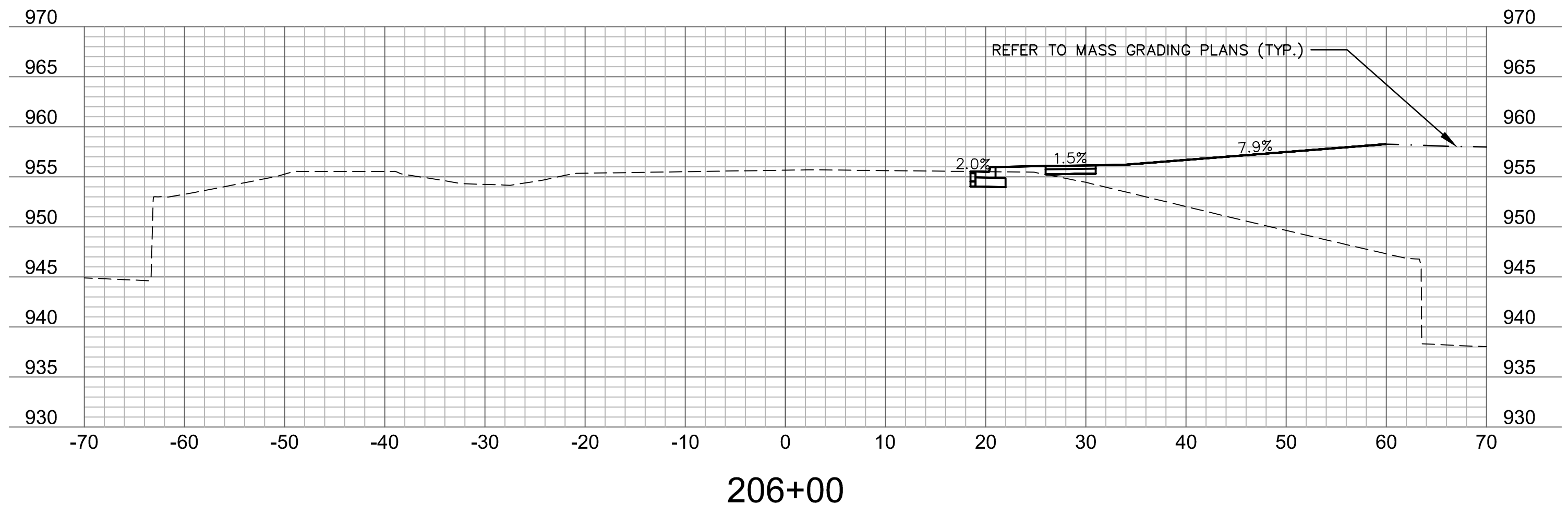
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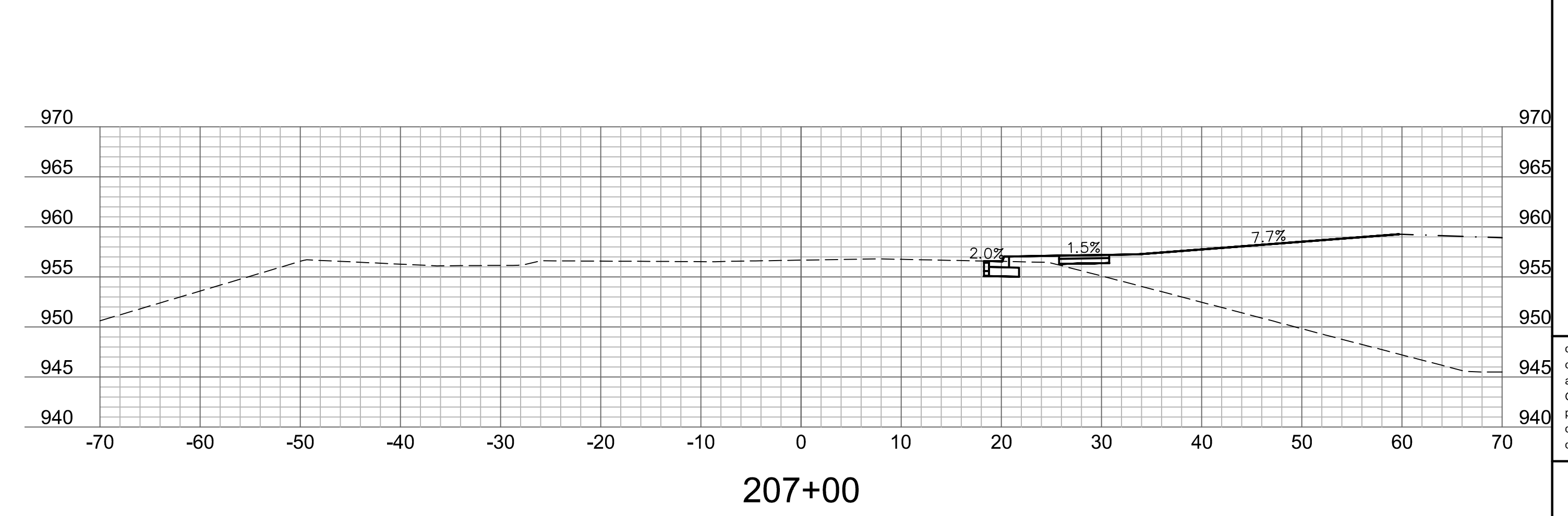
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207+25



206+00



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REV. NO.	DATE	REVISIONS DESCRIPTION
1	10/13/2023	CITY COMMENTS ON 10/05/2023

CROSS SECTIONS
 DOUGLAS STREET
 THE VILLAGE AT DISCOVERY PARK
 COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI
 2023

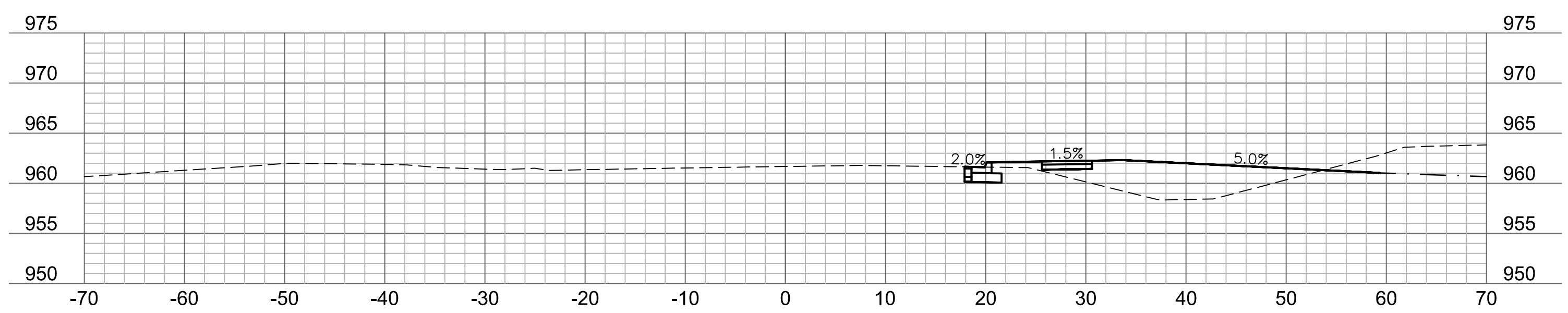
drawn by: BJW
 checked by: KLIW
 approved by: JFG
 QA/QC by: JJW
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 drawing no.: XSC01_D02104643
 date: 7/14/2023

