

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

PROJECT LOCATION

PROJECT TEAM CONTACT LIST

OWNER/DEVELOPER
INTRINSIC DEVELOPMENT
3622 ENDEAVOR AVE, STE.101
COLUMBIA, MO 65201
CONTACT: JOHN ODLE
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NORTH KANSAS CITY, MO 64116
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SURVEYOR
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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
☐GAR	GAS METER	☐CO	TRAFFIC SIGNAL POLE
☐GAR	GAS RISER	☐E	TRAFFIC SIGNAL CONTROL BOX
☐GR	GAS MANHOLE	☐E	TRAFFIC SIGNAL PEDESTAL
☐GR	GAS REGULATOR	☐E	ELECTRIC MANHOLE
☐GR	TELEVISION PEDESTAL	☐E	ELECTRIC RISER
☐GR	FIBER BOX	☐E	ELECTRIC RISER
☐GR	FIBER PEDESTAL	☐E	ELECTRIC BOX
☐GR	CABLE BOX	☐E	ELECTRIC CABINET
☐GR	CABLE VAULT	☐E	ELECTRIC JUNCTION BOX
☐GR	TELEPHONE PEDESTAL	☐SPH	SPRINKLER HEAD
☐GR	STORM MANHOLE	☐SCV	SPRINKLER CONTROL VALVE
☐GR	STORM GRATE	☐W	WATER METER PIT
☐GR	SANITARY MANHOLE	☐W	FIRE HYDRANT
☐GR	YARD LIGHT	☐WV	WATER METER
☐GR	LIGHT POLE	☐WV	WATER VALVE
☐GR	POWER POLE	☐FP	FLAG POLE
☐GR	POWER POLE W/ LIGHT	☐O	SIGN
☐GR	GUY WIRE	☐B	BOLLARD
☐GR	STUMP	☐W	WOOD POST
☐GR	BUSH	☐S	STEEL POST
☐GR	EVERGREEN TREE	☐COL	COLUMN
☐GR	DECIDUOUS TREE	☐B	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
PRO.P.	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

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.)

LOCATION MAP

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

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REVIEWED BY:

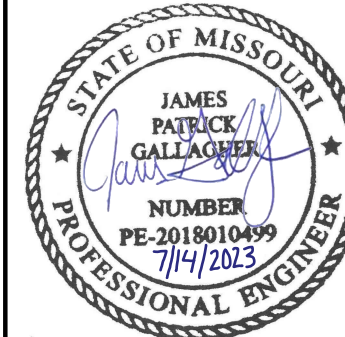
CITY OF LEE'S SUMMIT

DATE

JAMES P. GALLAGHER, P.E.
CIVIL ENGINEER

7/14/2023

DATE



REVISIONS DESCRIPTION	DATE	REV. NO.
PRELIMINARY PLANS		
NOT FOR CONSTRUCTION		

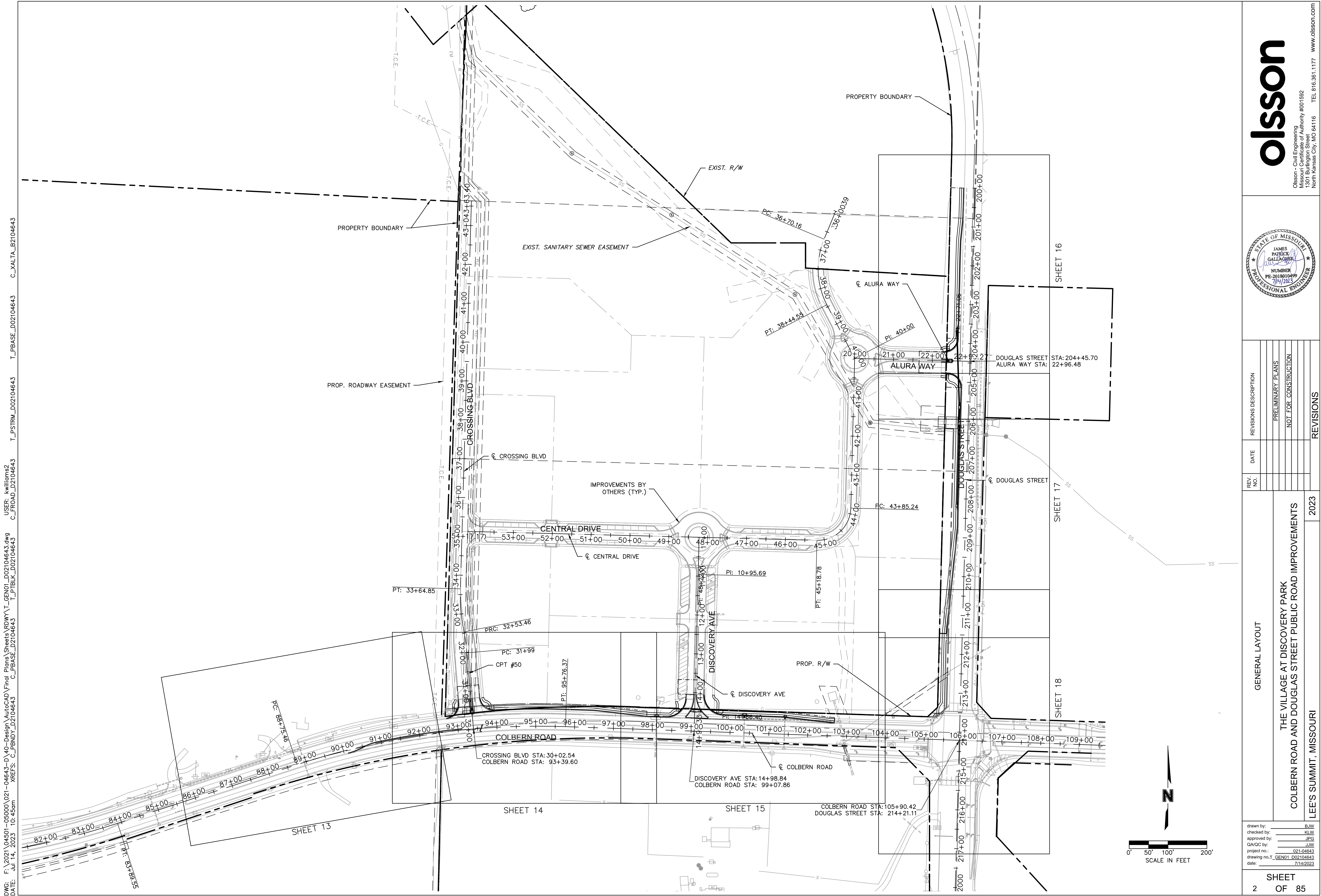
2023

TITLE SHEET

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

drawn by: BJW
checked by: KLV
approved by: JFG
QA/QC by: JWW
project no.: 021-04643
drawing no.: T_TTL01_D02104643
date: 7/14/2023

SHEET
1 OF 85



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STATE OF MISSOURI
JAMES PATRICK GALLAGHER
NUMBER PE-2018010499
7/14/2023
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION
		PRELIMINARY PLANS
		NOT FOR CONSTRUCTION
		REVISIONS

GENERAL LAYOUT
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:	JWJ
project no.:	021-04643
drawing no.:	T_GEN01_D02104643
date:	7/14/2023

SHEET
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GENERAL NOTES:

1.

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.
2.

APWA "TECHNICAL SPECIFICATIONS" LATEST EDITION ALONG WITH APWA "SPECIFICATIONS AND CRITERIA" SHALL GOVERN CONSTRUCTION OF THE PROJECT.
3.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS, OTHERWISE COMPLYING WITH ALL APPLICABLE REGULATIONS GOVERNING THE WORK.
4.

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.
5.

CONTRACTOR SHALL NOT BE ALLOWED TO WORK WEEKENDS OR HOLIDAYS WITHOUT REQUESTING PRIOR APPROVAL FROM THE CITY THREE WORKING DAYS IN ADVANCE.
6.

PRIOR TO ORDERING PRECAST STRUCTURES, SHOP DRAWINGS ARE TO BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL.



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

7.

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).
8.

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.
9.

CONSTRUCTION STAKING IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL SET THOSE STAKES NECESSARY TO CONSTRUCT THIS PROJECT IN ACCORDANCE WITH THE PLANS.
10.

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.
11.

ALL BACKFILL SHALL BE PLACED AND COMPACTED TO THE REQUIRED DENSITY AS INDICATED IN THE SPECIFICATIONS.
12.

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.
13.

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.
14.

WATER CAN BE OBTAINED BY RENTING A FIRE HYDRANT METER FROM THE CITY OF LEES SUMMIT, MO WATER UTILITIES DEPARTMENT.
15.

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.
16.

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).

17.

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 REFERENCE 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.
18.

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.
19.

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.
20.

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.
21.

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.
22.

ALL EXISTING TRAFFIC CONTROL SIGNS REMOVED SHALL BE SALVAGED AND DELIVERED TO THE CITY OF LEES SUMMIT, MISSOURI MAINTENANCE YARD.
23.

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.
24.

APPROPRIATE TRAFFIC CONTROL DEVICES, SIGNAGE, AND PAVEMENT MARKINGS SHALL BE ESTABLISHED AND MAINTAINED THROUGHOUT THE PROJECT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND MUTCD.
25.

HANDICAP RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ADA REQUIREMENTS AT ALL LOCATIONS WHERE POSSIBLE.
26.

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."
27.

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.
28.

SAWCUTS SHALL BE FULL DEPTH. THIS SHALL BE SUBSIDIARY TO PAVING ITEMS.
29.

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".
30.

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.
31.

THE CONTRACTOR SHALL POTHOLE 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.
32.

THE CONTRACTOR SHALL SUPPORT AND PROTECT ALL EXPOSED UTILITIES IN TRENCHES AND BRACE ALL POLES AS REQUIRED BY THE ENGINEER.
33.

ALL REINFORCED CONCRETE PIPE SHALL BE CLASS III, UNLESS OTHERWISE NOTED ON THE PLANS.
34.

KCMMB CONCRETE SHALL BE USED THROUGHOUT THE PROJECT.
35.

CONTACT STEVE HOLLOWAY WITH THE MISSOURI DEPARTMENT OF TRANSPORTATION PERMITS AT 816-607-2186 AT LEAST 24 HOURS PRIOR TO BEGINNING WORK AND FOR REQUIRED INSPECTIONS ON PORTIONS IN THE MODOT RIGHT OF WAY.
36.

ANY WORK PERFORMED WITHIN MODOT RIGHT OF WAY SHALL CONFORM TO MODOT STANDARDS AND SPECIFICATIONS. IN ADDITION, THE CONTRACTOR SHALL PROVIDE MATERIALS CERTIFICATION AND COMPACTION TESTING THAT COMPLIES WITH MODOT SPECIFICATIONS.
37.

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:

1.

PRIOR TO LAND DISTURBANCE ACTIVITIES, THE CONTRACTOR SHALL:

A. 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.

B. CONSTRUCT A STABILIZED ENTRANCE/PARKING/DELIVERY AREA AND INSTALL ALL PERIMETER SEDIMENT CONTROLS ON THE SITE.

C. 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.

D. TEMPORARY FENCING SHALL BE INSTALLED ALONG ALL TEMPORARY EASEMENTS AND MAINTAINED FOR THE DURATION OF THE PROJECT.
2.

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.
3.

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.
4.

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.
5.

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.
6.

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.
7.

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.
8.

PROJECT SHALL BE CONSTRUCTED DOWNSTREAM TO UPSTREAM. THE AMOUNT OF DISTURBED AREA LEFT EXPOSED SHALL BE MINIMIZED.
9.

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.
10.

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	UNIT	QUANTITY
1	MOBILIZATION	LS	1
2	CLEARING AND GRUBBING	LS	1
3	DEMOLITION AND REMOVALS	LS	1
4	CONTRACTOR SURVEYING AND STAKING	LS	1
5	UNCLASSIFIED EXCAVATION	CY	2525
6	COMPACTING EMBANKMENT	CY	6812
7	EMBANKMENT (BORROW)	CY	4287
8	AGGREGATE BASE COURSE TYPE 5 (4")	SQYD	1332
9	AGGREGATE BASE COURSE TYPE 5 (6")	SQYD	4320
10	GEOGRID	SQYD	3263
11	ASPHALTIC CONCRETE SURFACE (2")	SQYD	916
12	PORTLAND CEMENT CONCRETE PAVEMENT (9")	SQYD	1686
13	PORTLAND CEMENT CONCRETE PAVEMENT (10")	SQYD	916
14	CONCRETE SIDEWALK (4")	SQYD	11603
15	CONRETE SIDEWALK RAMP (6")	SQYD	446
16	DETECTABLE WARNING SURFACE	SQFT	120
17	CURB AND GUTTER (TYPE CG-1)	LNFT	2811
18	CONCRETE MEDIAN (4")	SQYD	283
19	CONCRETE MEDIAN STRIP (6")	SQYD	46
20	15" RCP	LF	458.5
21	4'X3' CURB INLET	EACH	2
22	6'X3' CURB INLET	EACH	2
23	8'X3' CURB INLET	EACH	3
24	JUNCTION BOX CONVERSION	EACH	2
25	CONNECTION TO EXISTING CURB INLET	EACH	2
26	CONNECTION TO EXISTING RCB	EACH	2
27	SEEDING AND SODDING	LS	1
28	TEMPORARY EROSION CONTROL	LS	1
29	PAVEMENT MARKING AND SIGNING	LS	1
30	TRAFFIC CONTROL	LS	1
31	STREET LIGHTING MODIFICATION	LS	1
32	TRAFFIC SIGNAL MODIFICATION	LS	1



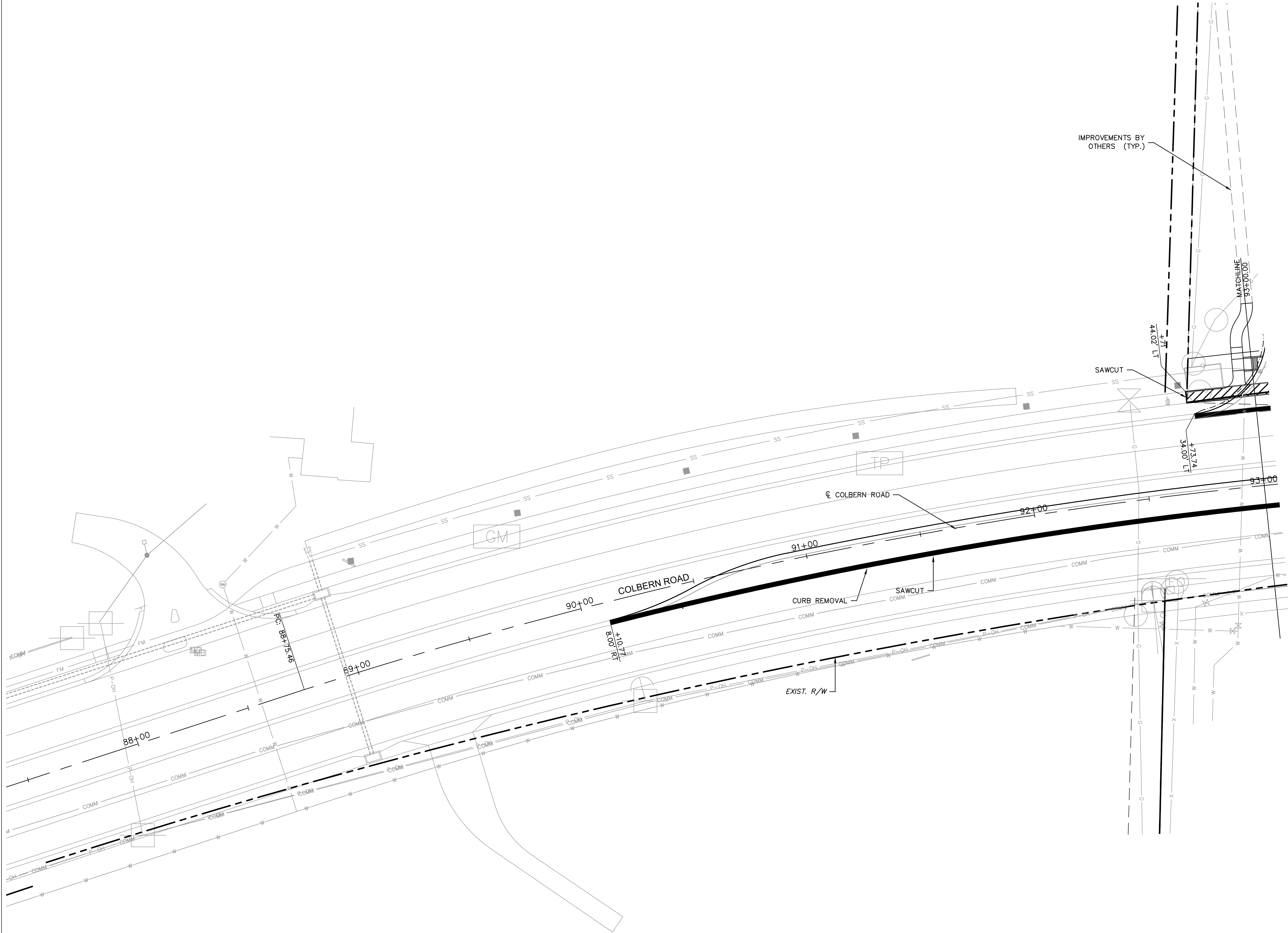
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GENERAL NOTES AND SUMMARY OF QUANTITIES		2023
THE VILLAGE AT DISCOVERY PARK COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS		
LEE'S SUMMIT, MISSOURI		

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drawing no. T_QTY01_D02104643
date: 7/14/2023

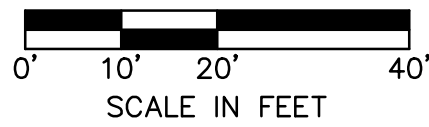
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USER: kwilliams2

NOTE:
DEMOLITION PLANS ARE THE ENGINEER'S BEST EFFORT TO
IDENTIFY ALL ITEMS TO BE REMOVED. ADDITIONAL ITEMS FOUND
DURING CONSTRUCTION SHALL BE CONSIDERED SUBSIDIARY TO
THE BID ITEM "REMOVAL OF IMPROVEMENTS"



LEGEND

- SIDEWALK REMOVAL
- PAVEMENT REMOVAL
- CURB AND GUTTER REMOVAL
- STORM SEWER REMOVAL



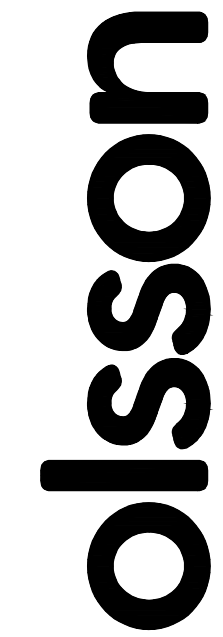
DEMOLITION & REMOVALS

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.: DEM01_D02104643
date: 7/14/2023