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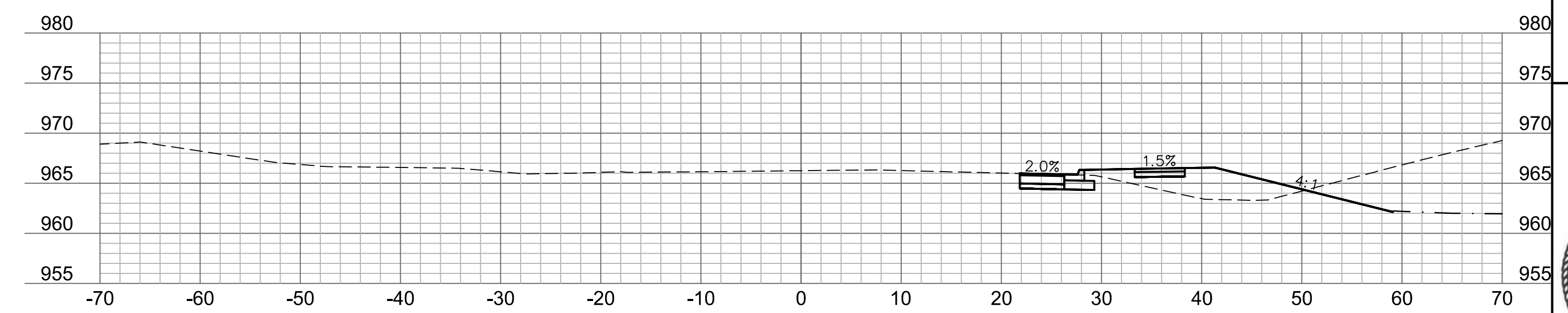
Development Services Department
Lee's Summit, Missouri
11/07/2023

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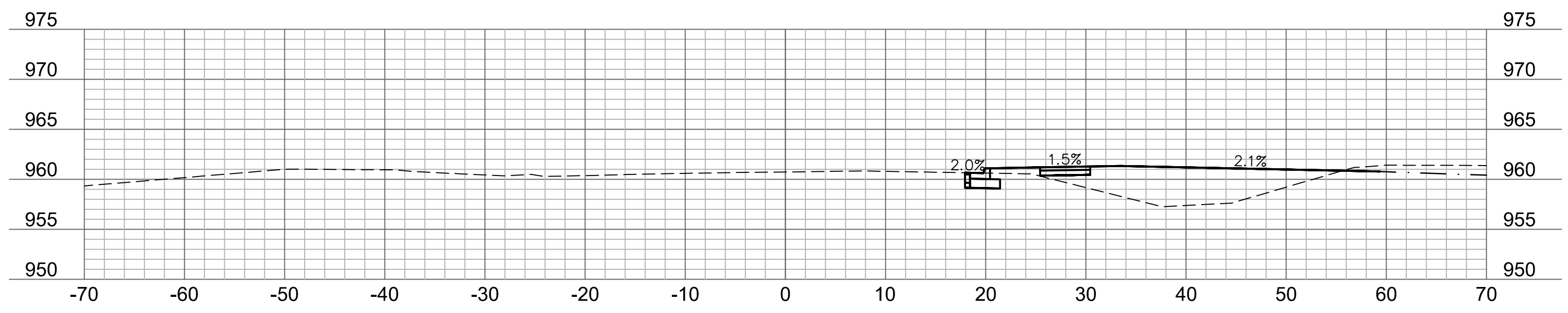
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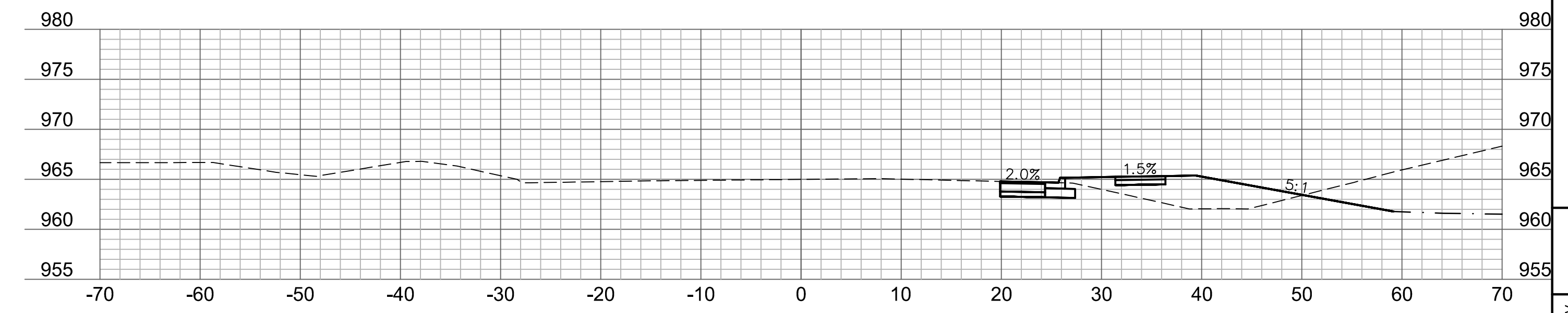
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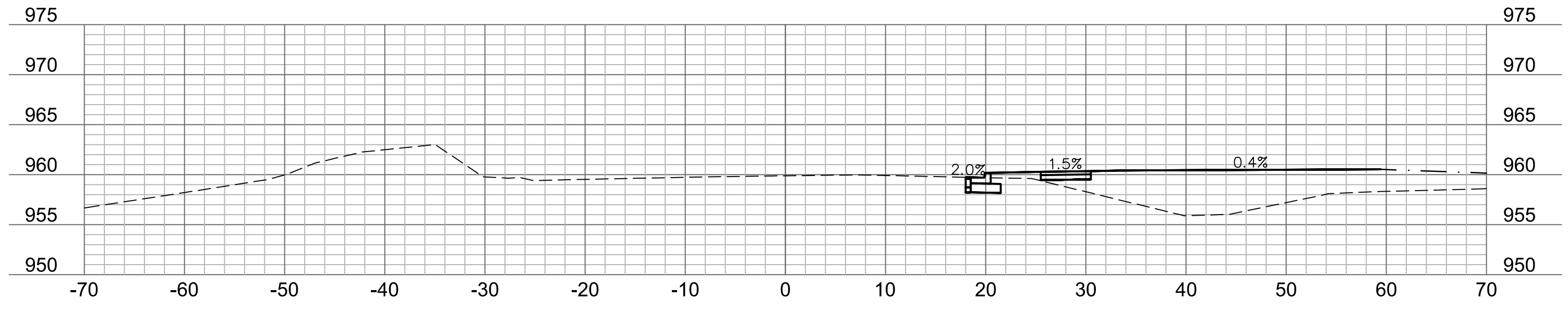
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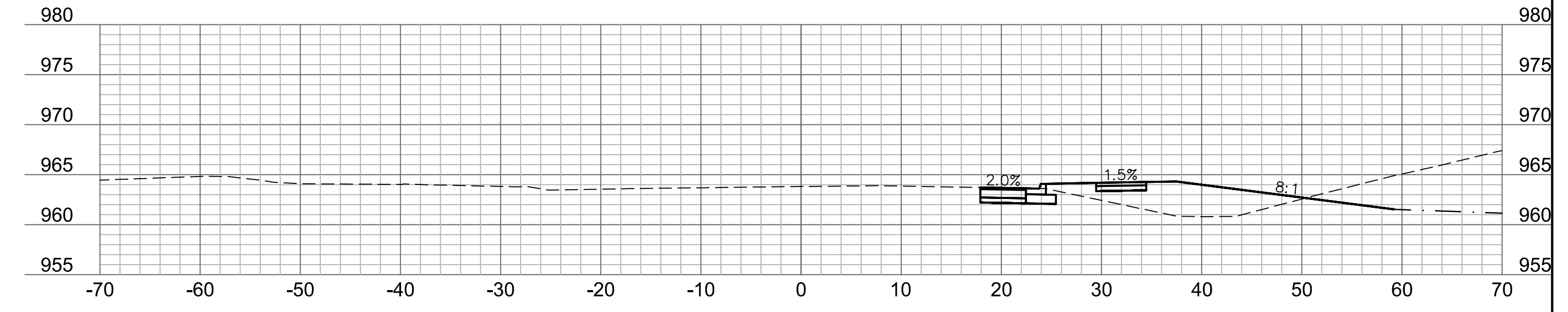
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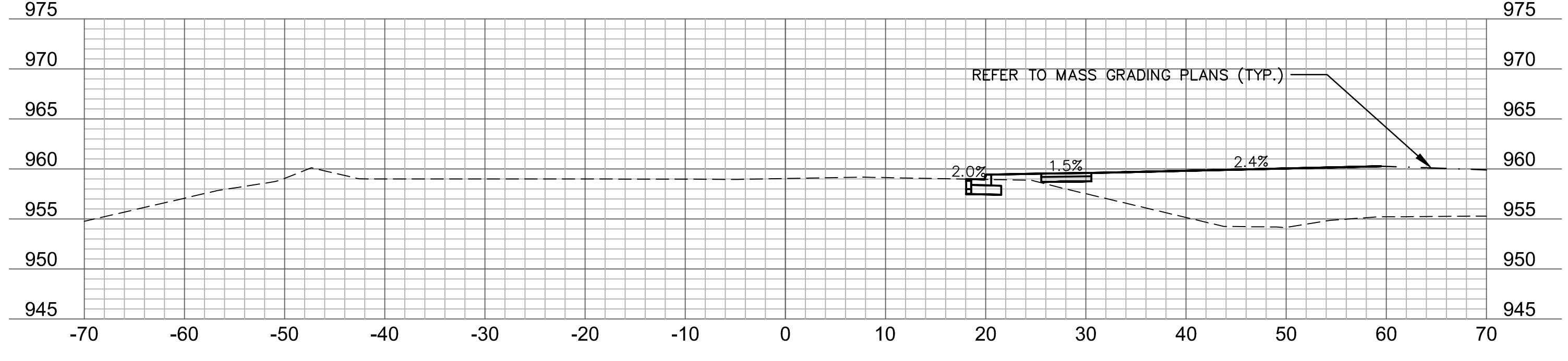
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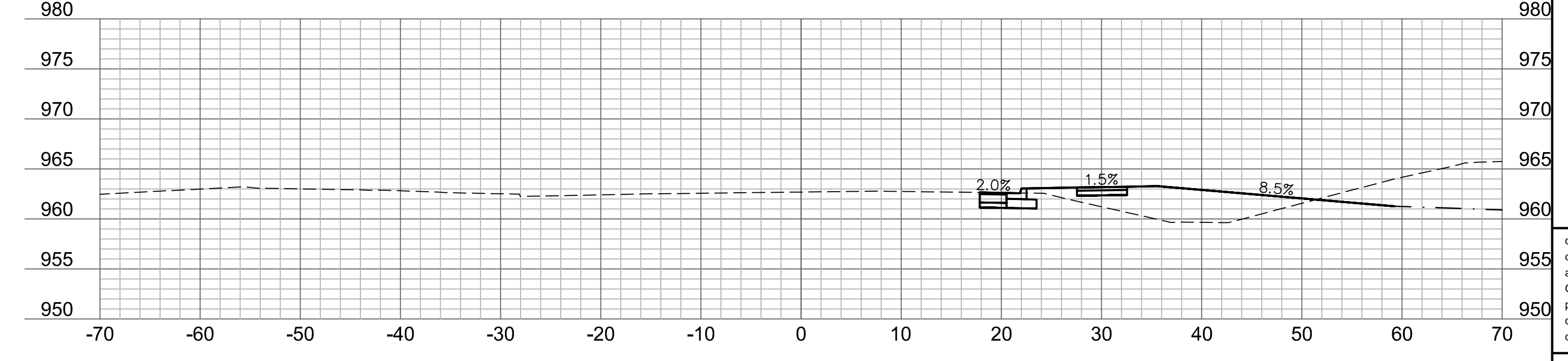
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208+00