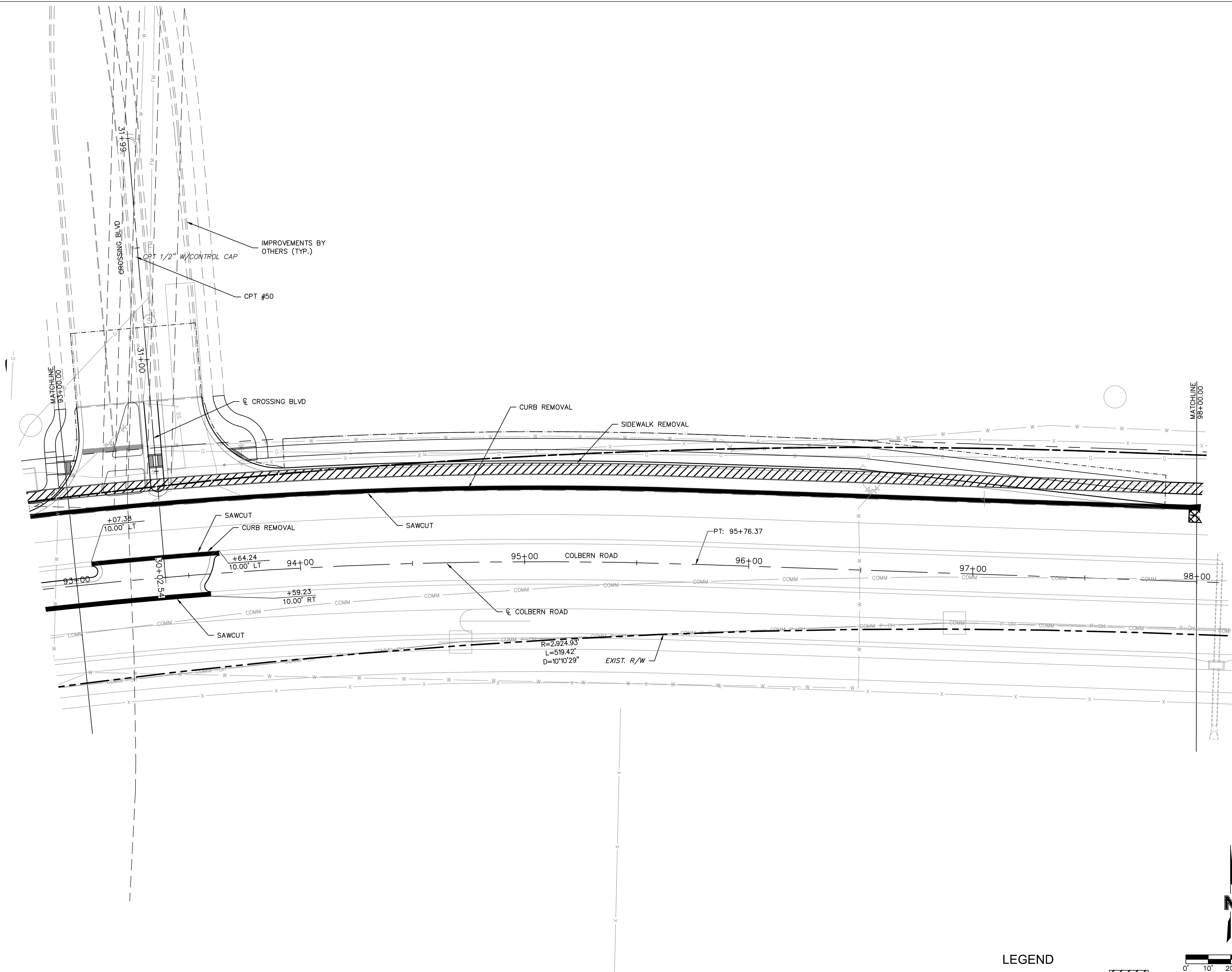
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LEGEND

- | | |
|-------------------------|---|
| SIDEWALK REMOVAL |  |
| PAVEMENT REMOVAL |  |
| CURB AND GUTTER REMOVAL |  |
| STORM SEWER REMOVAL |  |



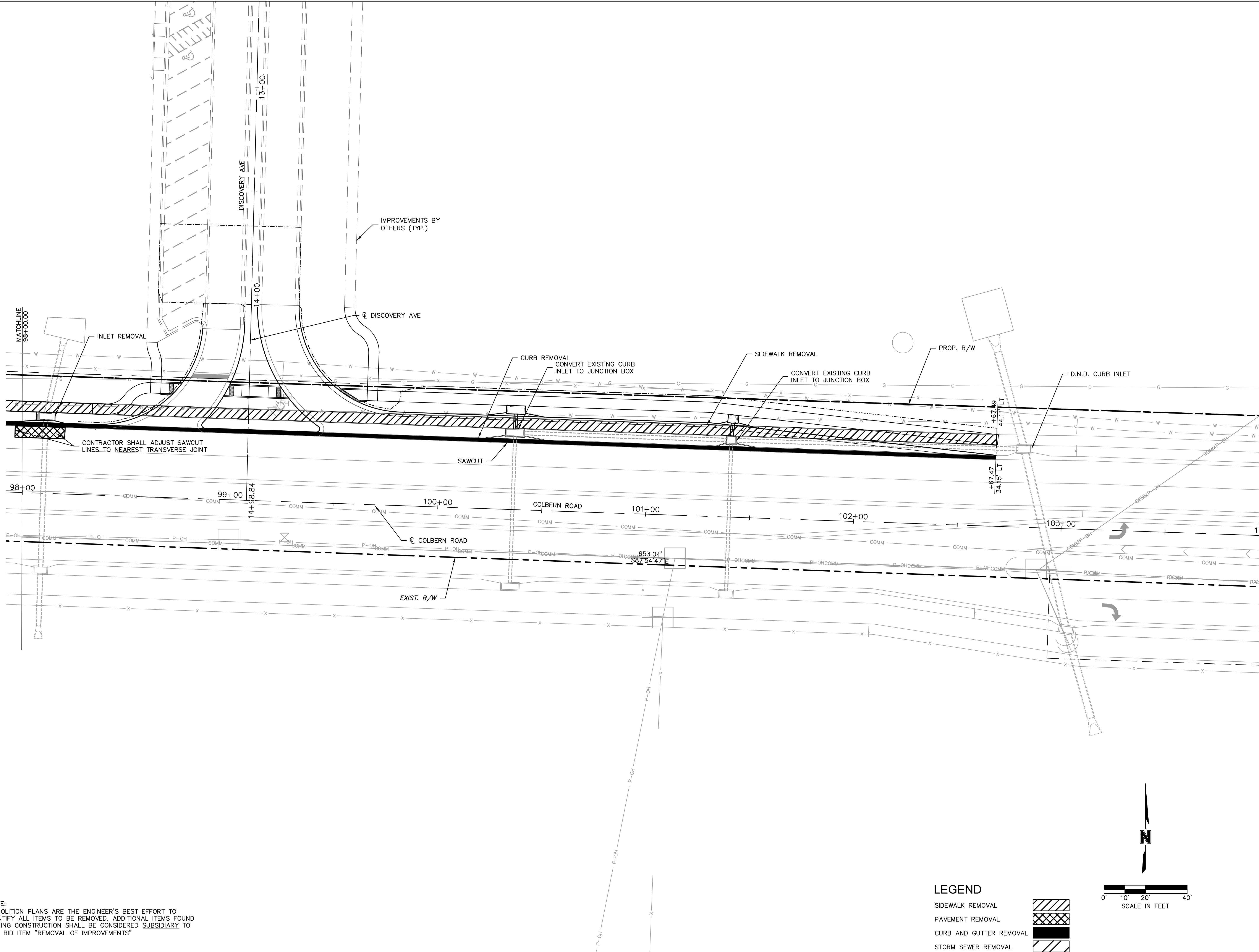
THE VILLAGE AT DISCOVERY PARK COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	2021
LEE'S SUMMIT, MISSOURI	

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		NOT FOR CONSTRUCTION
		REVISIONS



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NOTE:
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7/14/2023
PROFESSIONAL ENGINEER

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1		PRELIMINARY PLANS
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REVISIONS

DEMOLITION & REMOVALS

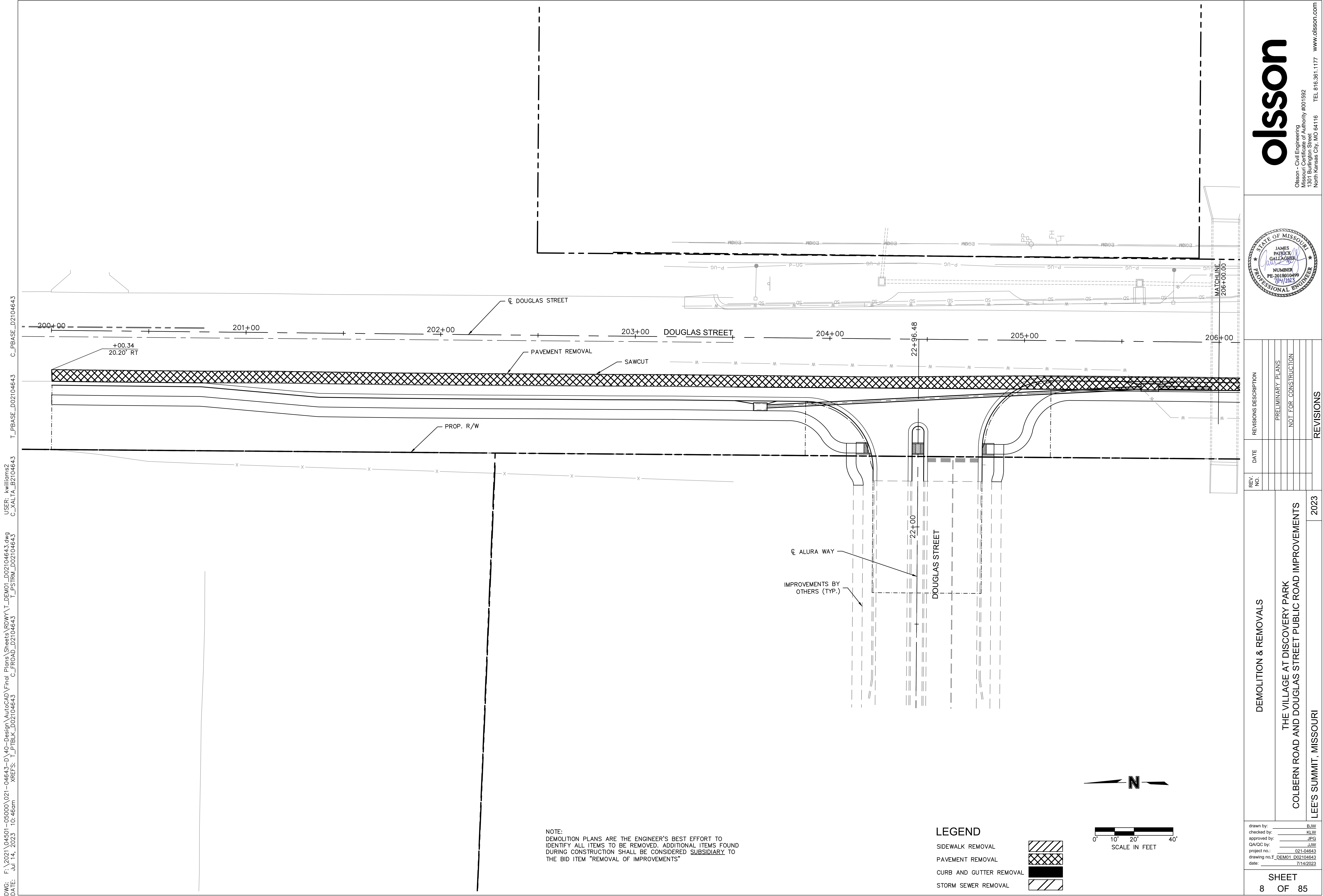
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COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

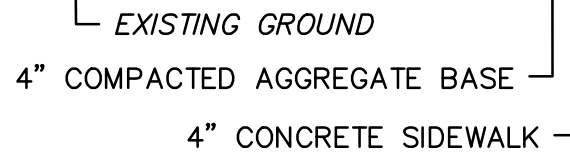
LEE'S SUMMIT, MISSOURI

drawn by: BJW
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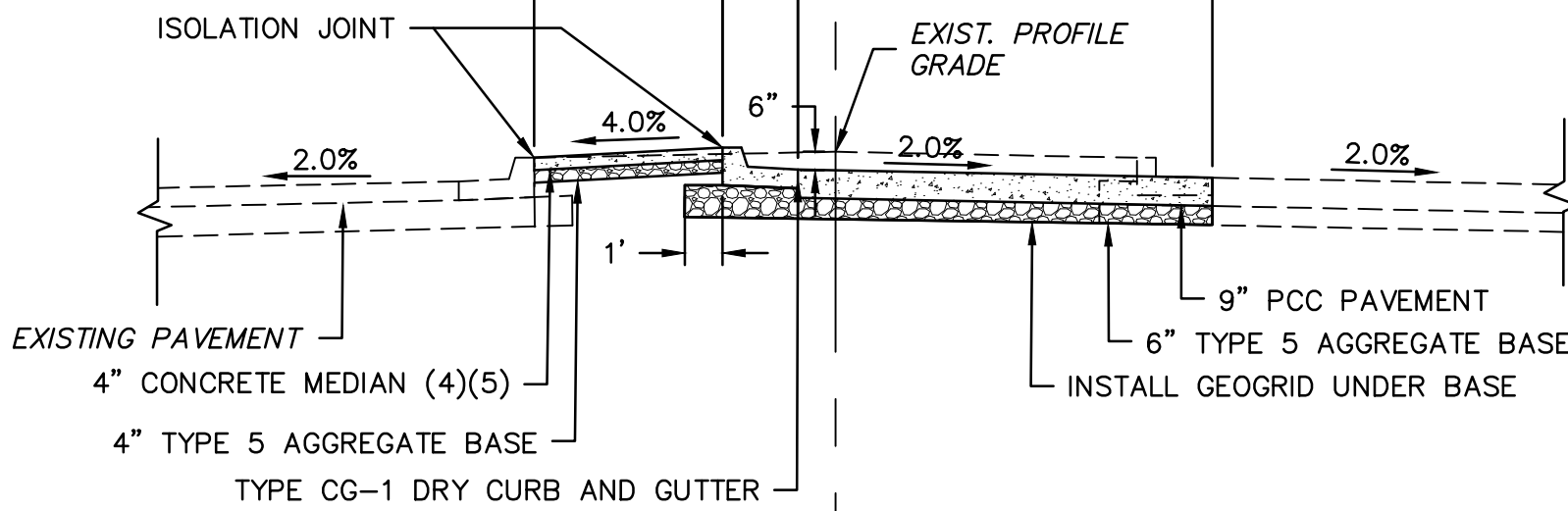
SHEET

7 OF 85





STA. 93+95.23 TO STA. 97+84.65
STA. 99+80.11 TO STA. 102+67.55



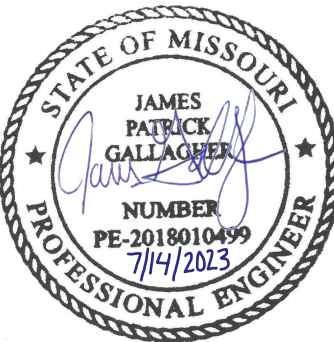
STA. 90+10.77 TO STA. 93+64.24

(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.

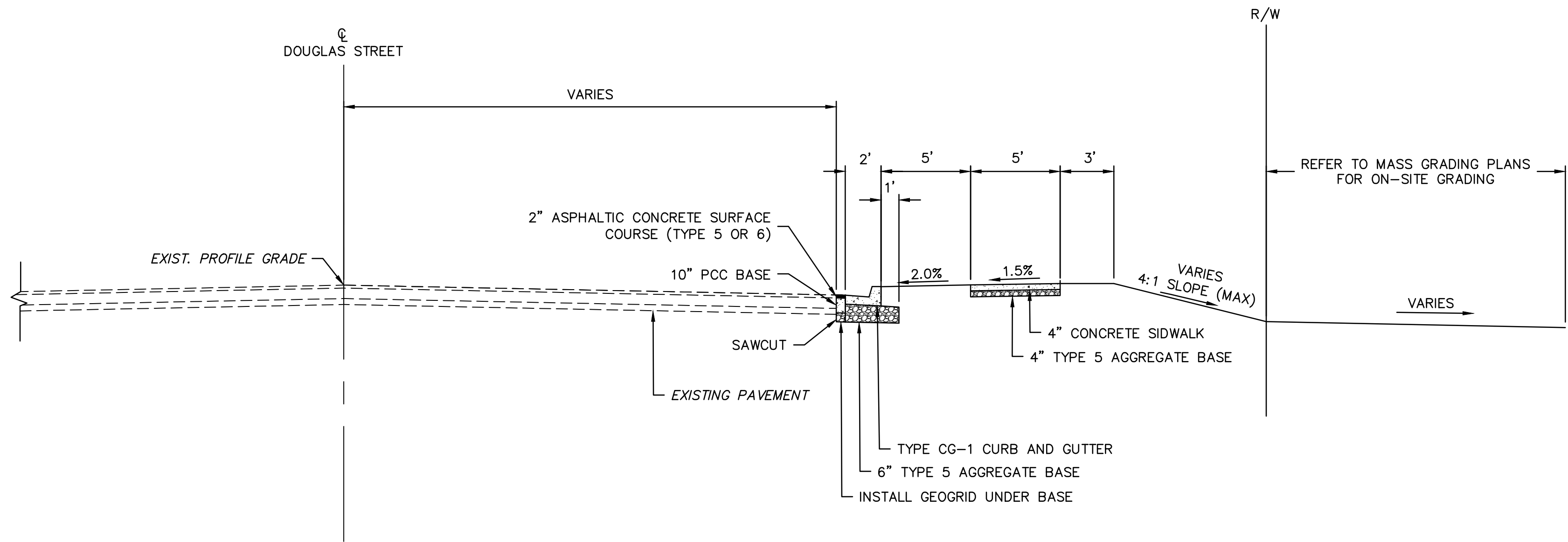
PRELIMINARY PLANS
 NOT FOR CONSTRUCTION

LEE'S SUMMIT, MISSOURI	2023
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drawn by: BJW
checked by: KLW
approved by: JPG
QA/QC by: JJW
project no.: 021-04643
drawing no.: TYP01 D02104643
date: 7/14/2023



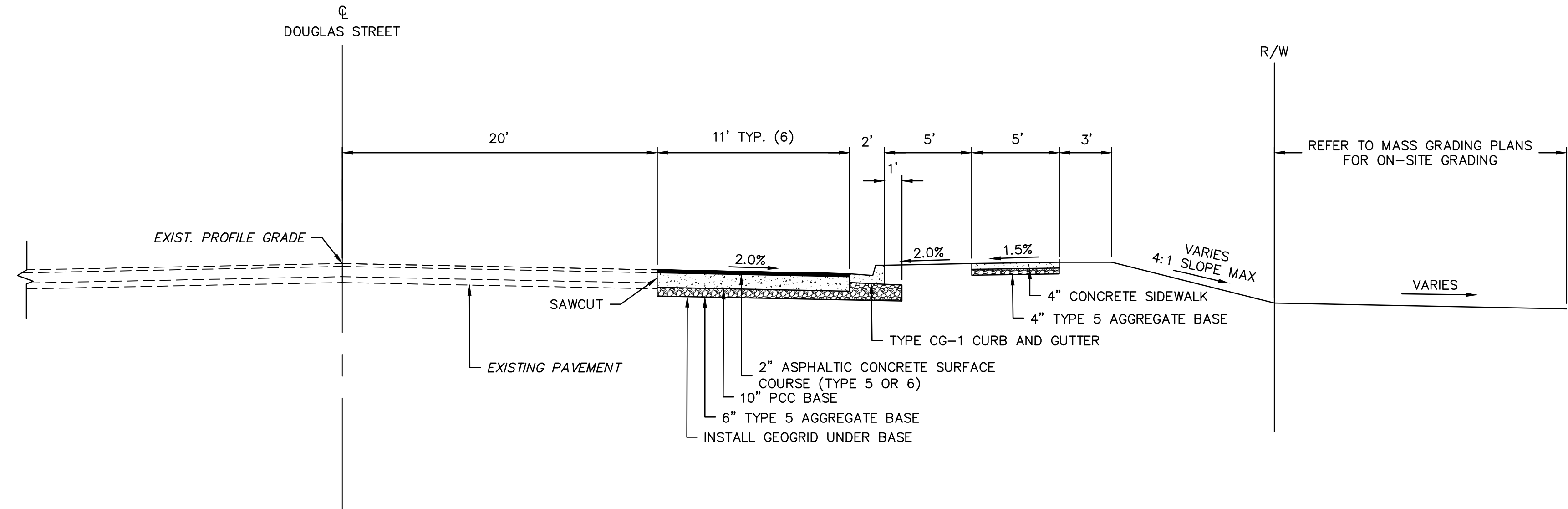
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USER: kwilliams2



TYPICAL SECTION - DOUGLAS STREET

STA. 205+13.42 TO STA. 211+47.54

NOTES:
(6) WIDTH VARIES 6 FEET TO 11 FEET FROM STATION 200+77.21 TO STATION 201+37.80, RESPECTIVELY.