209+00

REV. NO.	DATE	REVISIONS DESCRIPTION
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CROSS SECTIONS
DOUGLAS STREET

THE VILLAGE AT DISCOVERY PARK
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
LEE'S SUMMIT, MISSOURI

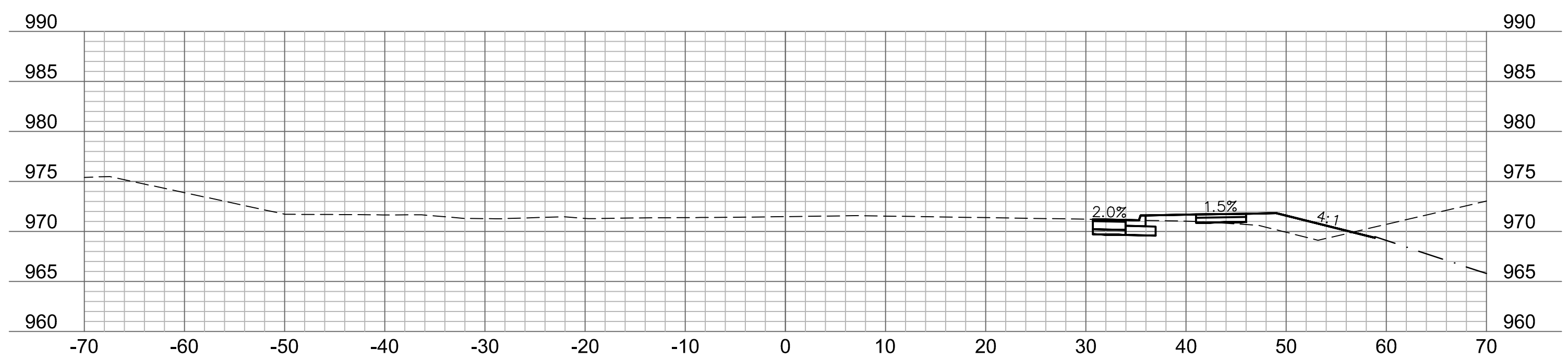
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checked by: KLIW
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: XSC01_D02104643
date: 7/14/2023

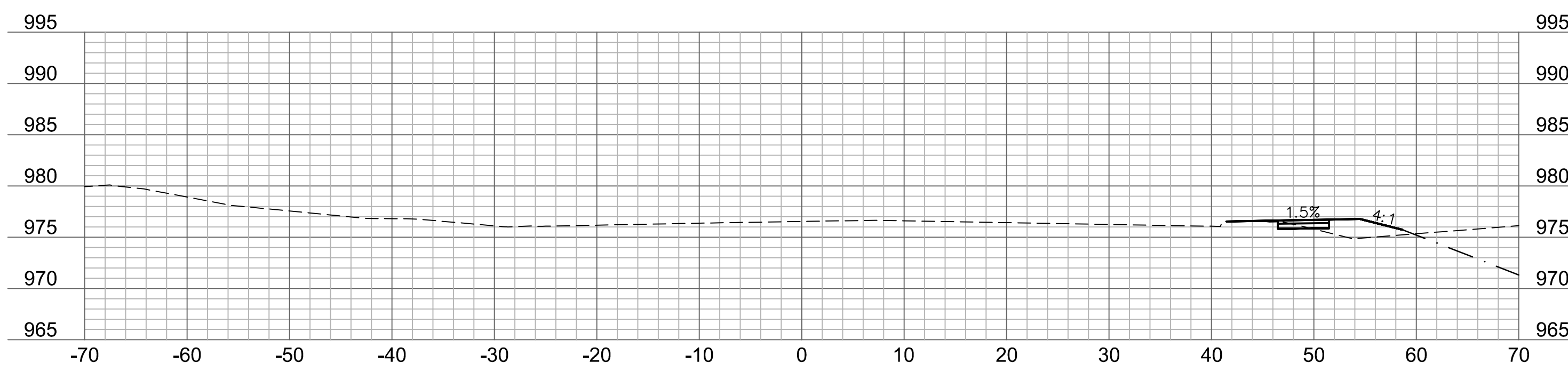
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 11/07/2023