TYPICAL SECTION - DOUGLAS STREET

STA. 200+00.52 TO STA. 203+87.89



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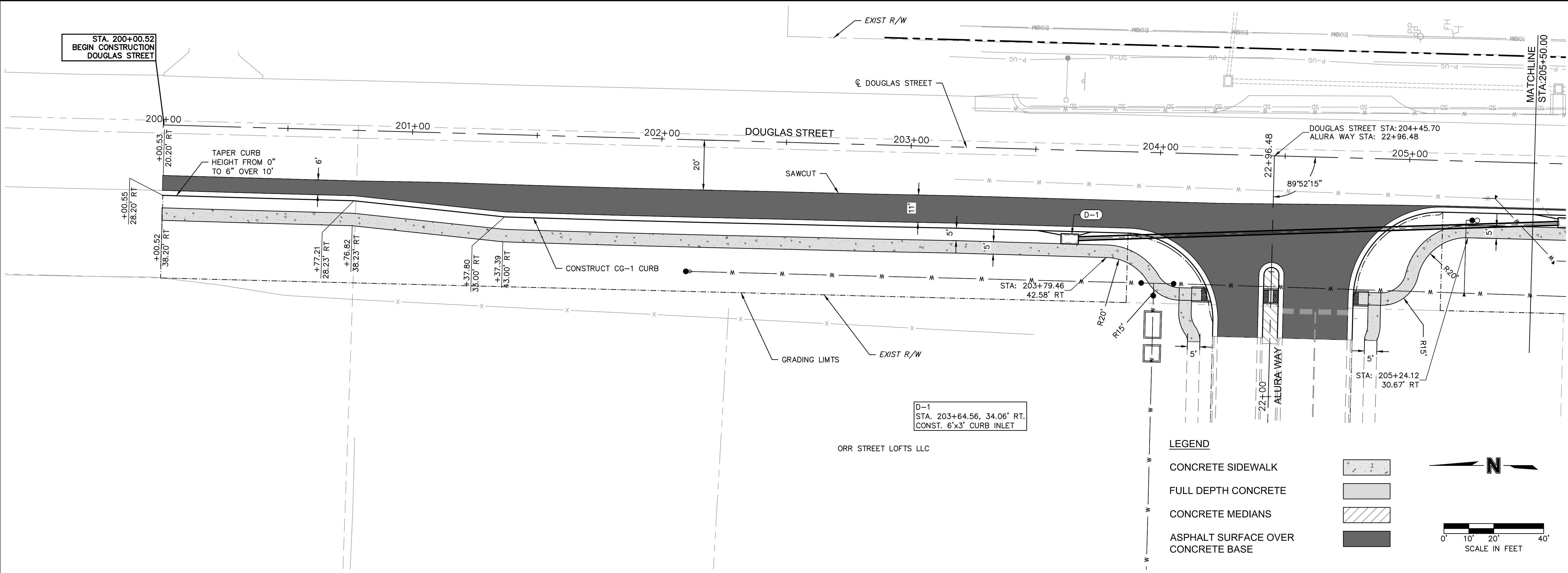
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		NOT FOR CONSTRUCTION
REVISIONS		

TYPICAL SECTIONS	
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LEE'S SUMMIT, MISSOURI	
2023	

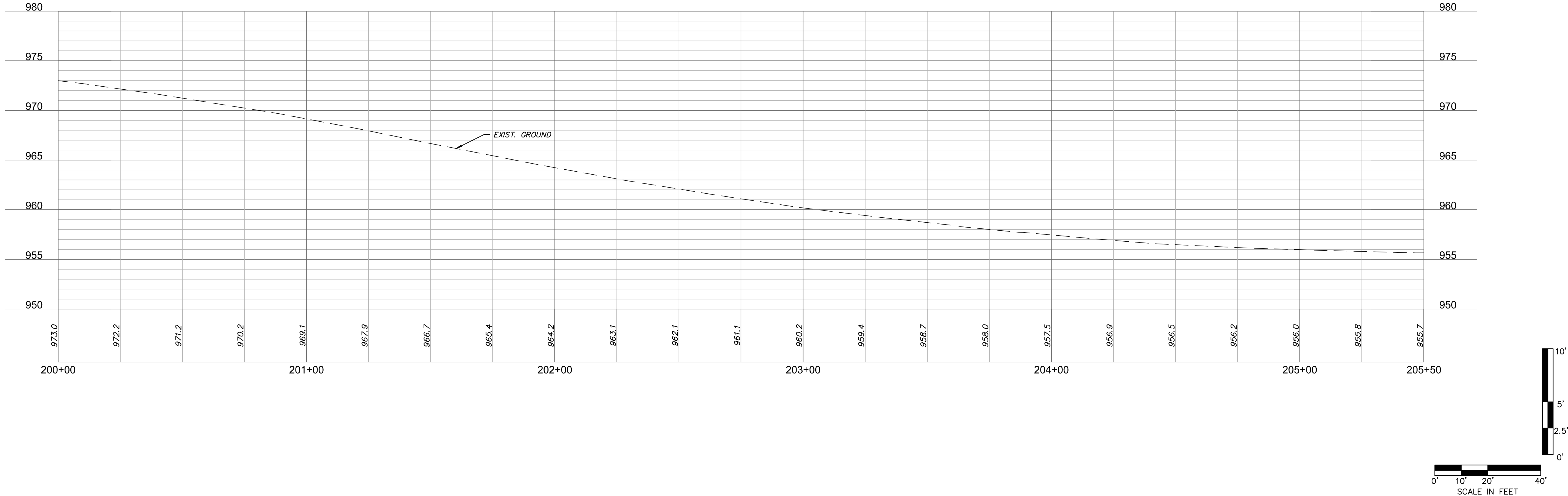
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C_XALTA_B2104643
T_PSTRM_D02104643
C_PUTIL_D2104643
C_PBASE_D2104643



DOUGLAS STREET (200+00 - 205+50)



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		NOT FOR CONSTRUCTION

PLAN & PROFILE

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

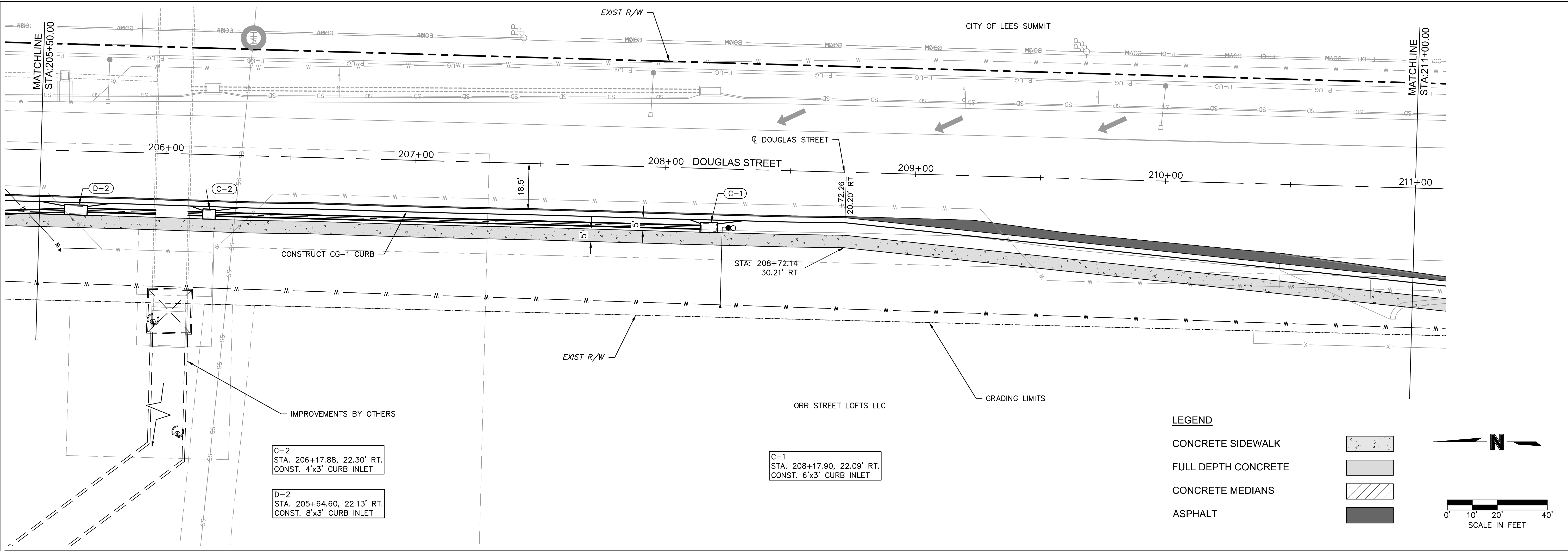
LEE'S SUMMIT, MISSOURI

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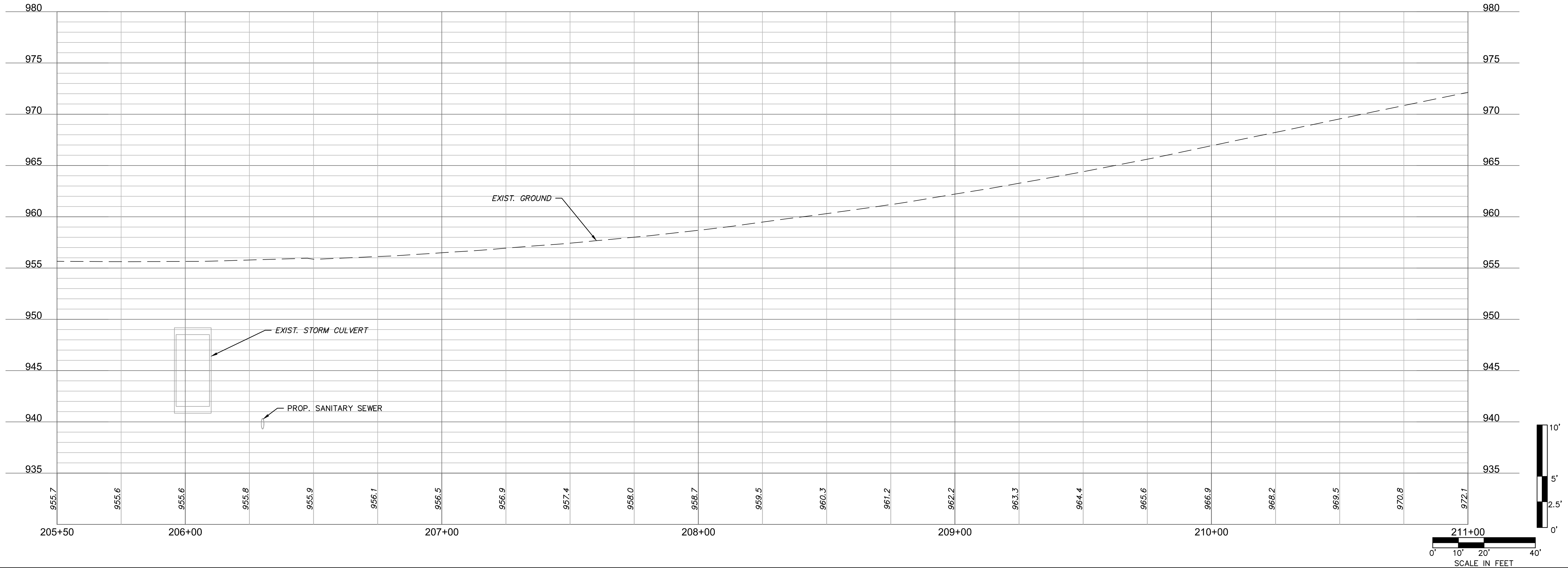
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date: 7/14/2023

SHEET
16 OF 85

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C_PUTIL_D2104643
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PLAN & PROFILE

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

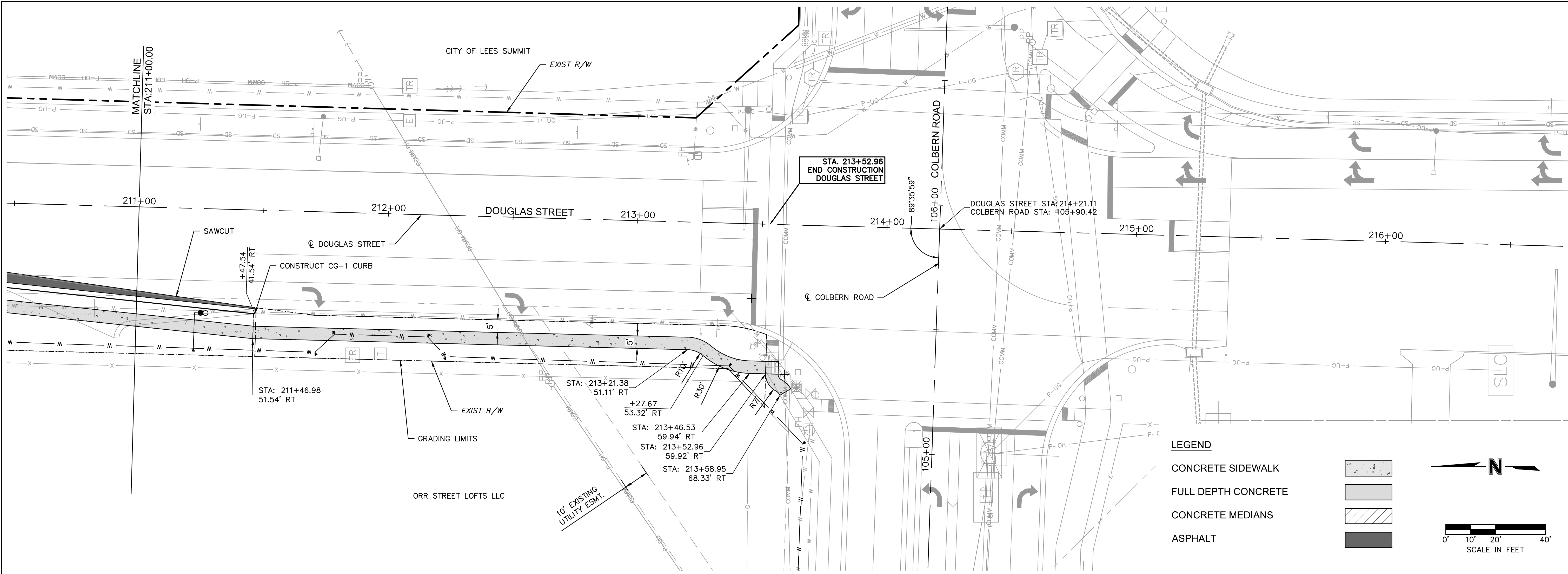
LEE'S SUMMIT, MISSOURI

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date: 7/14/2023

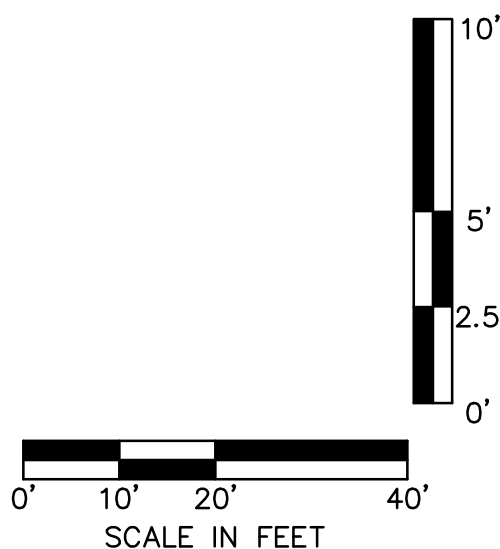
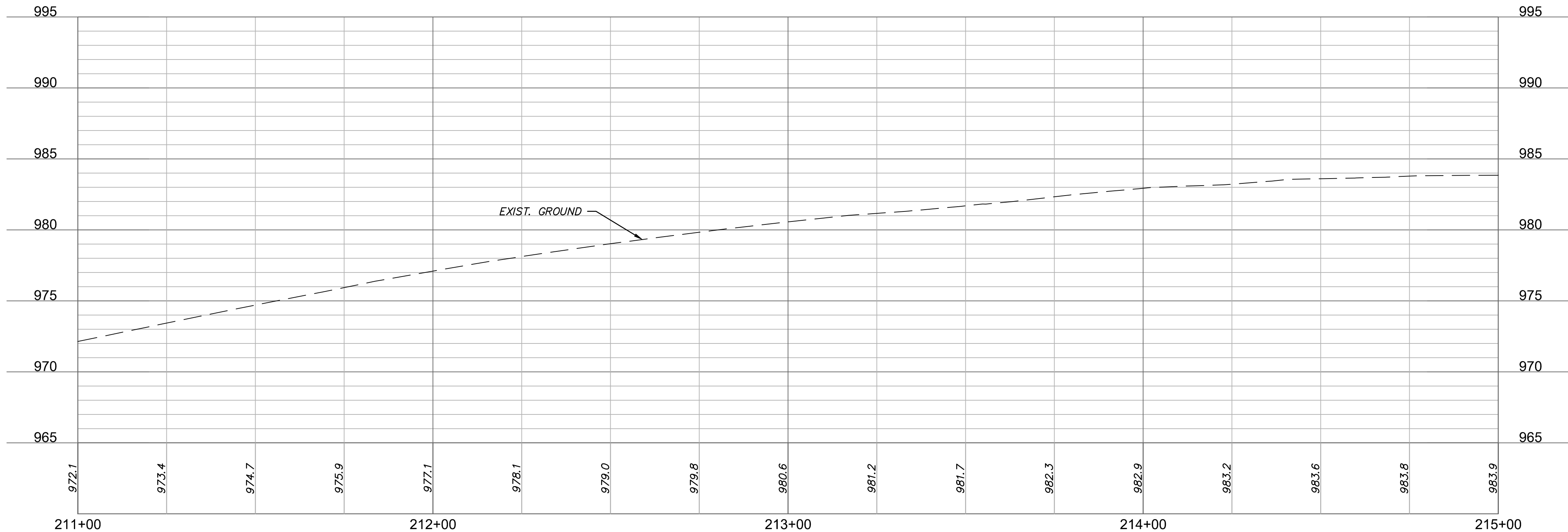
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C_XALTA_B2104643 T_PSTRM_D02104643 C_PUTIL_D2104643 C_PBASE_D2104643



DOUGLAS STREET (211+00 - 215+00)