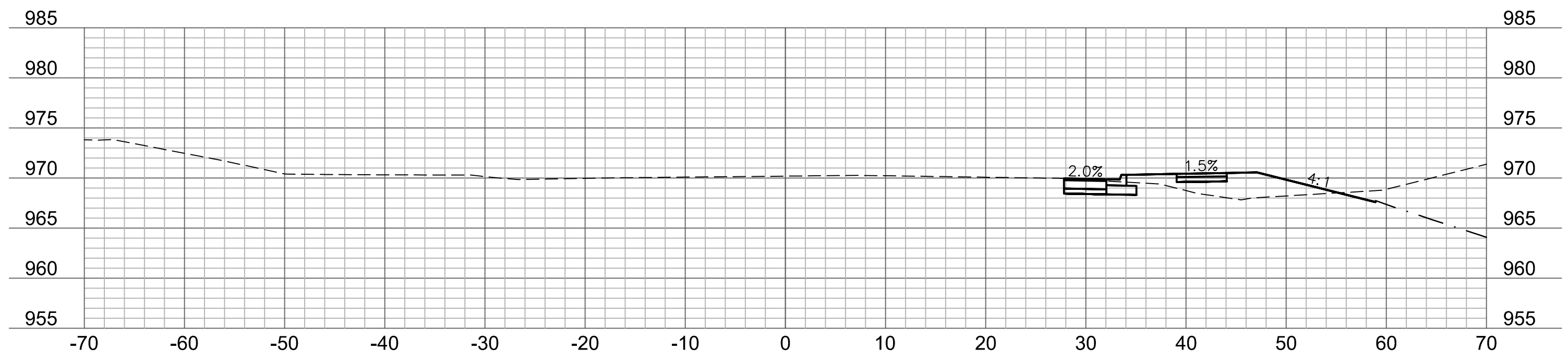
olsson
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 North Kansas City, MO 64116
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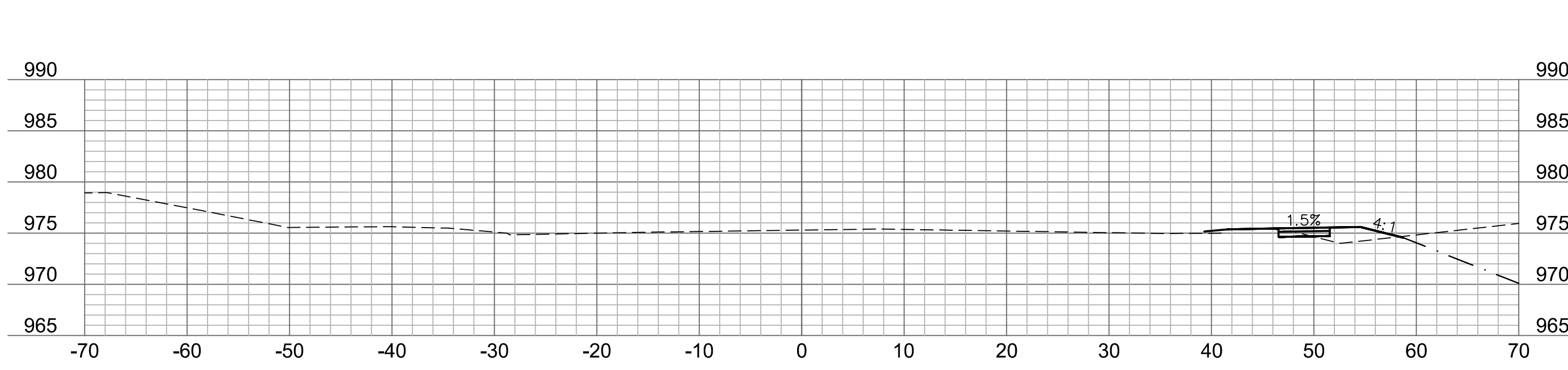
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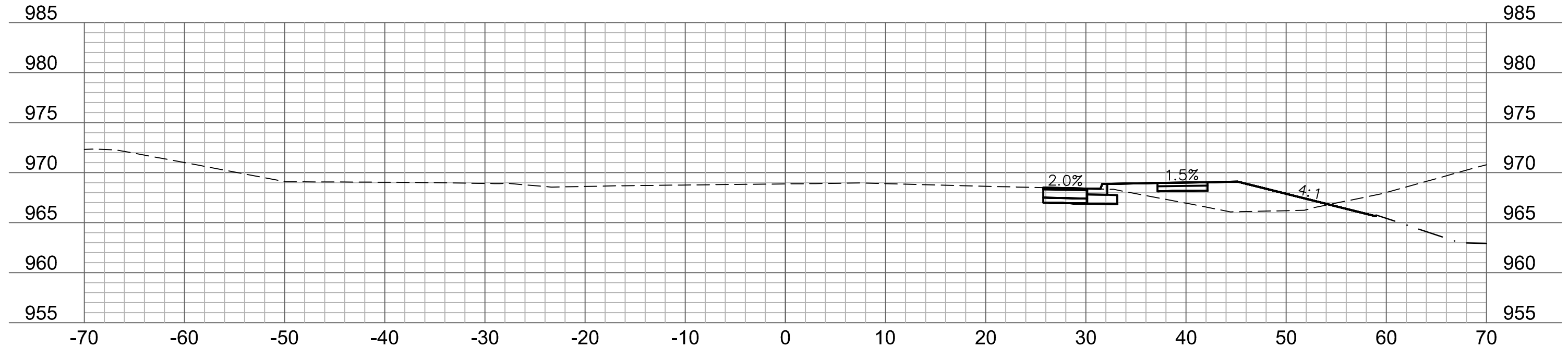
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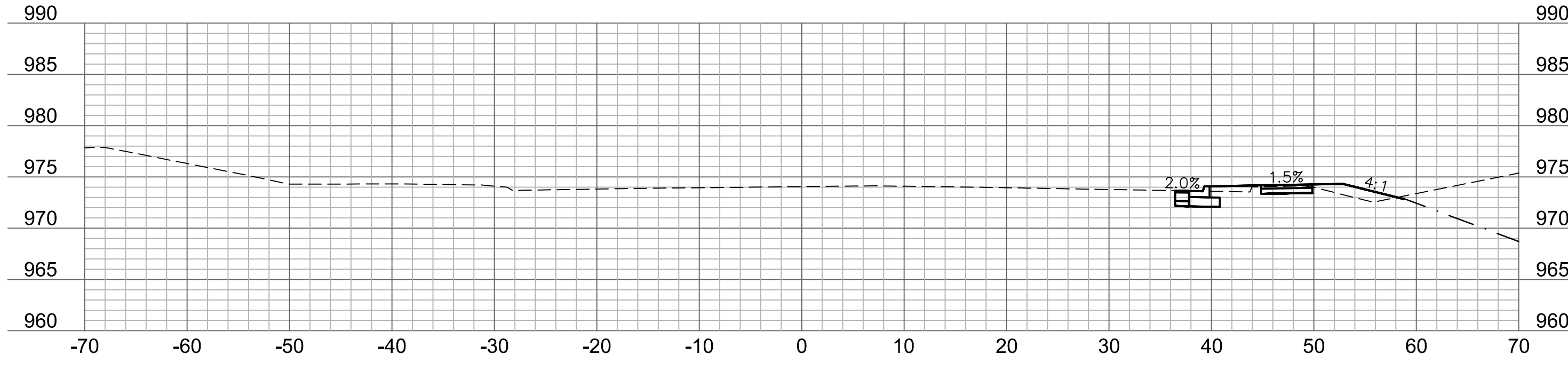