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PLAN & PROFILE

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

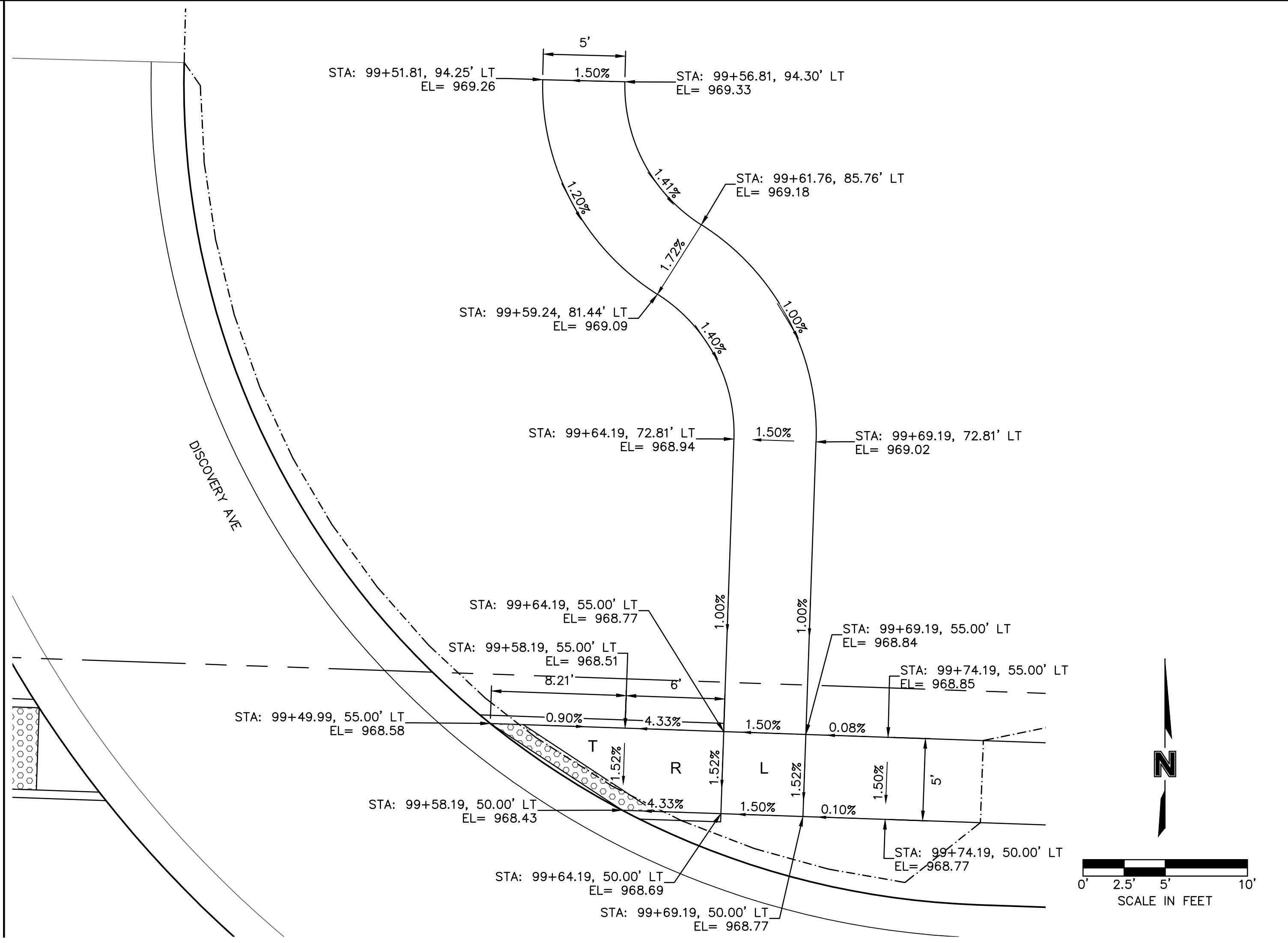
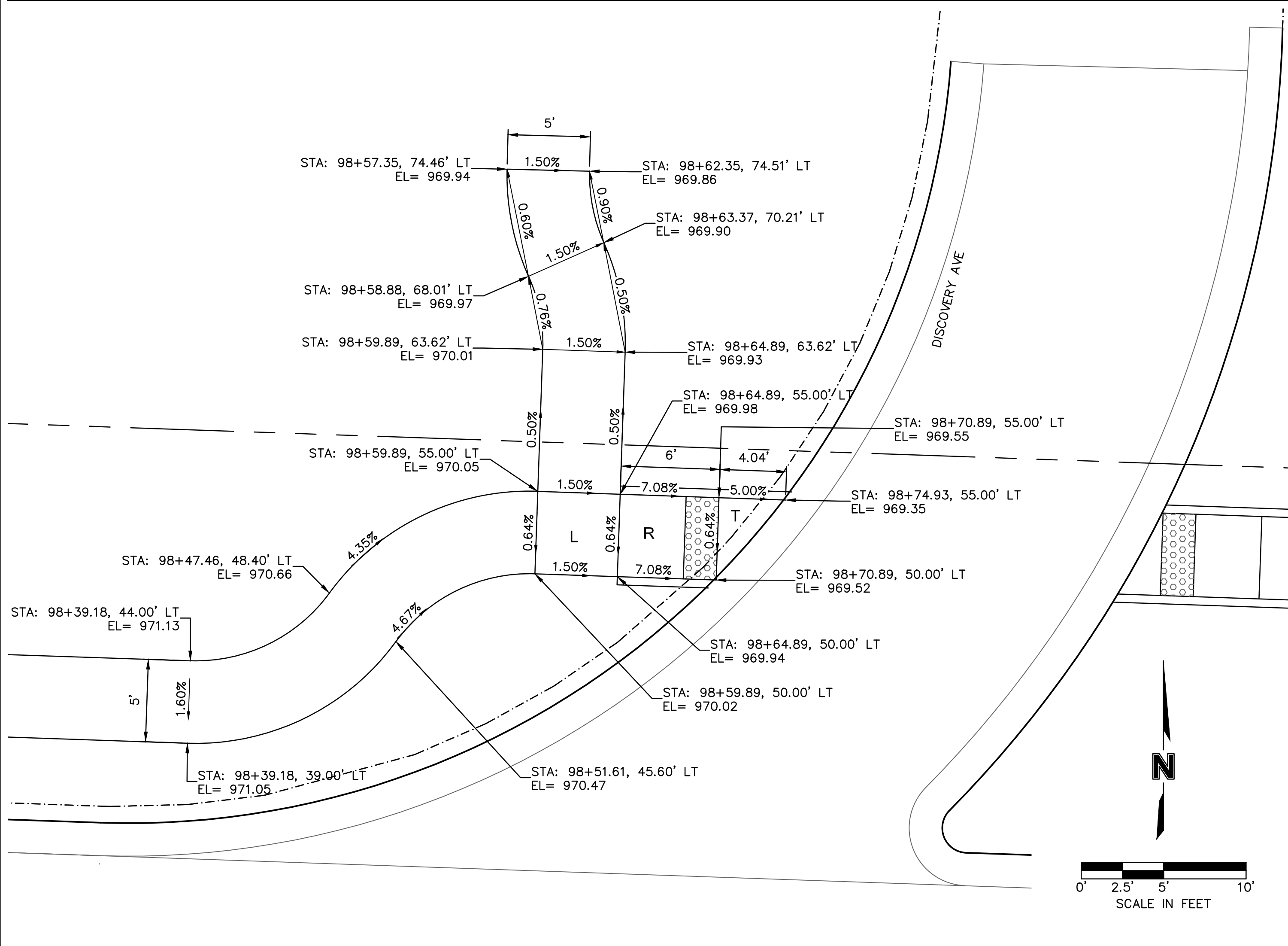
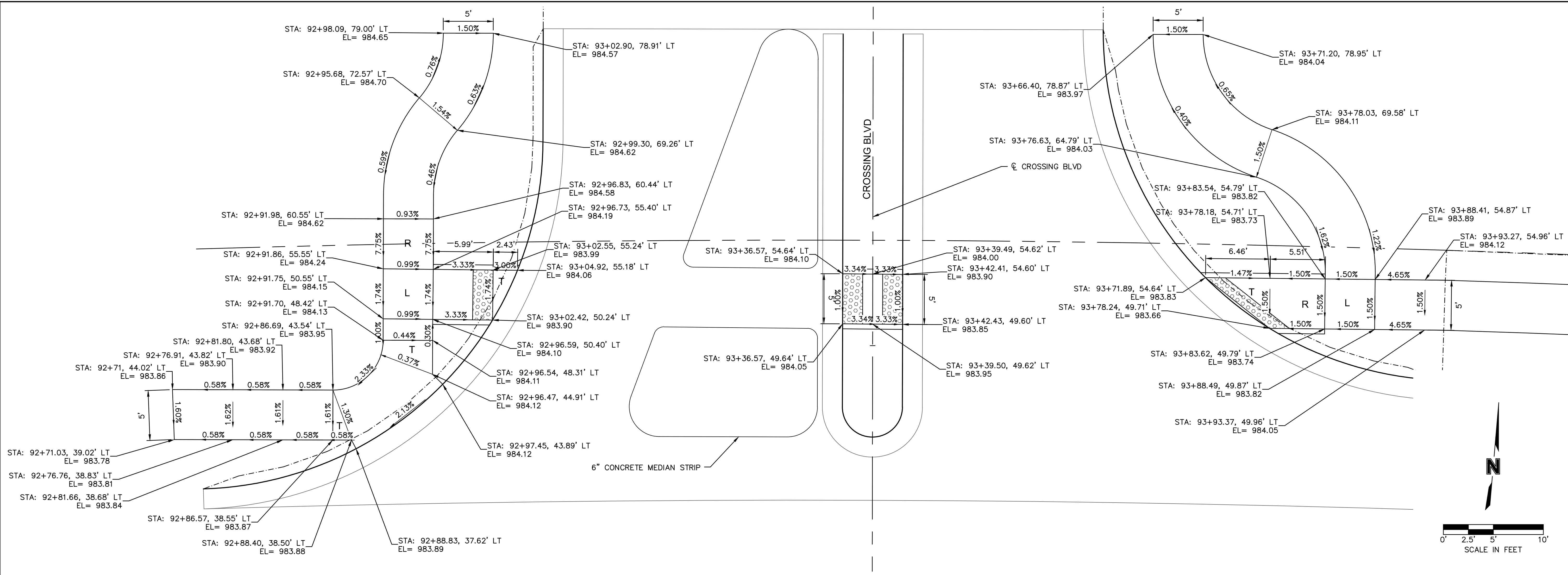
LEE'S SUMMIT, MISSOURI

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

SHEET
18 OF 85

2023

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REV.	NO.	DATE	REVISIONS DESCRIPTION
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SIDEWALK RAMP LAYOUTS

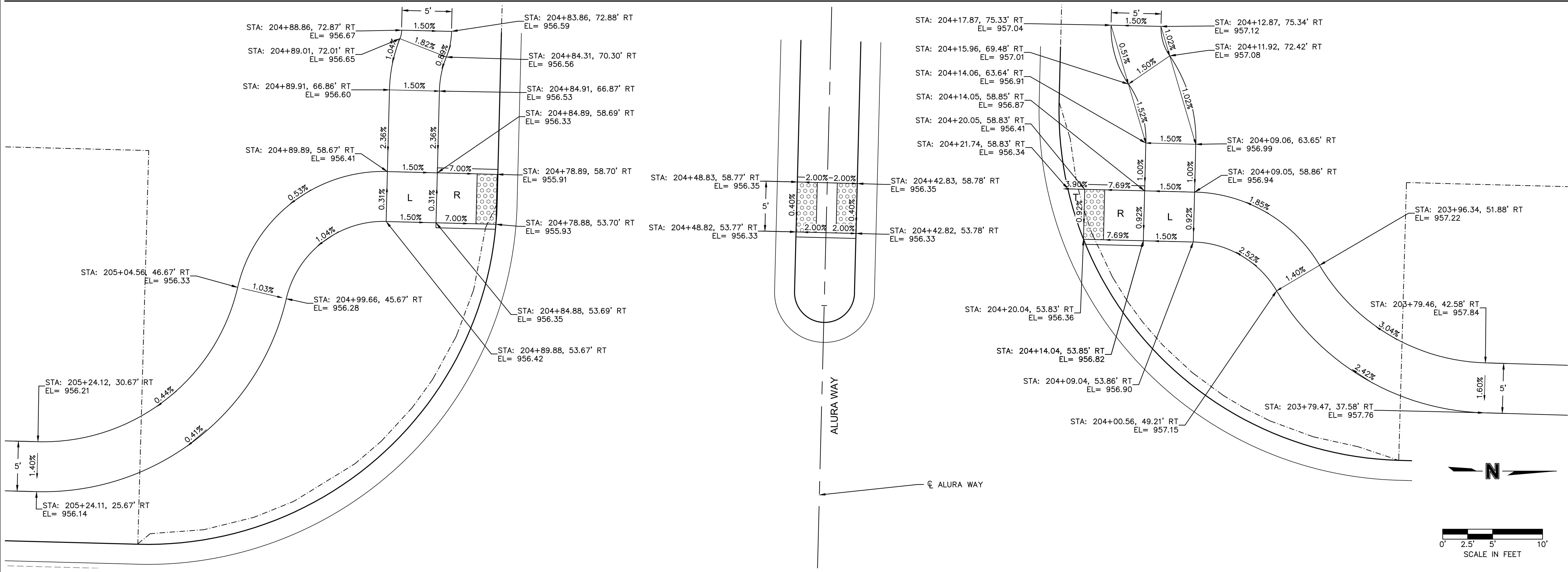
THE VILLAGE AT DISCOVERY PARK
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

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checked by: KJW
approved by: JFG
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project no.: 021-04643
drawing no.: SDWK01_D02104643
date: 7/14/2023

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

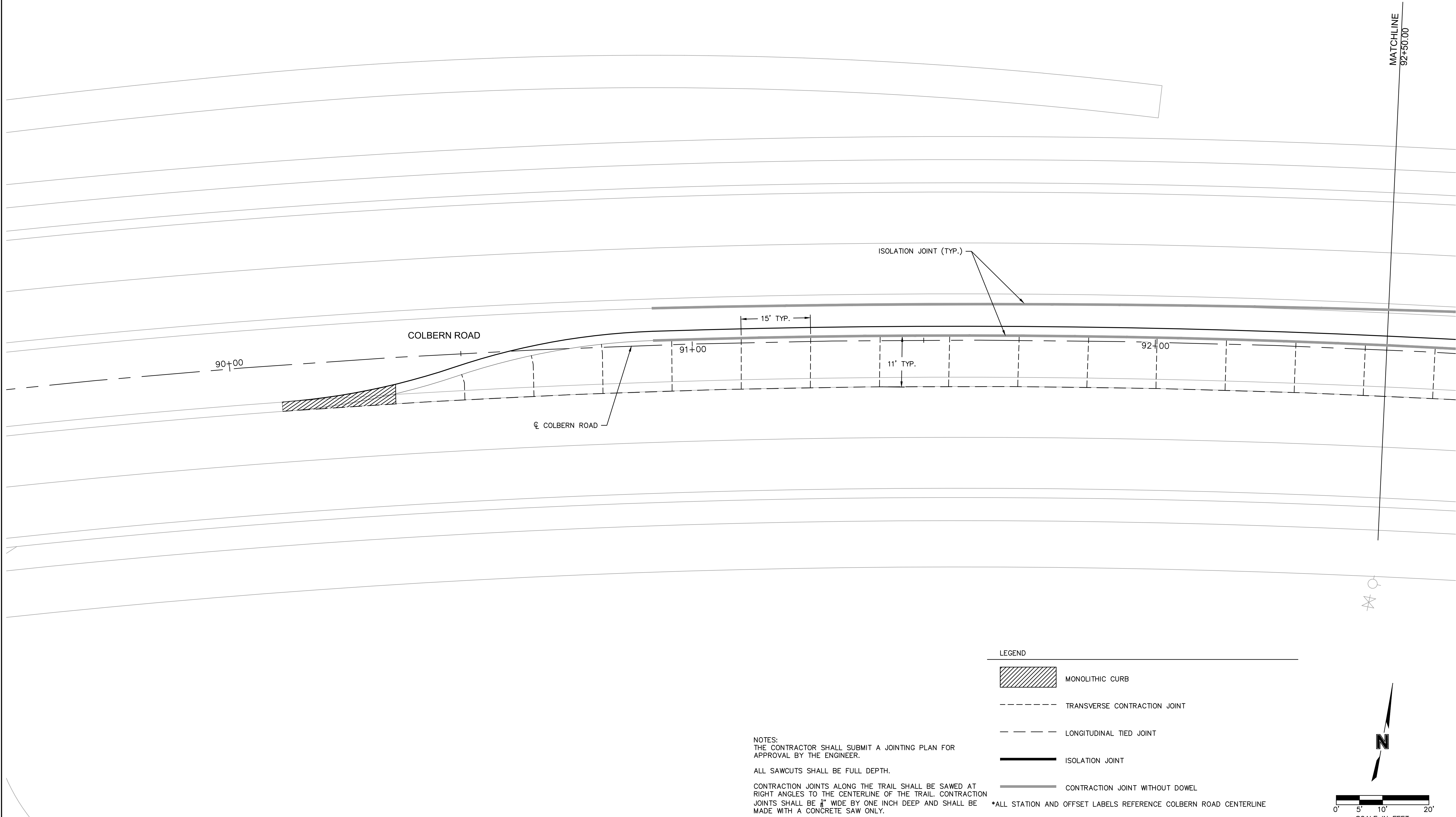
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22 OF 85

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CONCRETE JOINTING PLANS

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

LEE'S SUMMIT, MISSOURI

REV. NO.	DATE	REVISIONS DESCRIPTION
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2023

REVISIONS

drawn by: BJW
checked by: KLV
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: JNT01_D02104643
date: 7/14/2023

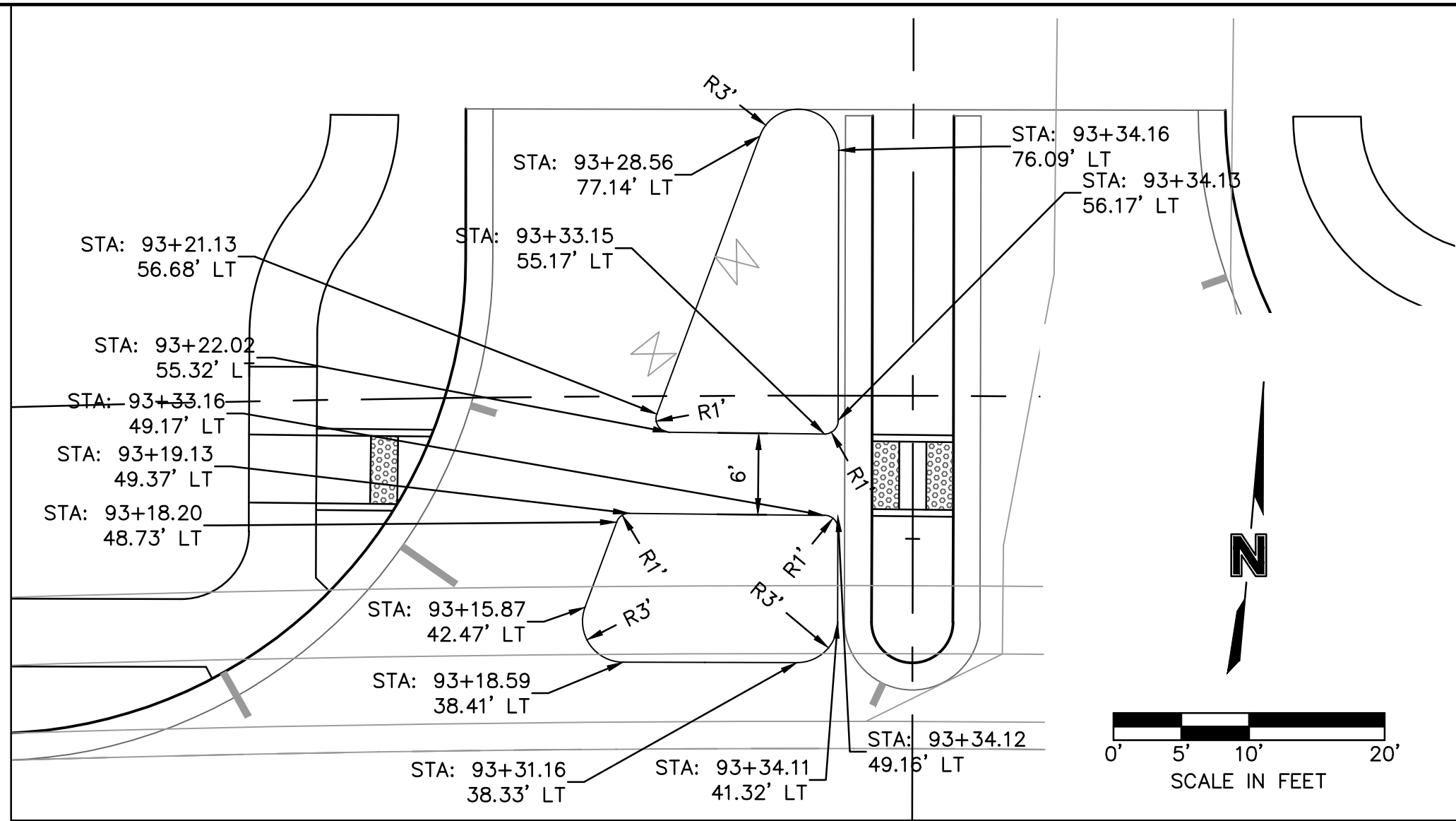
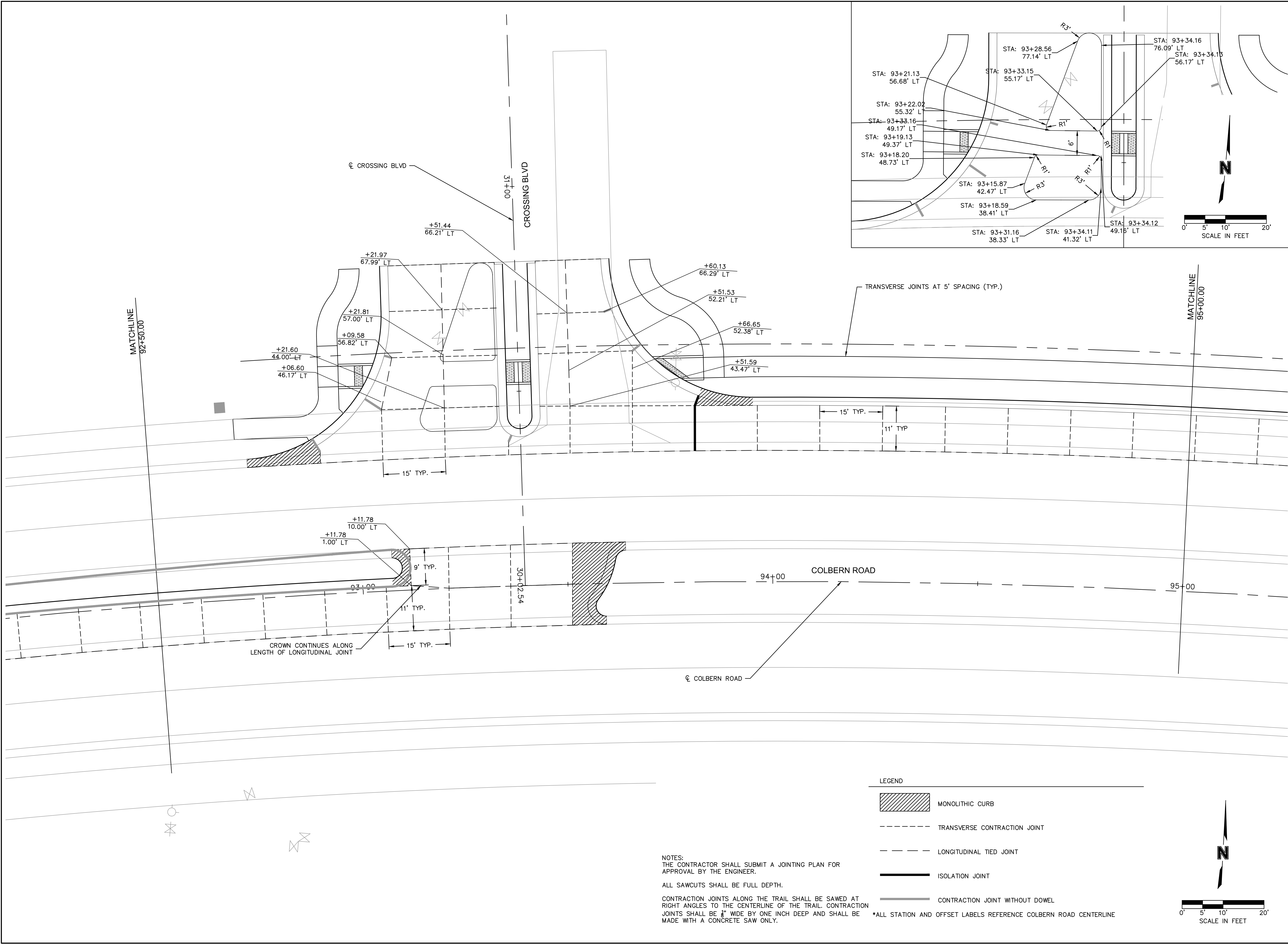
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23 OF 85

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CONCRETE JOINTING PLANS

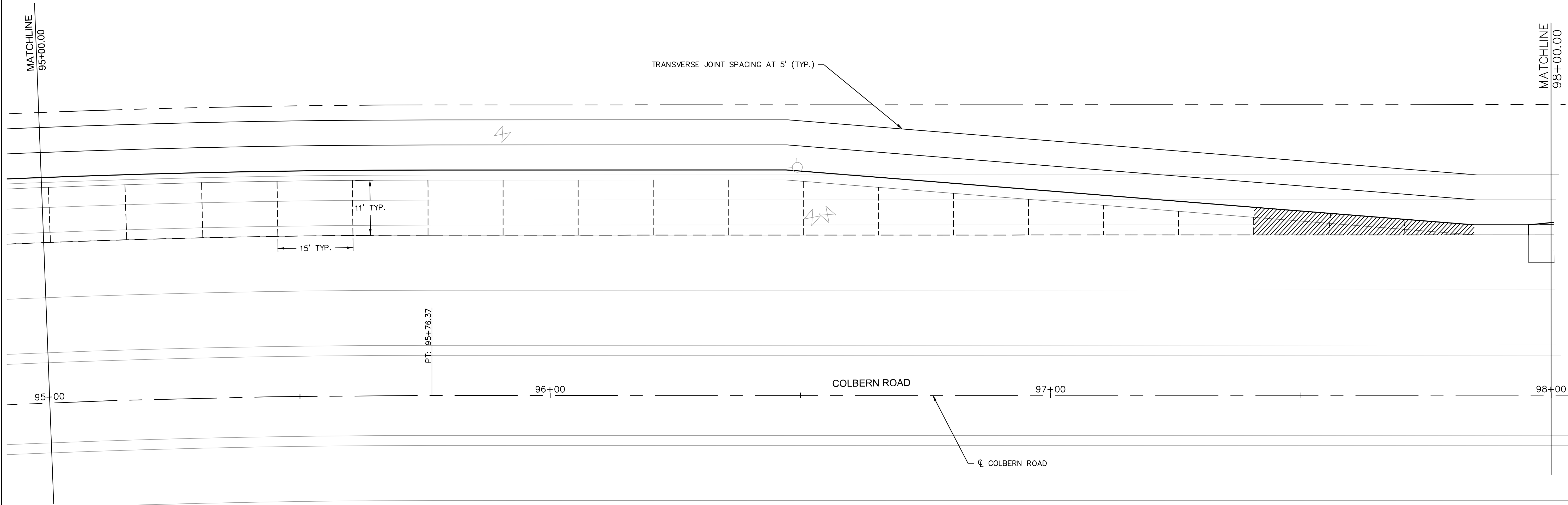
THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

drawn by: BJW
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approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: JNT01_D02104643
date: 7/14/2023

SHEET
24 OF 85

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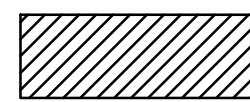


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THE CONTRACTOR SHALL SUBMIT A JOINTING PLAN FOR
APPROVAL BY THE ENGINEER.

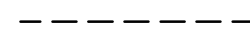
ALL SAWCUTS SHALL BE FULL DEPTH.

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

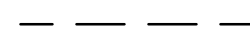
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MONOLITHIC CURB



TRANSVERSE CONTRACTION JOINT



LONGITUDINAL TIED JOINT

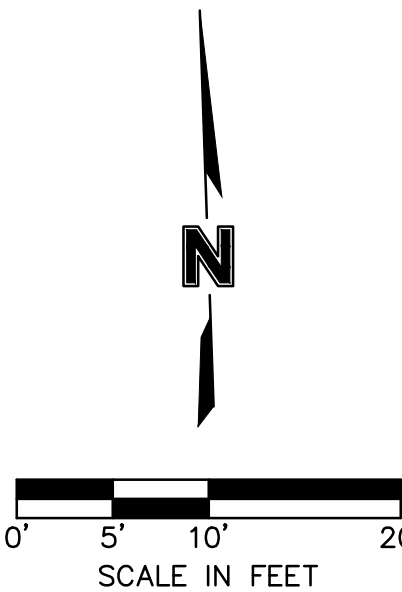


ISOLATION JOINT



CONTRACTION JOINT WITHOUT DOWEL

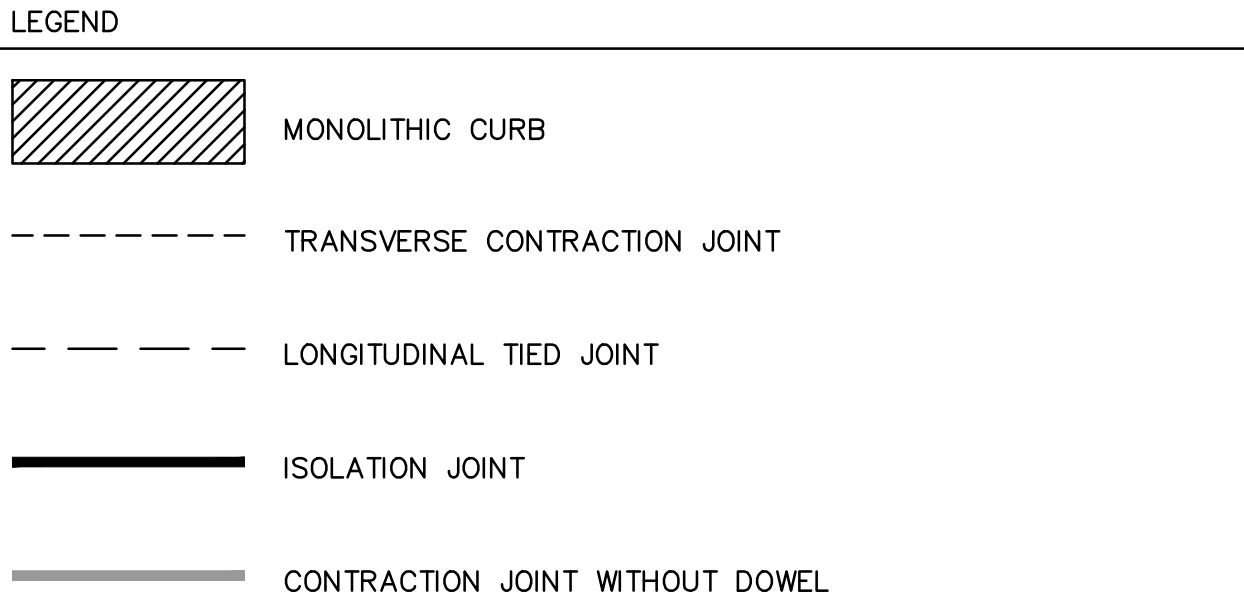
*ALL STATION AND OFFSET LABELS REFERENCE COLBERN ROAD CENTERLINE



REV. NO.	DATE	REVISIONS DESCRIPTION
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CONCRETE JOINTING PLANS	
THE VILLAGE AT DISCOVERY PARK	
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	
LEE'S SUMMIT, MISSOURI	
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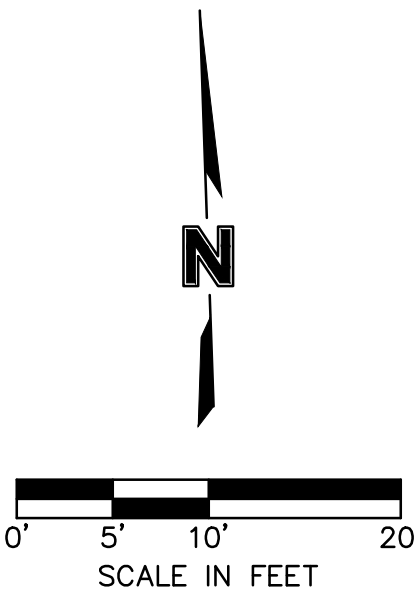
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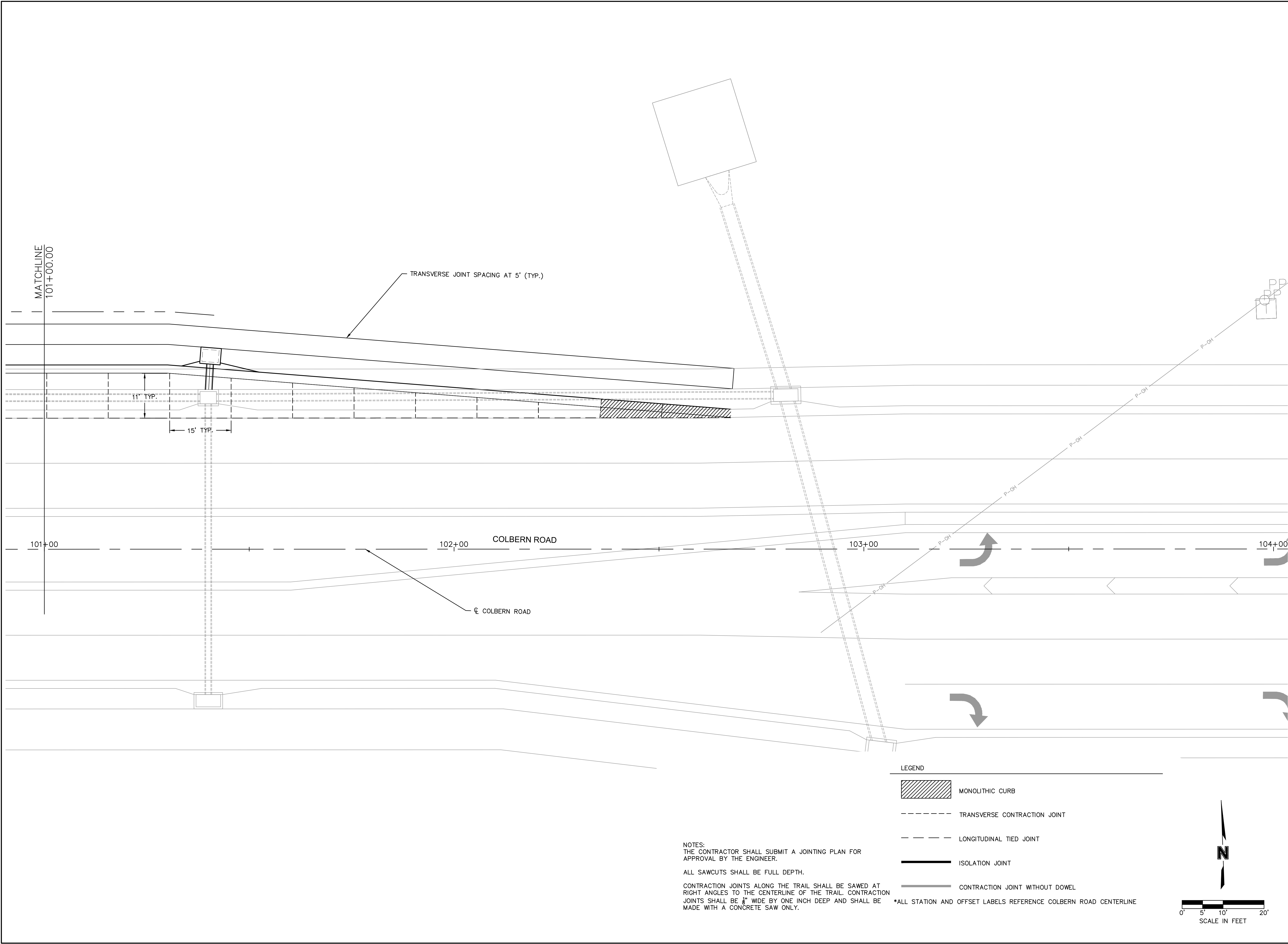
ALL SAWCUTS SHALL BE FULL DEPTH.

CONTRACTION JOINTS ALONG THE TRAIL SHALL BE SAWED AT RIGHT ANGLES TO THE CENTERLINE OF THE TRAIL. CONTRACTION JOINTS SHALL BE $\frac{1}{8}$ " WIDE BY ONE INCH DEEP AND SHALL BE MADE WITH A CONCRETE SAW ONLY.

*ALL STATION AND OFFSET LABELS REFERENCE COLBERN ROAD CENTERLINE



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		NOT FOR CONSTRUCTION

CONCRETE JOINTING PLANS

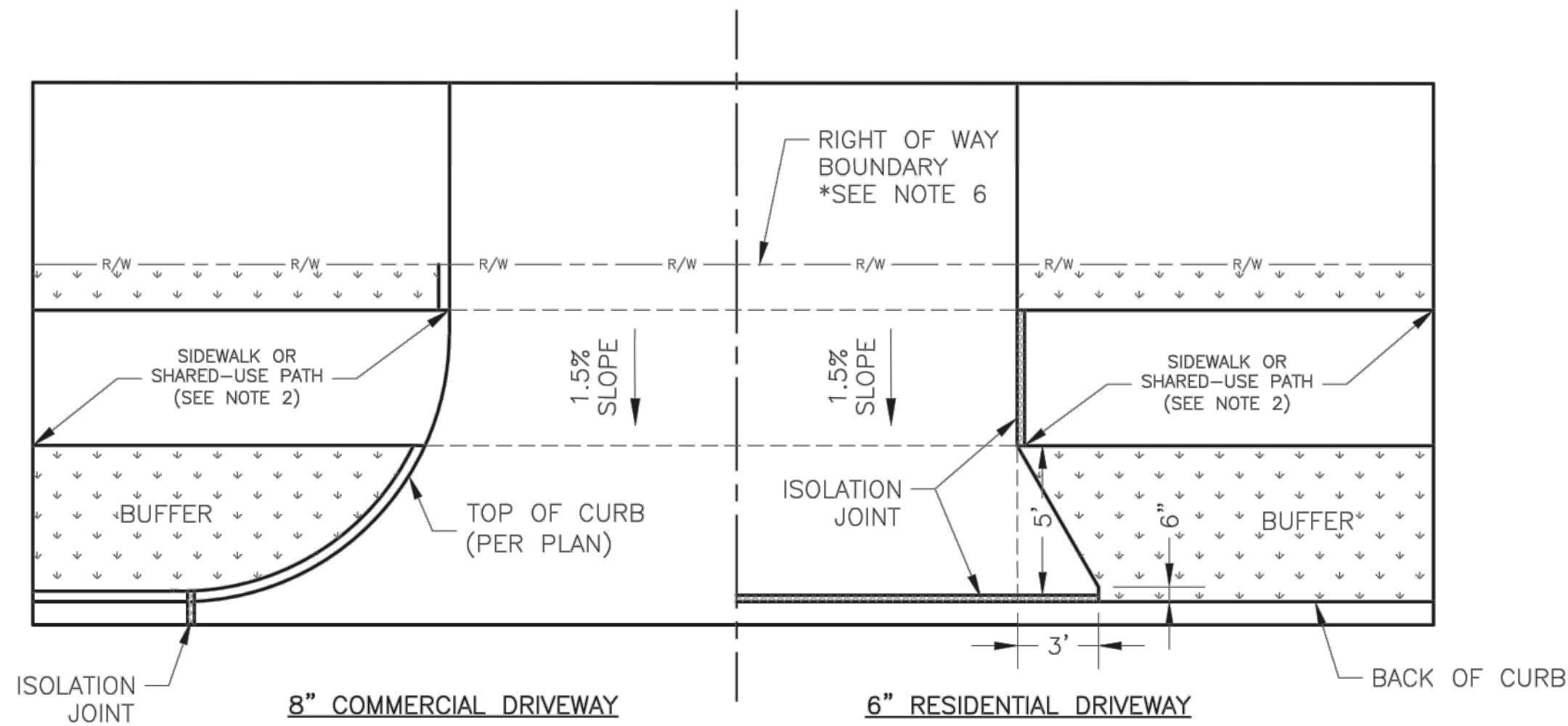
THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

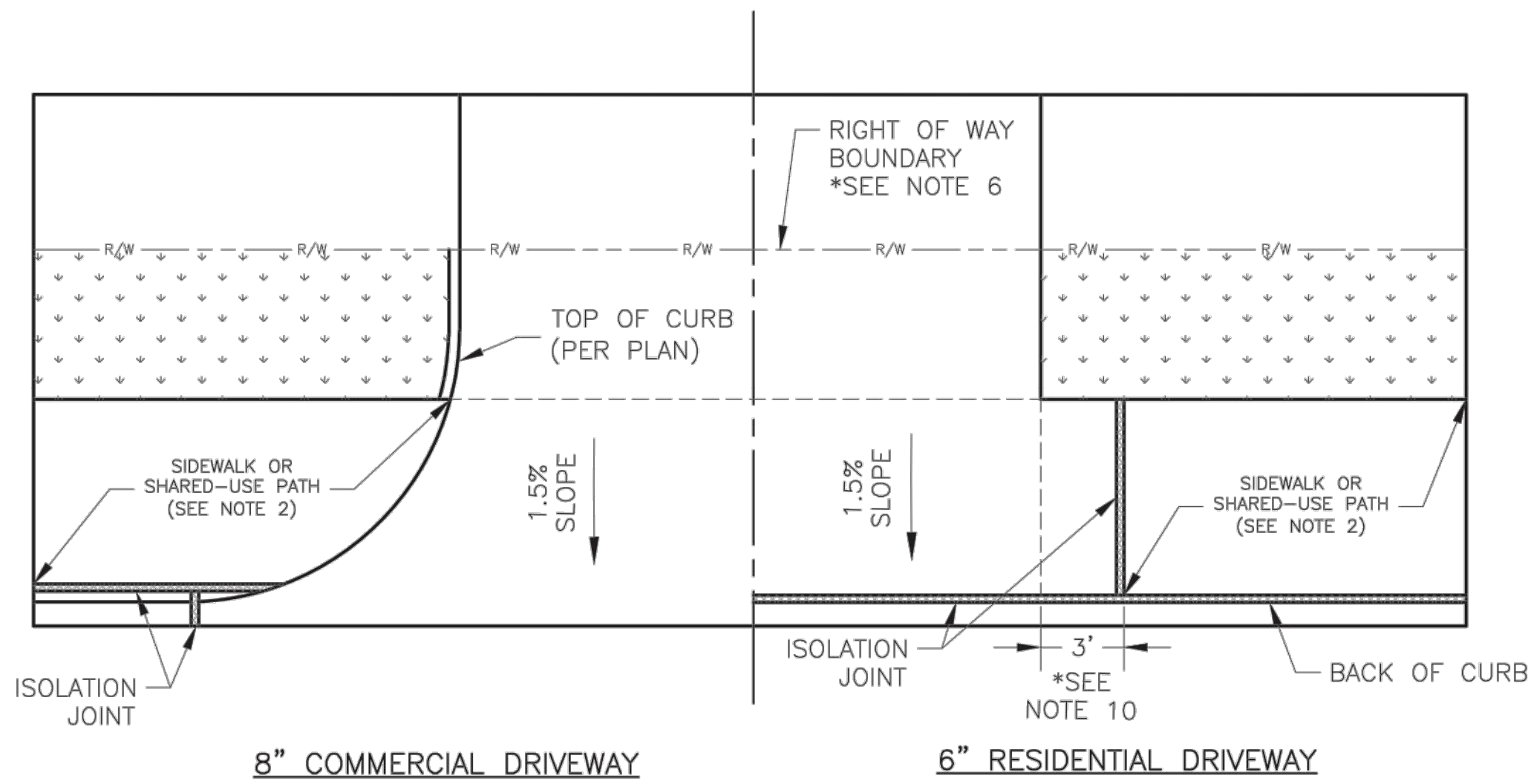
2023

drawn by: BJW
checked by: KLV
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: JNT01_D02104643
date: 7/14/2023