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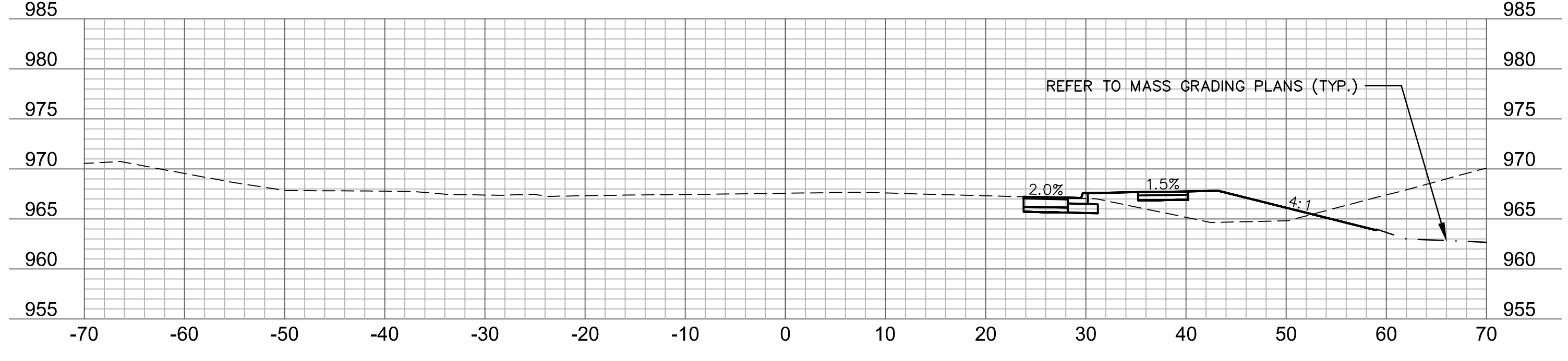
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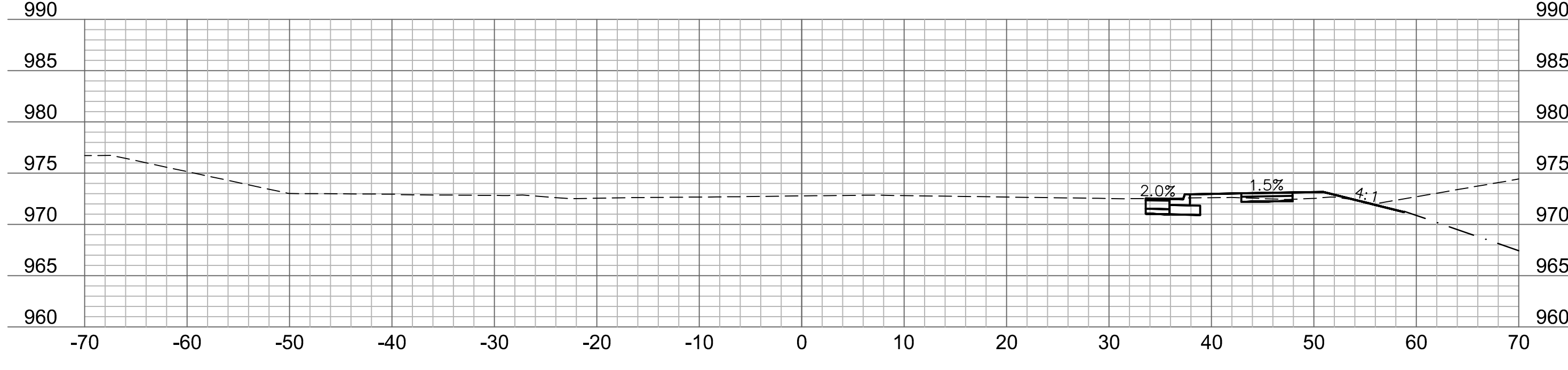
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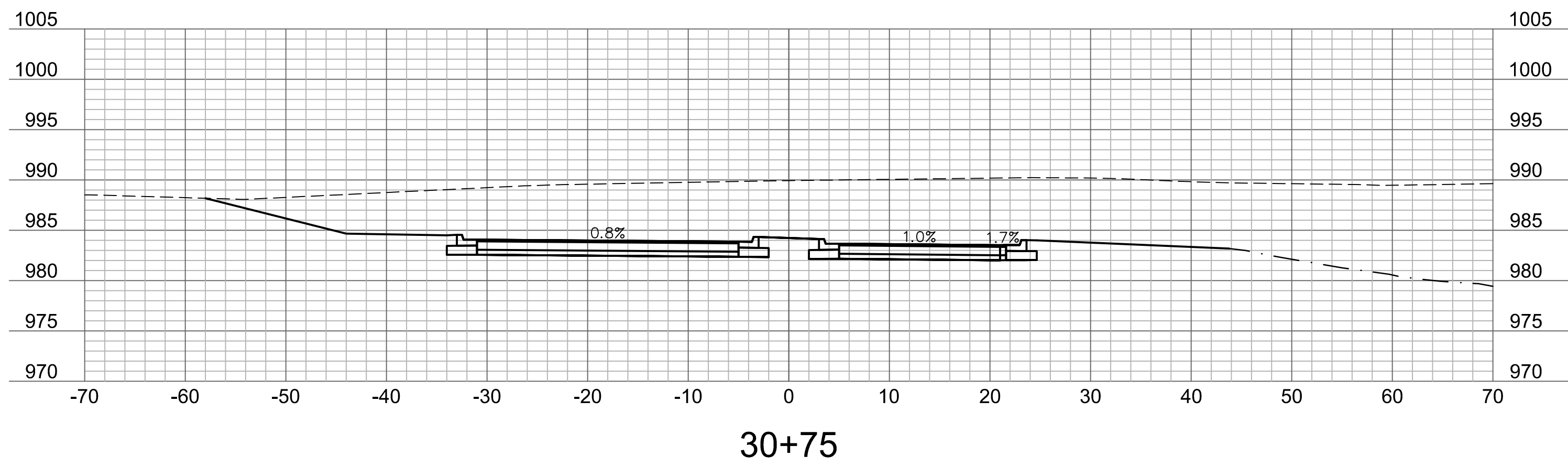
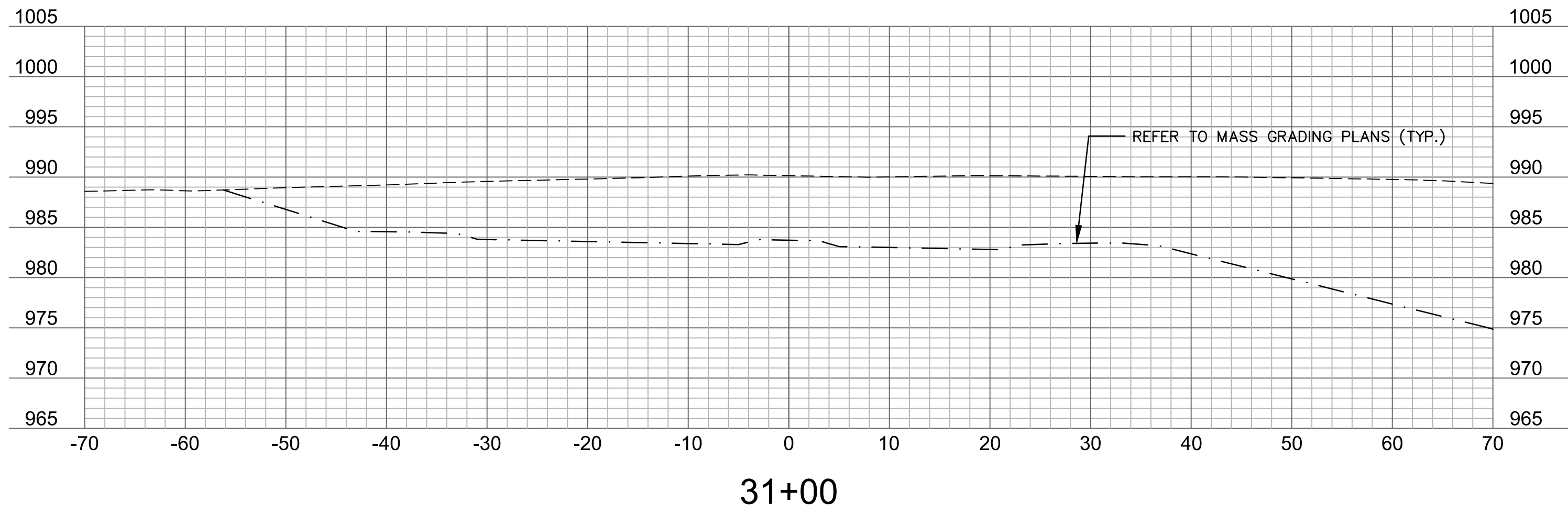
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CROSS SECTIONS
 DOUGLAS STREET
 THE VILLAGE AT DISCOVERY PARK
 COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