SHEET
27 OF 85



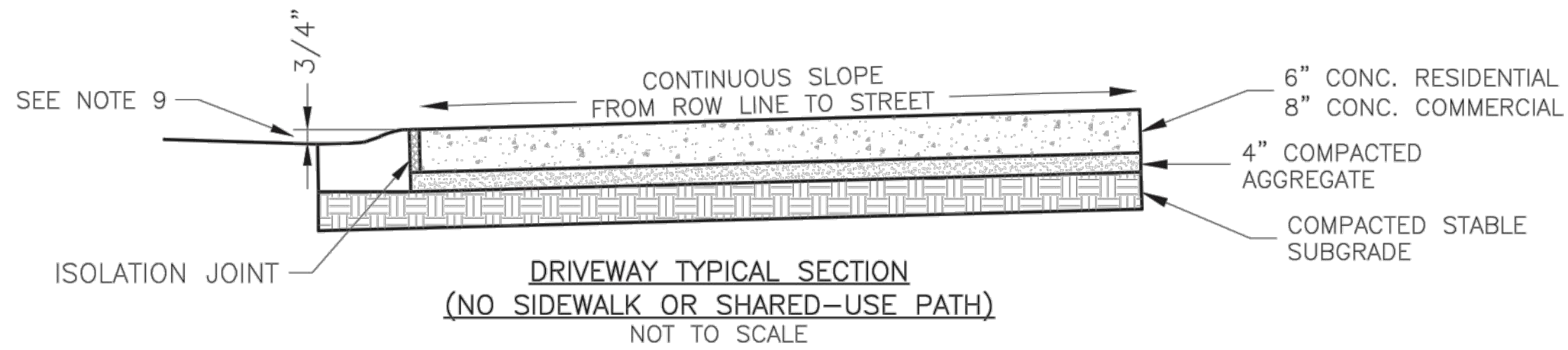
DRIVEWAY WITH BUFFER
NOT TO SCALE



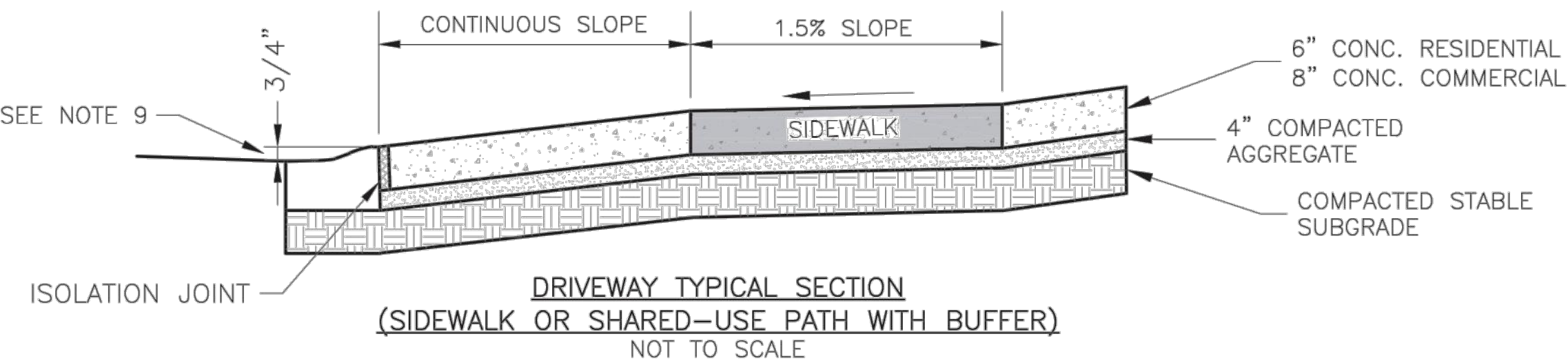
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NOT TO SCALE

GENERAL NOTES

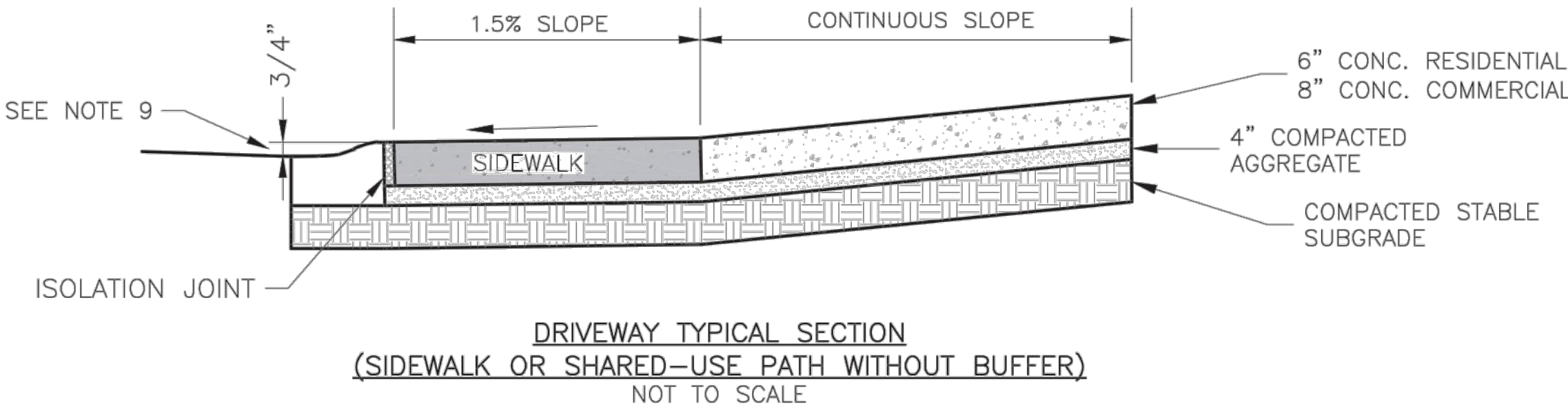
1. SUBGRADE SHALL BE STABLE. COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-3B, SIDEWALK/SHARED 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. ¾" 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.



DRIVEWAY TYPICAL SECTION
(NO SIDEWALK OR SHARED-USE PATH)
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITH BUFFER)
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITHOUT BUFFER)
NOT TO SCALE



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ct: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT. JACKSON COUNTY. MO

Sheet Name: DRIVEWAY DETAIL

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

GEN-1



olson

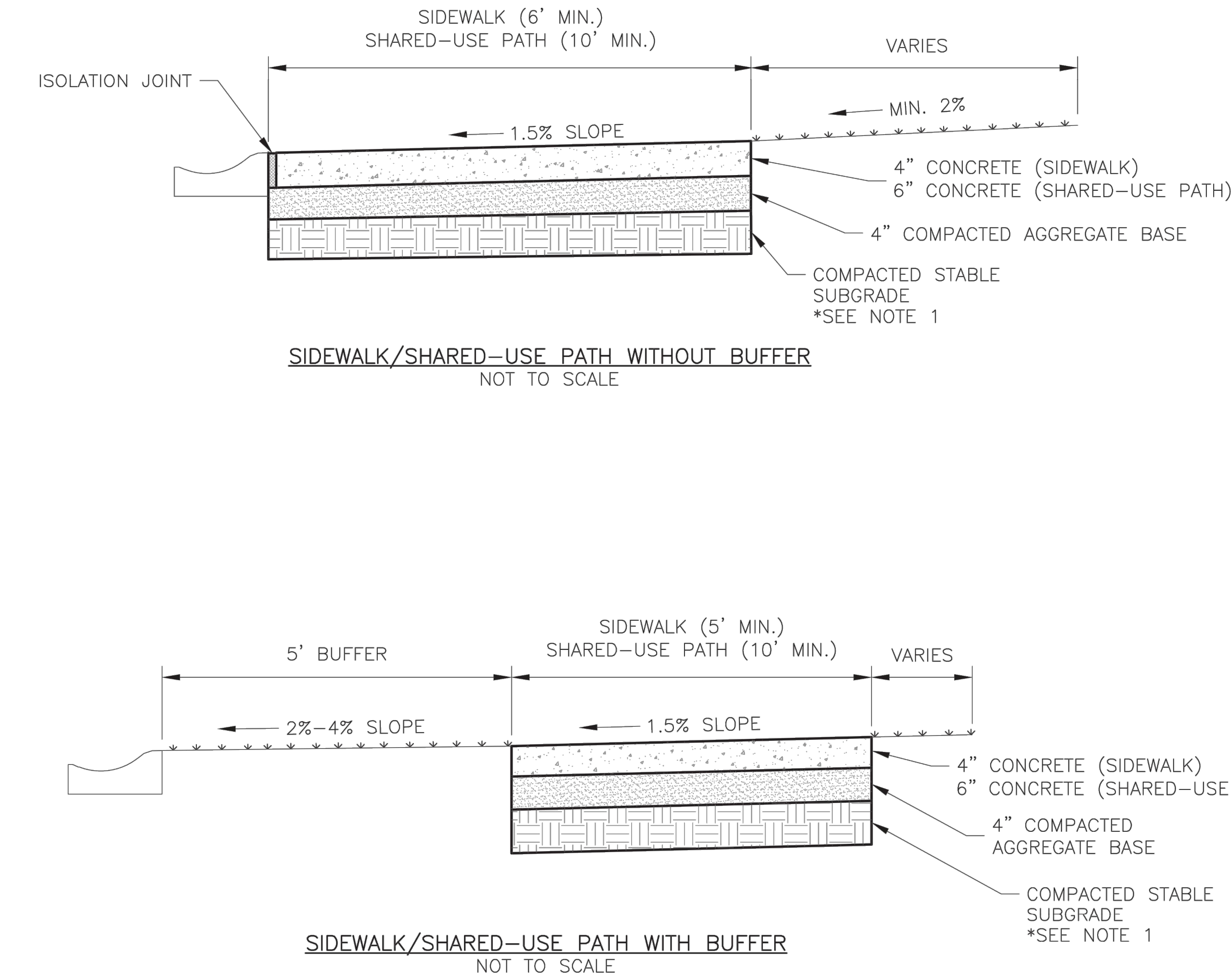
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NOTES			
			PRELIMINARY PLANS
			NOT FOR CONSTRUCTION
2023			REVISIONS

STANDARD DETAILS

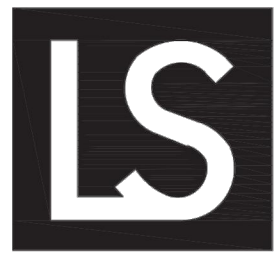
THE VILLAGE AT DISCOVERY PARK COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	202
LEE'S SUMMIT, MISSOURI	

drawn by: _____ BJW
checked by: _____ KLW
approved by: _____ JPG
QA/QC by: _____ JJW
project no.: _____ 021-04643
drawing no.: T DET01 02104643
date: _____ 7/14/2023



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.



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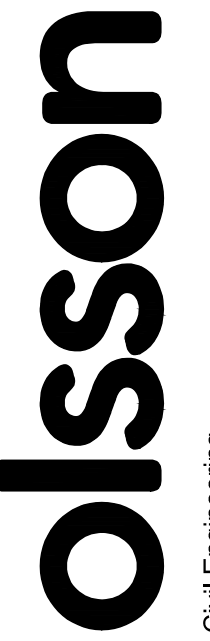
SIDEWALK/SHARED-USE PATH DETAIL

Date: 05/2021

Drawn By: MJF

Checked By: DL

GEN-2



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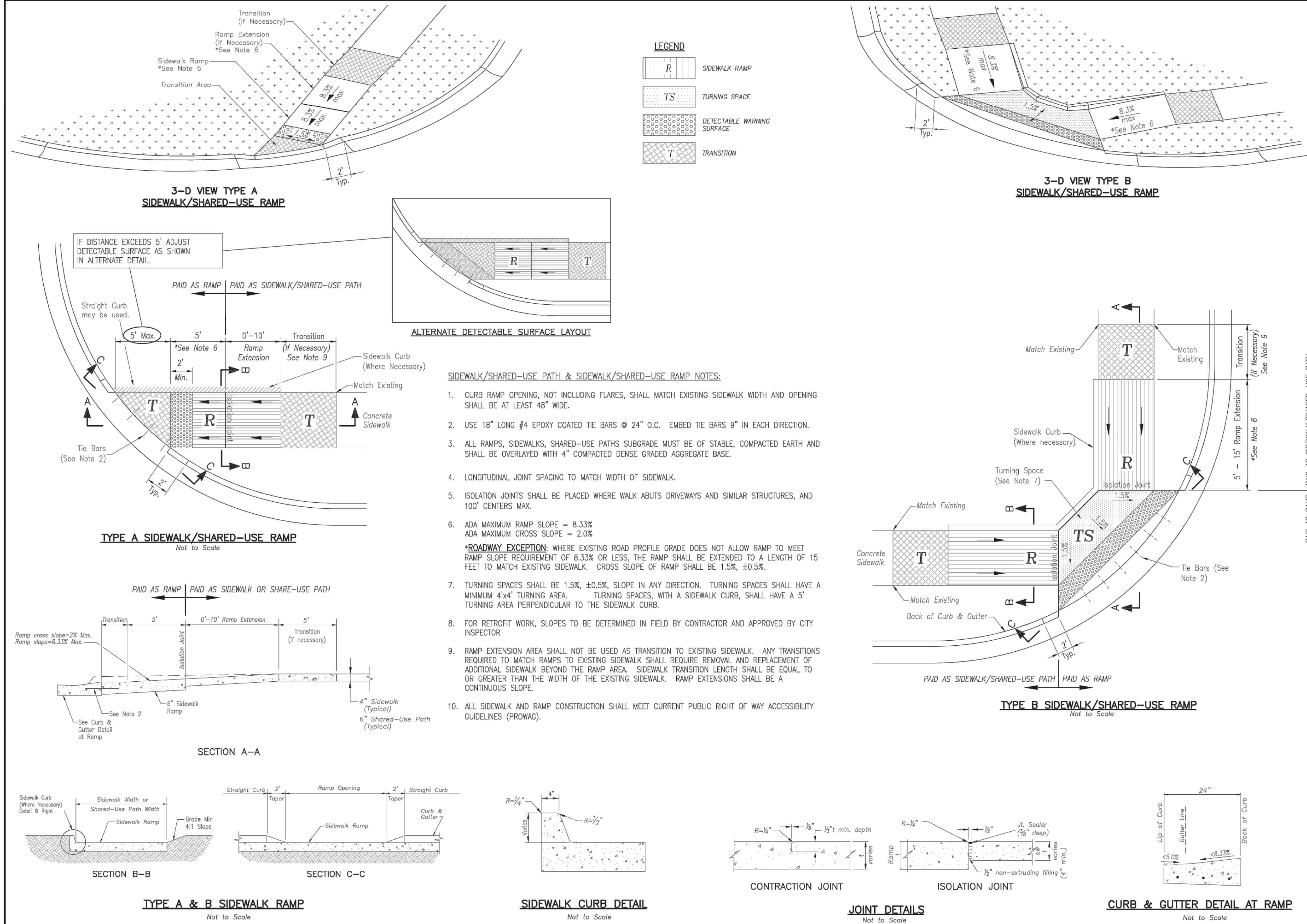
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		REVISIONS

STANDARD DETAILS

THE VILLAGE AT DISCOVERY PARK

LEE'S SUMMIT, MISSOURI

Drawn by: BJW
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 Project no.: 021-04643
 Drawing no.: T DET01 02104643
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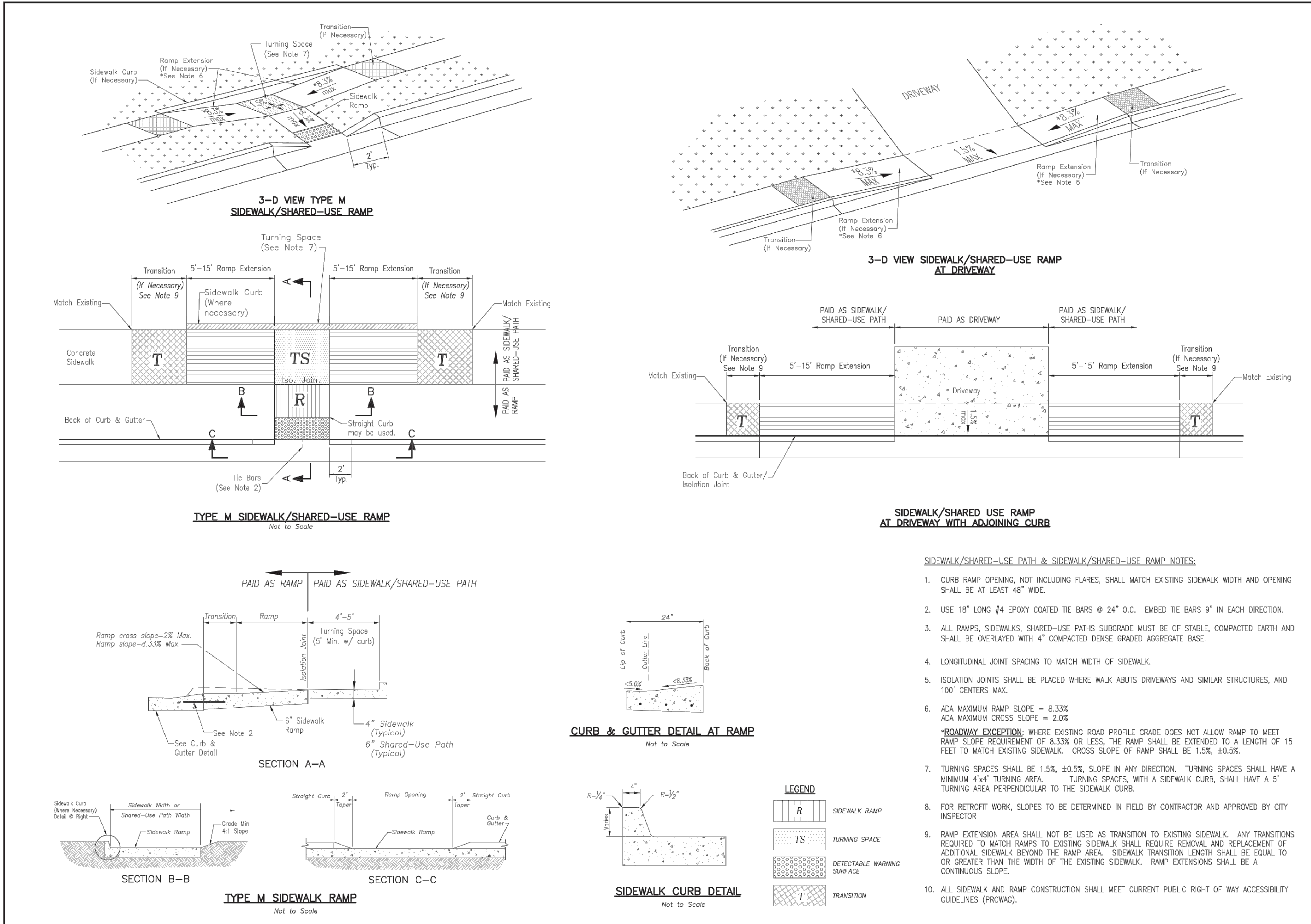
Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: ADA RAMP RETROFIT DETAIL