drawn by: BJW
 checked by: KLIW
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
 drawing no.: XSC01_D02104643
 date: 7/14/2023

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CROSS SECTIONS
 TRAILSEDGE BOULEVARD
 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

drawn by: BJW
 checked by: KLIW
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
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REVISIONS

2023

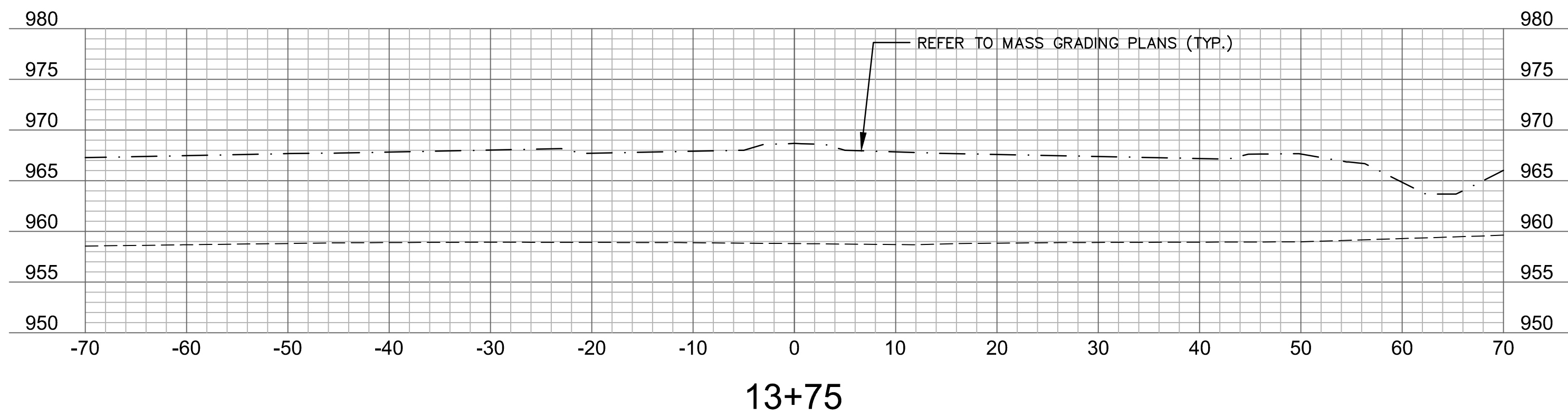
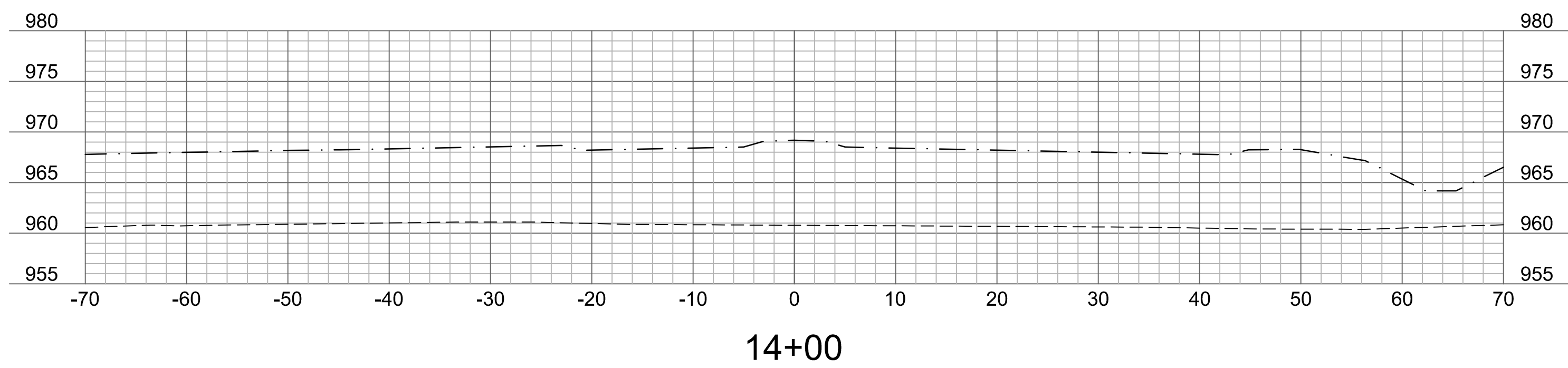
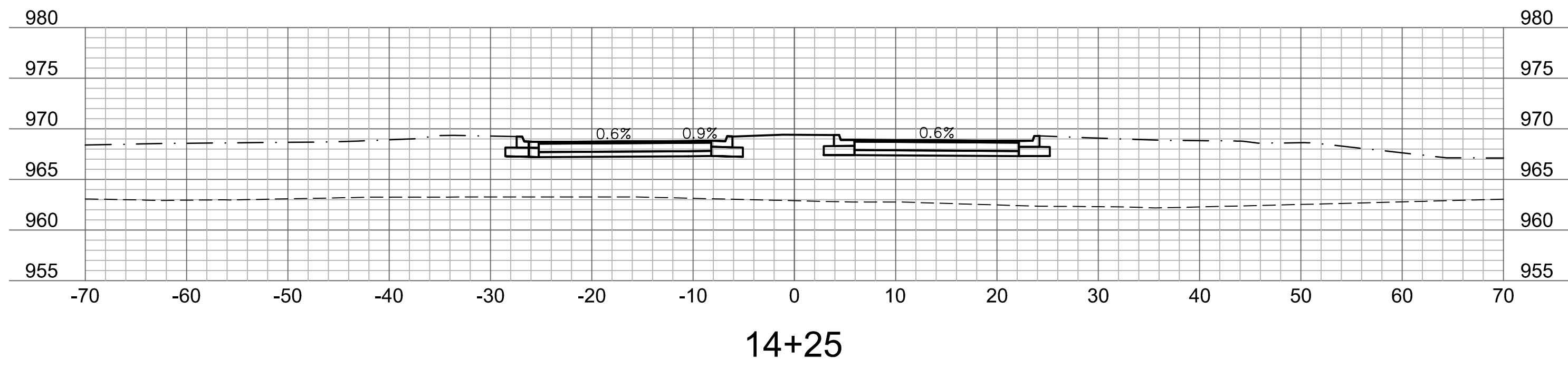
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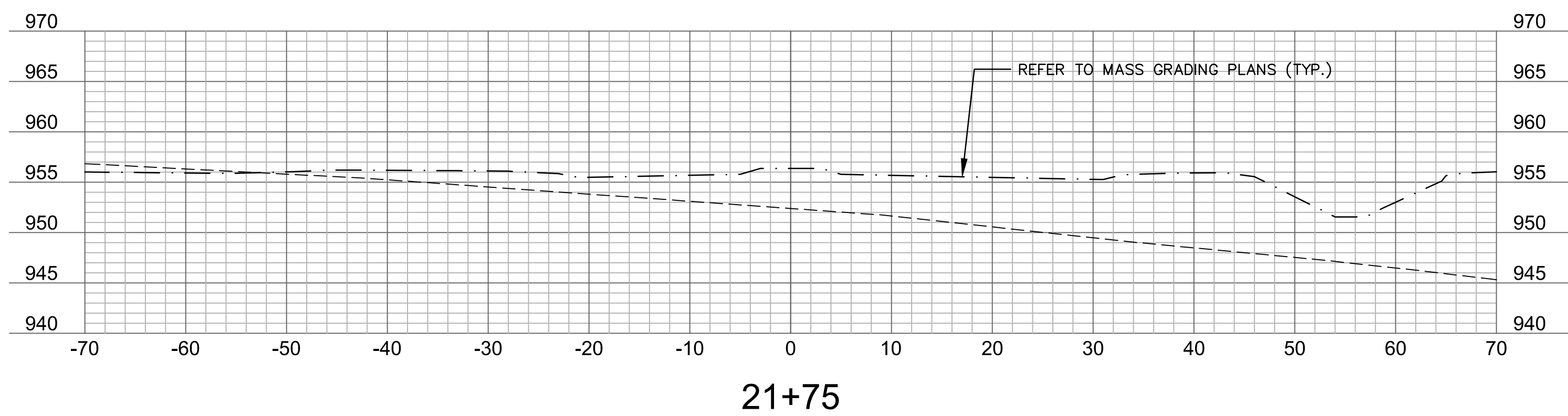