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

GEN-3A

REV. NO.	DATE	REVISIONS DESCRIPTION
		PRELIMINARY PLANS
		NOT FOR CONSTRUCTION

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



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

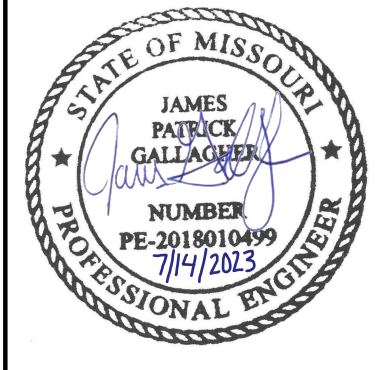
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Date: 05/2021
Proj. #:

GEN-3B

STANDARD DETAILS

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

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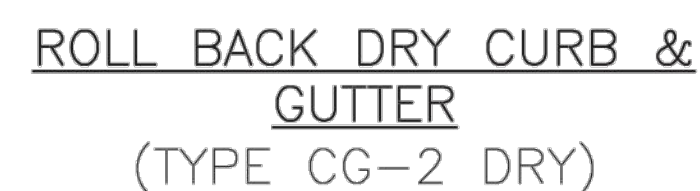
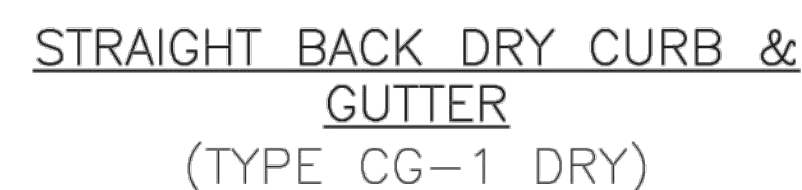


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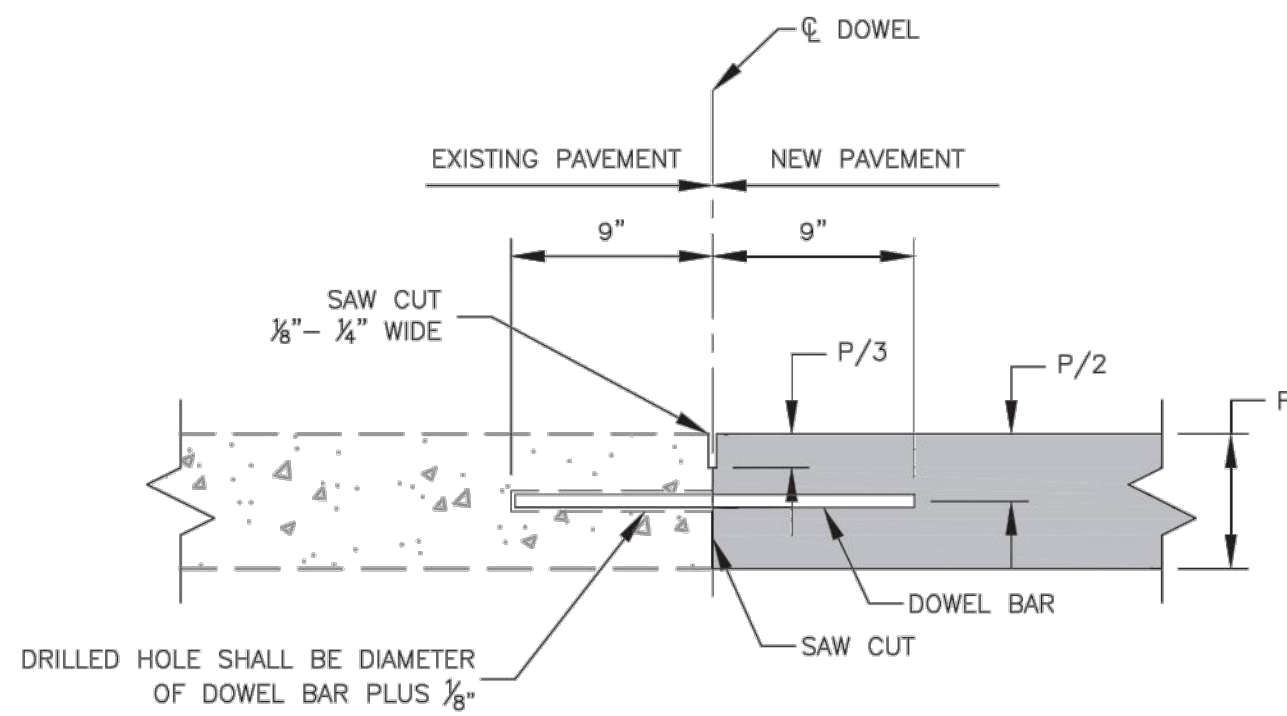
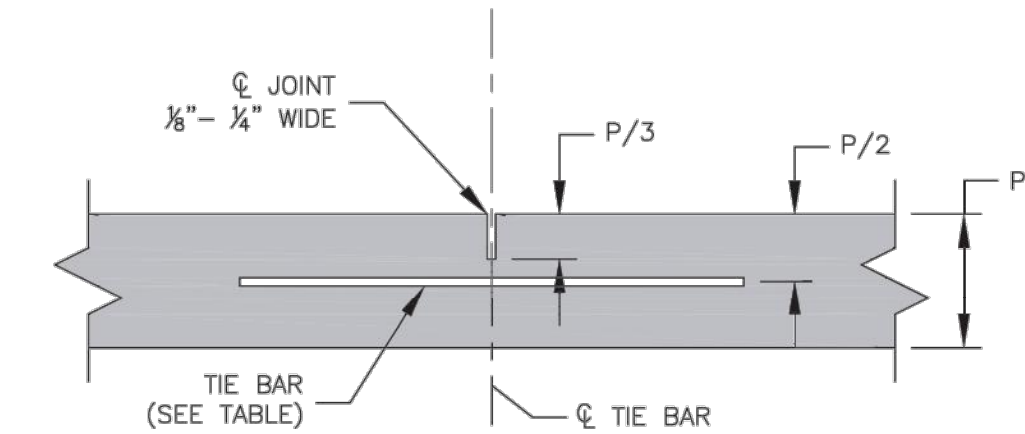
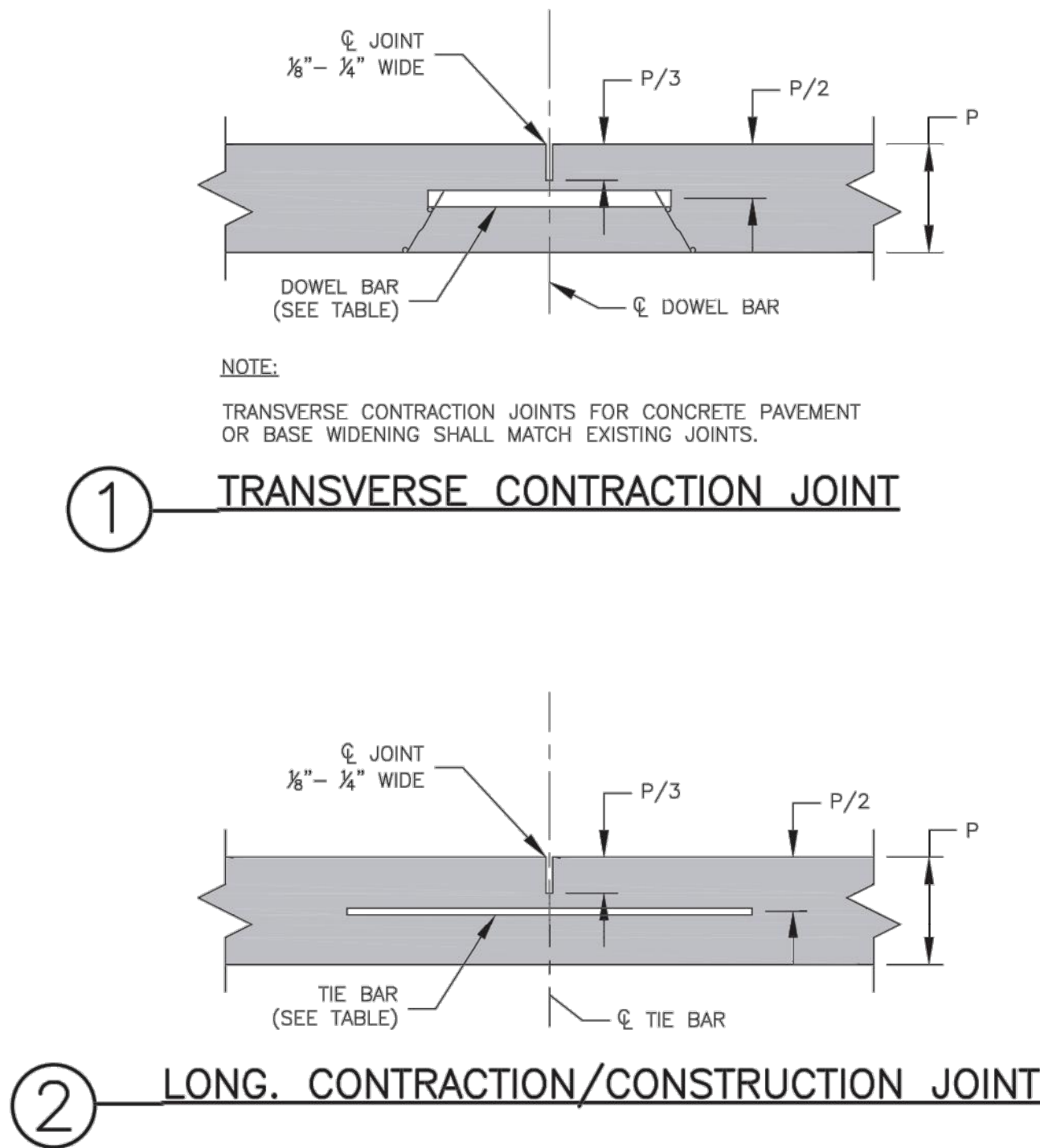
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QA/QC by: JJW
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drawing no.: T_DET01_02104843
date: 7/14/2023



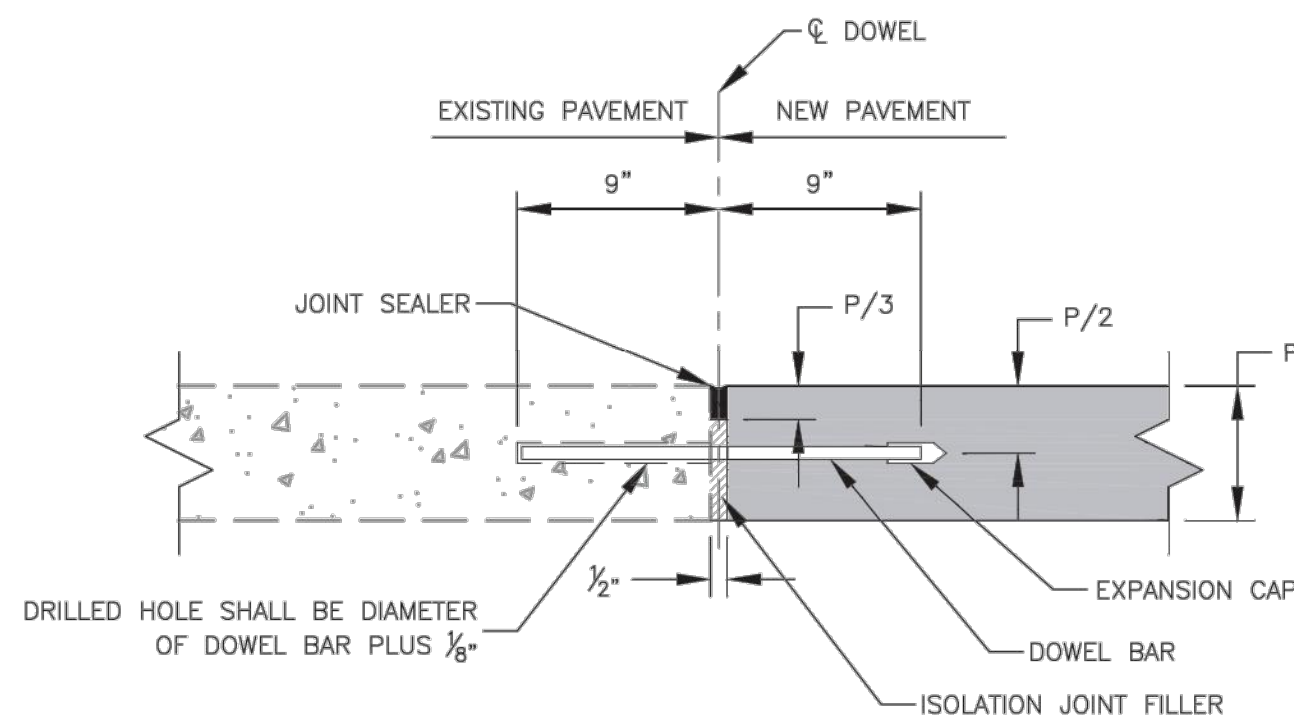
1. 3/4" ISOLATION JOINTS WITH 3' 2"-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.



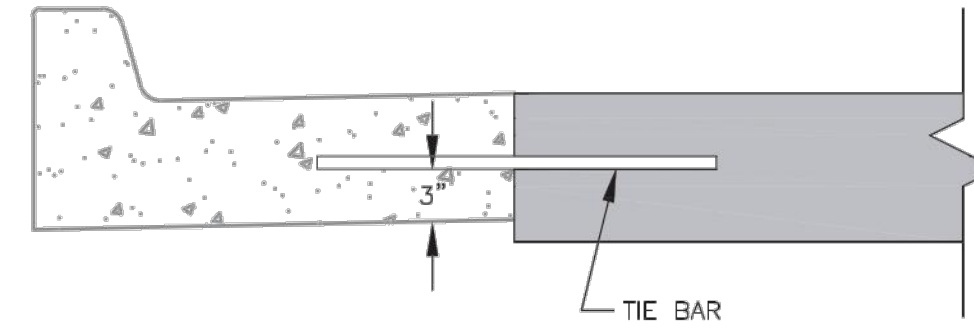
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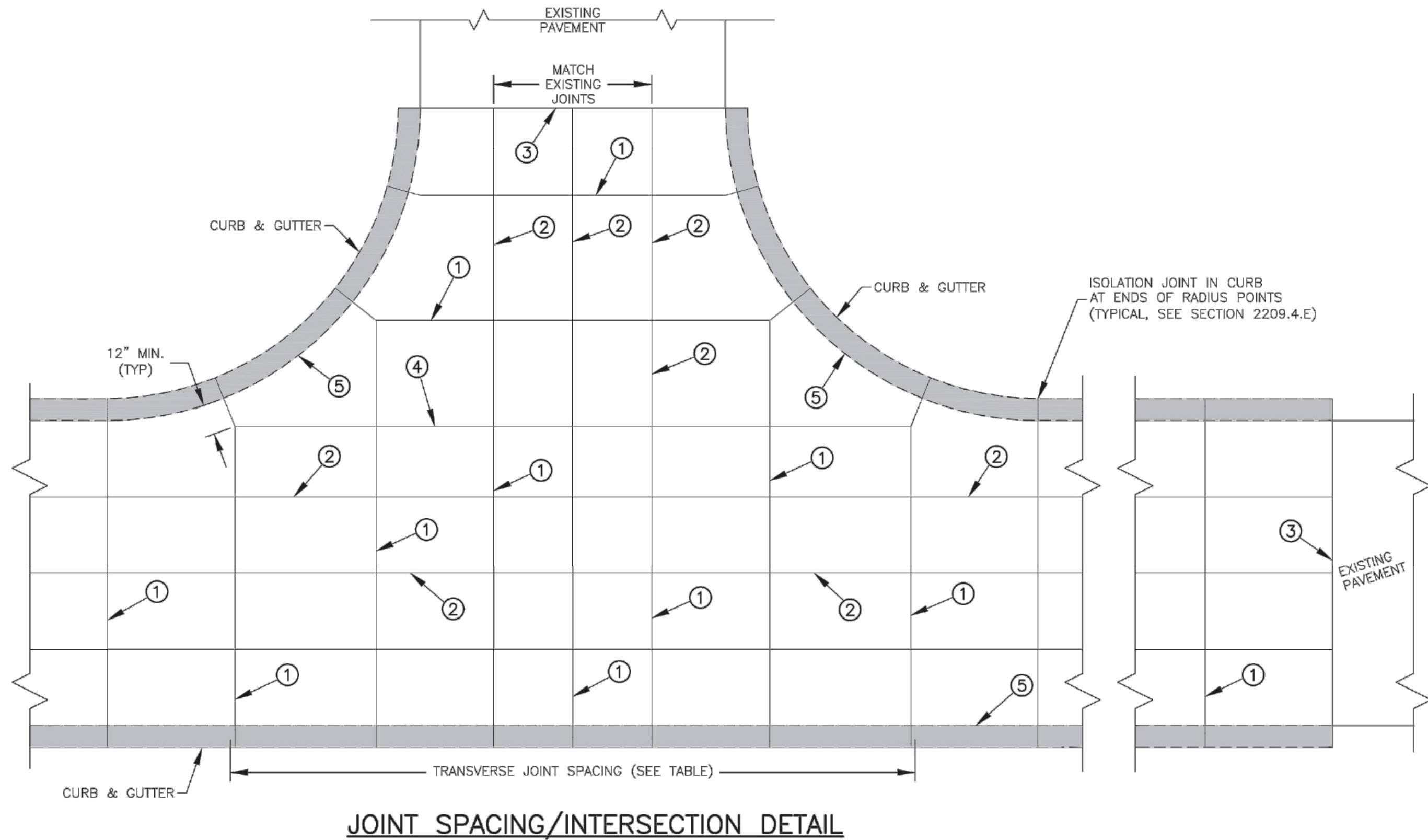
- NOTES:
- DOWEL BARS SHALL BE SMOOTH REINFORCING BARS.
 - DOWEL BARS SHALL BE BONDED INTO THE EXISTING PAVEMENT.
 - BONDING FOR DOWEL BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS.
 - THE PORTION OF THE DOWEL OUTSIDE THE HOLE SHALL BE COATED WITH AN APPROVED LUBRICANT.



- NOTES:
- DOWEL BARS SHALL BE SMOOTH REINFORCING BARS.
 - DOWEL BARS SHALL BE BONDED INTO THE EXISTING PAVEMENT.
 - BONDING FOR DOWEL BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS.
 - THE PORTION OF THE DOWEL OUTSIDE THE HOLE SHALL BE COATED WITH AN APPROVED LUBRICANT.



- NOTE:
- JOINT NOT NEEDED IF CURB & GUTTER IS MONOLITHICALLY POURED.



PCCP THICKNESS (P)	DOWEL SIZE	TIE BAR SIZE	DOWEL SPACING	TIE BAR SPACING	MAX. TRAN. SPACING	MAX. LONG. SPACING
6"	N/A	#5 x 30"	N/A	30" CTRS.	12'	12'
7"	1" x 18"	#5 x 30"	12" CTRS.	30" CTRS.	14'	14'
8"	1 1/4" x 18"	#5 x 30"	12" CTRS.	30" CTRS.	15'	14'
≥9"	1 1/2" x 18"	#5 x 30"	12" CTRS.	30" CTRS.	15'	15'

- GENERAL NOTES:
- THE FINAL POSITION OF ALL DOWELS AND TIE BARS SHALL BE PERPENDICULAR TO THE PLANE OF THE JOINT AND PARALLEL TO THE SURFACE OF THE PAVEMENT AND PARALLEL TO EACH OTHER.
 - ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.
 - DOWEL BARS SHALL BE PLACED AT 9 INCHES FROM LONGITUDINAL JOINTS.
 - TIE BARS SHALL BE PLACED AT 12 INCHES FROM TRANSVERSE JOINTS.
 - PANEL LENGTH TO WIDTH RATIO SHALL NOT EXCEED 1.5 TO 1.
 - DOWEL BASKET SHIPPING WIRE SHALL NOT BE CUT.
 - CONTRACTOR SHALL SUBMIT PROJECT SPECIFIC JOINTING PLAN AT LEAST TWO WEEKS BEFORE PAVING OPERATIONS.
 - IN ACCORDANCE WITH 2208.4.D, ALL JOINTS SHALL BE SEALED, INCLUDING CURB & GUTTER.