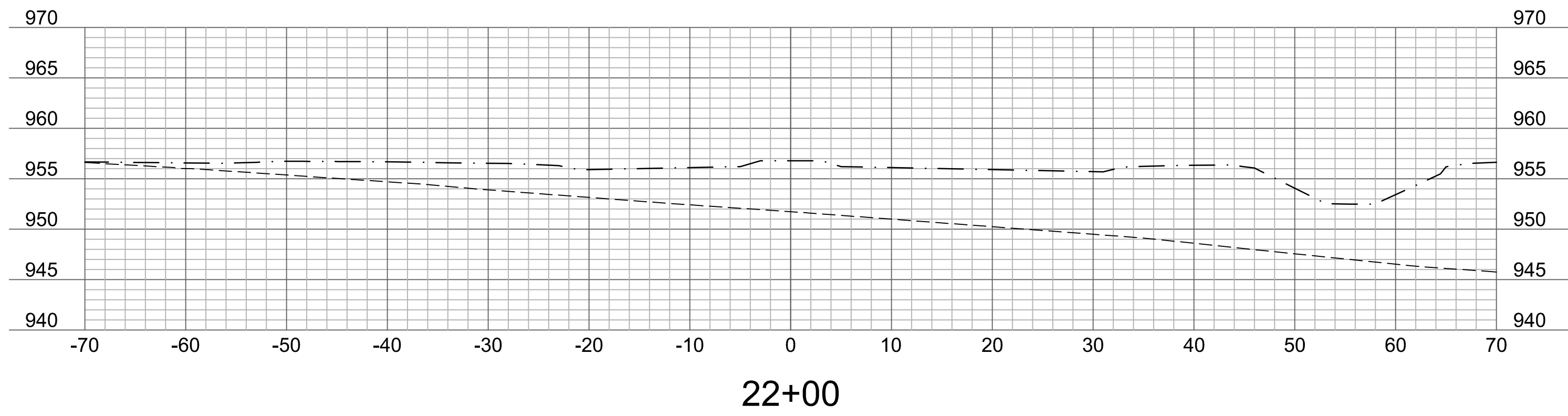
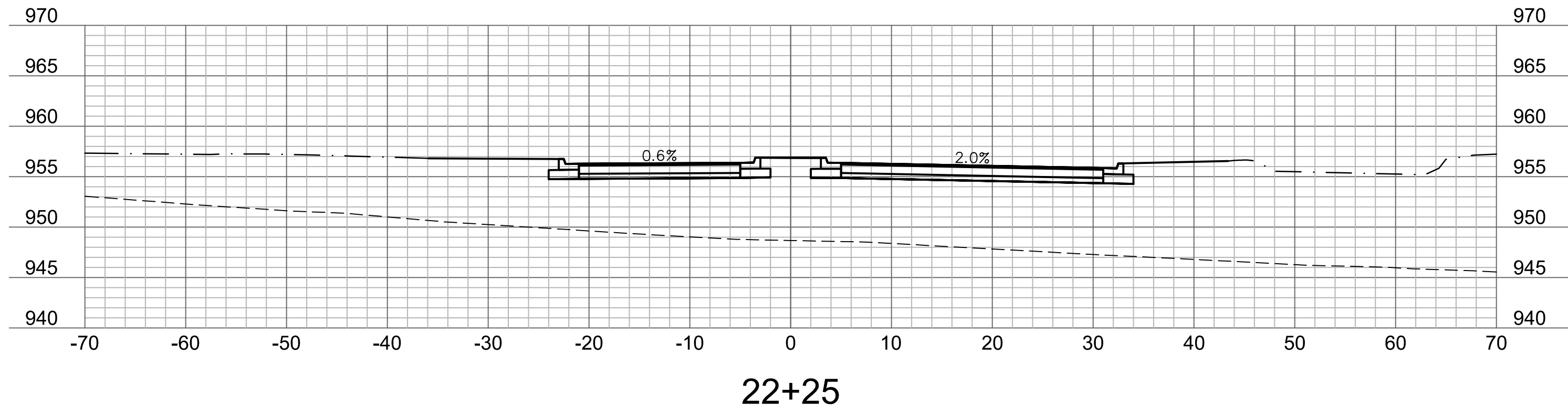
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CROSS SECTIONS
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 THE VILLAGE AT DISCOVERY PARK
 COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
 LEE'S SUMMIT, MISSOURI

drawn by: BJW
 checked by: KLIW
 approved by: JFG
 QA/QC by: JJW
 project no.: 021-04643
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REV. NO.

CROSS SECTIONS
LAKESIDE COURT

THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2023

drawn by: BJW
checked by: KLIW
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