LEE'S SUMMIT
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Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: TYPICAL PAVEMENT JOINT DETAILS

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

GEN-9



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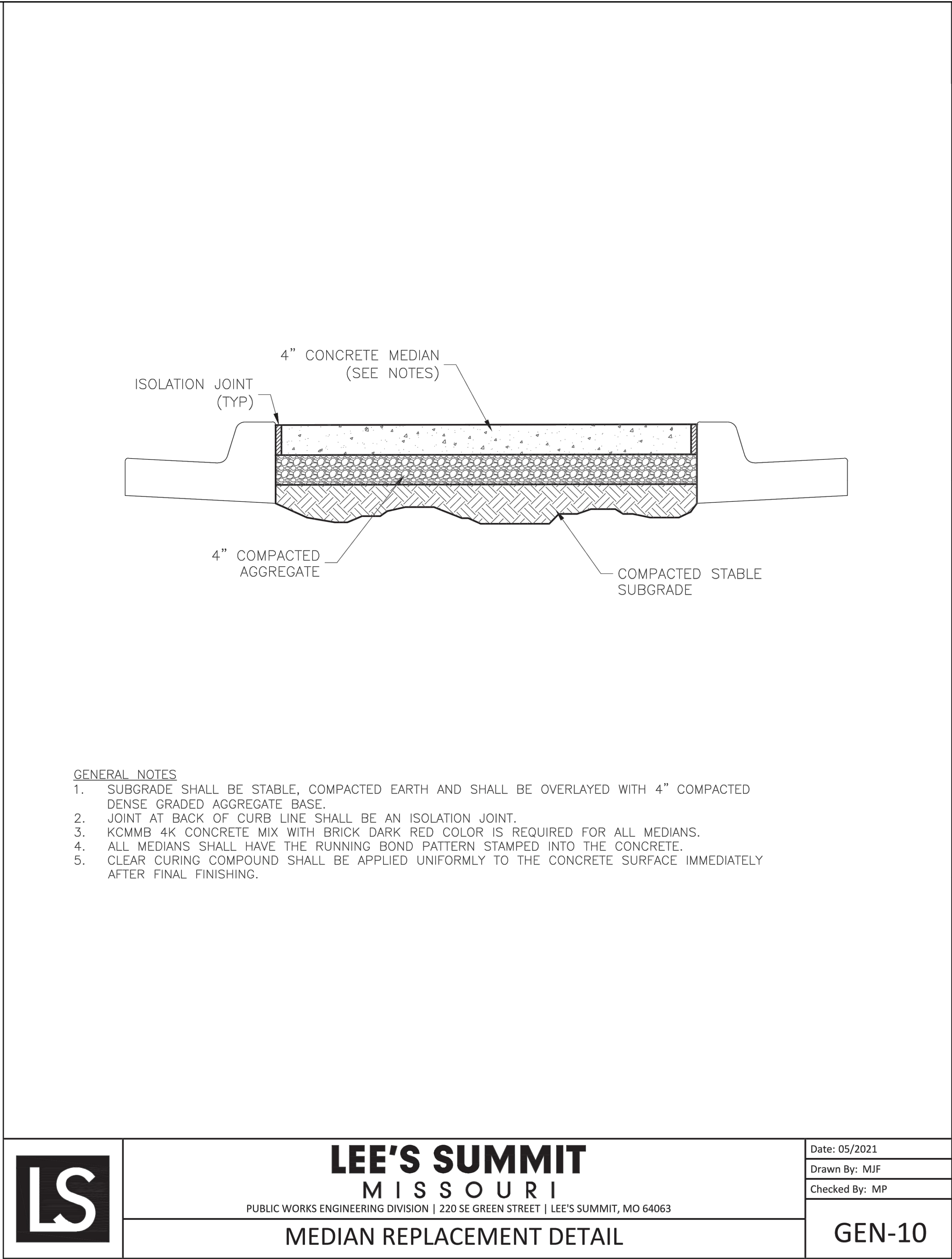
STANDARD DETAILS

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

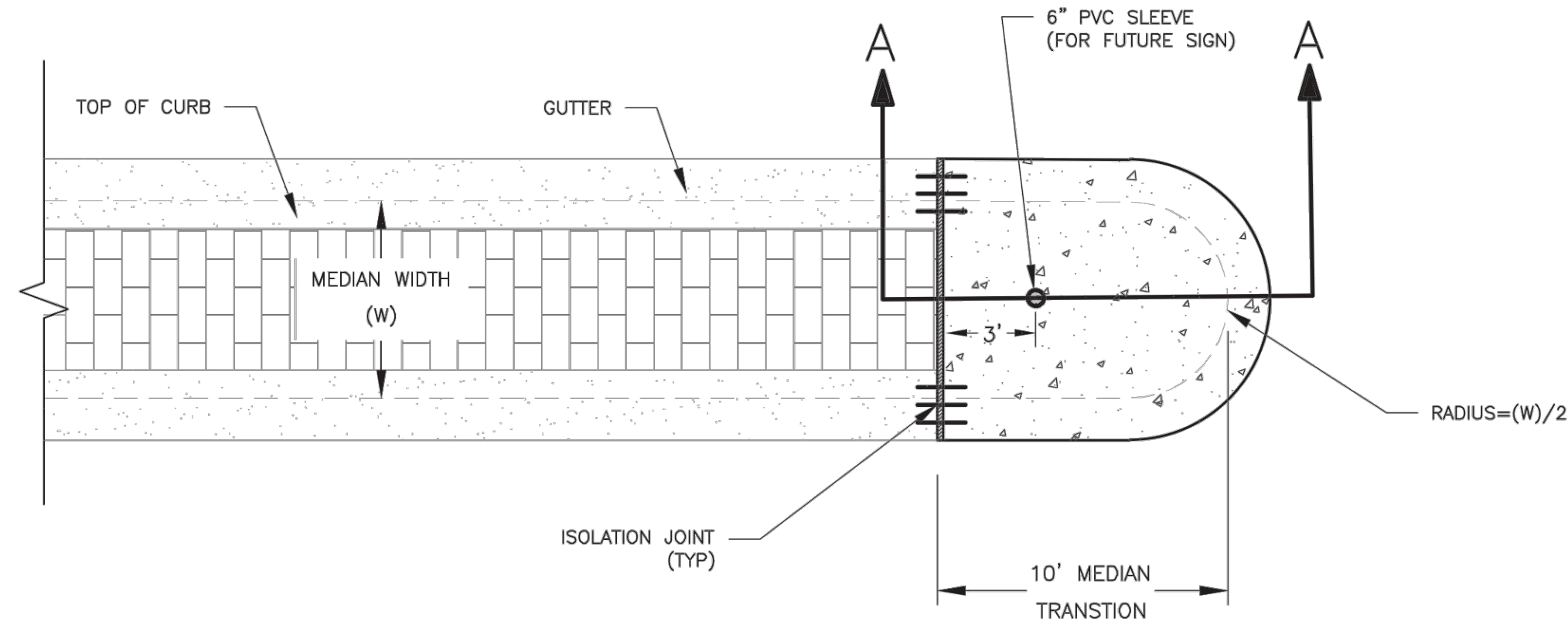
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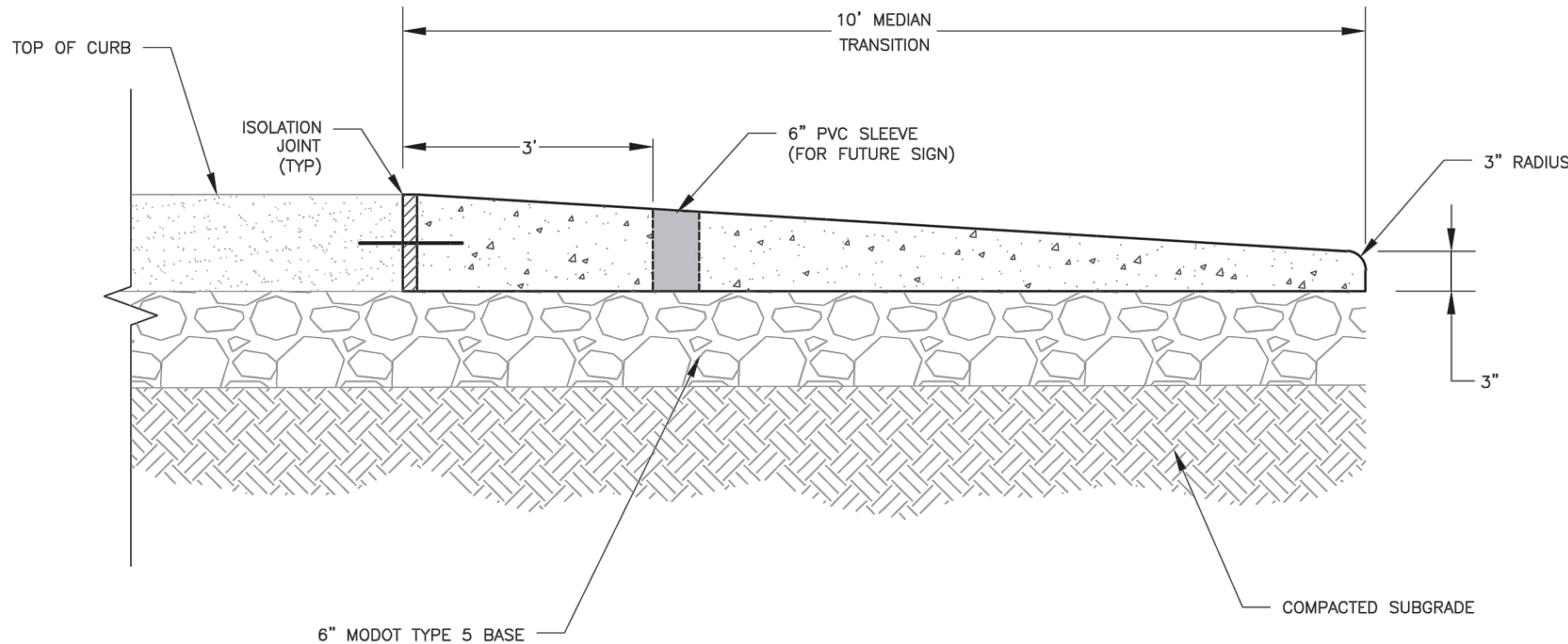
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checked by: KLV
approved by: JFG
QA/QC by: JJW
project no.: 021-04843
drawing no.: T_DET01_02104843
date: 7/14/2023



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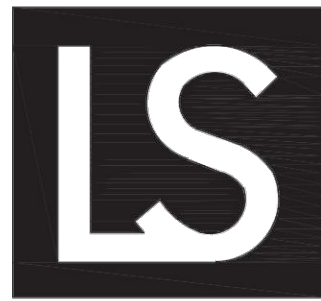
MEDIAN TRANSITION
PLAN VIEW



MEDIAN TRANSITION
SECTION A-A

NOTES:

1. $\frac{3}{4}$ " 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.



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MEDIAN TRANSITION DETAIL

Date: 05/2021

Drawn By: MJF

Checked By: MP

GEN-11

STANDARD DETAILS

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_DET01_02104643
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35 OF 85

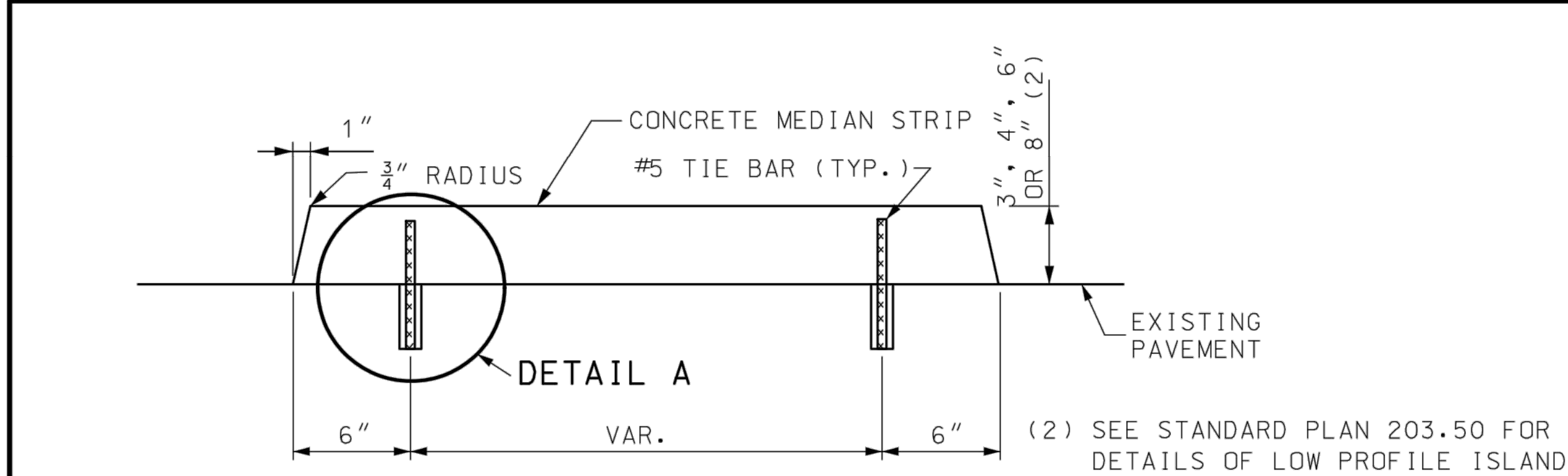


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REVISIONS		

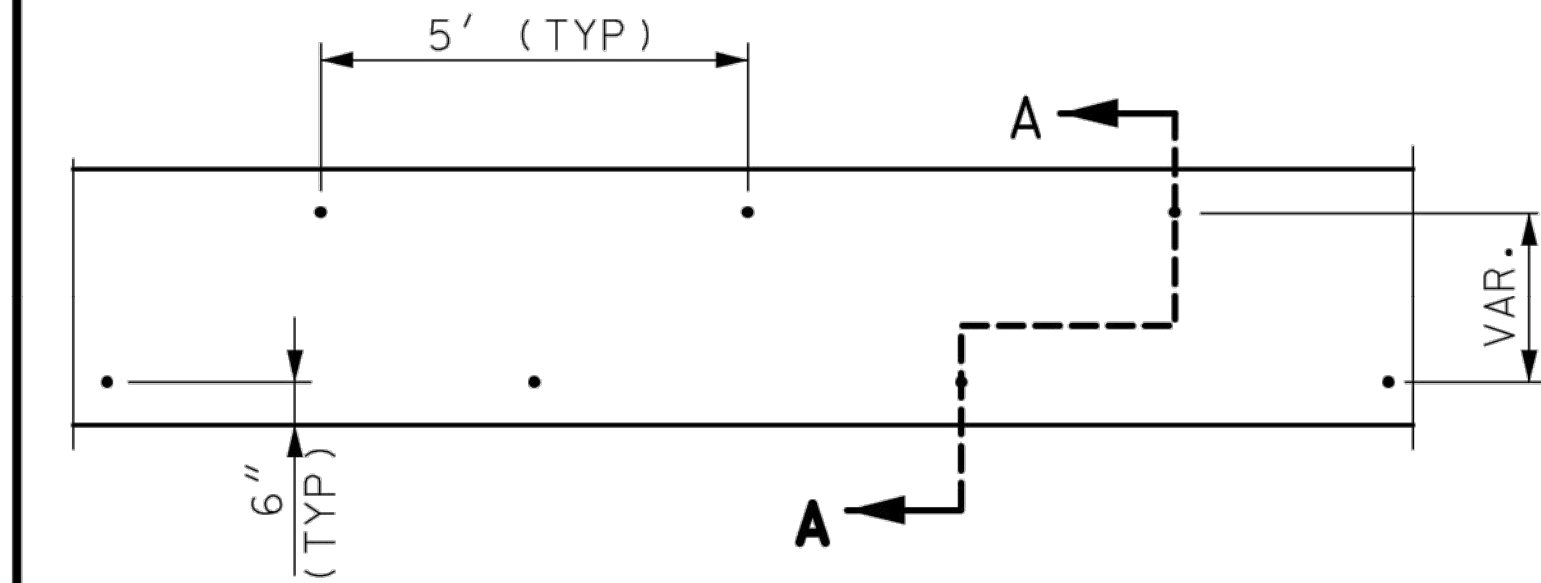
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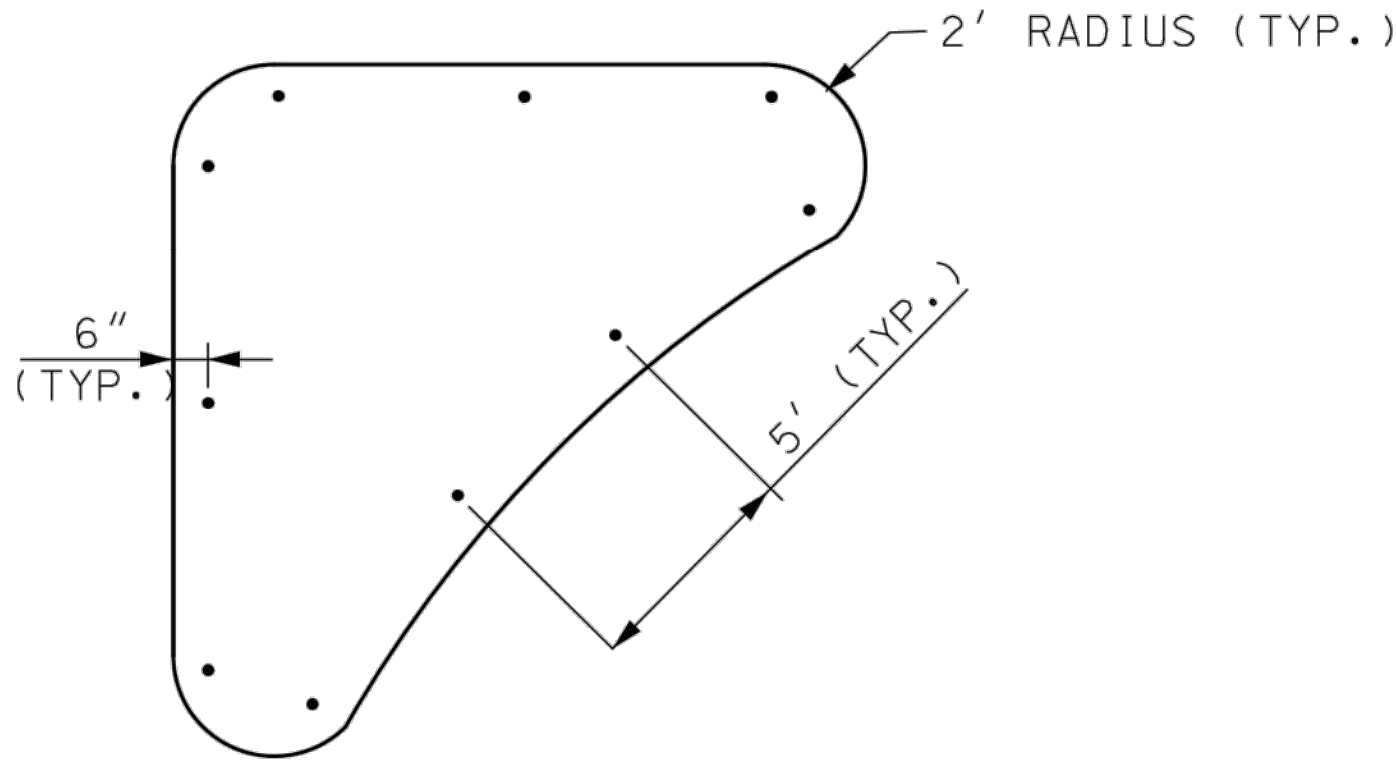
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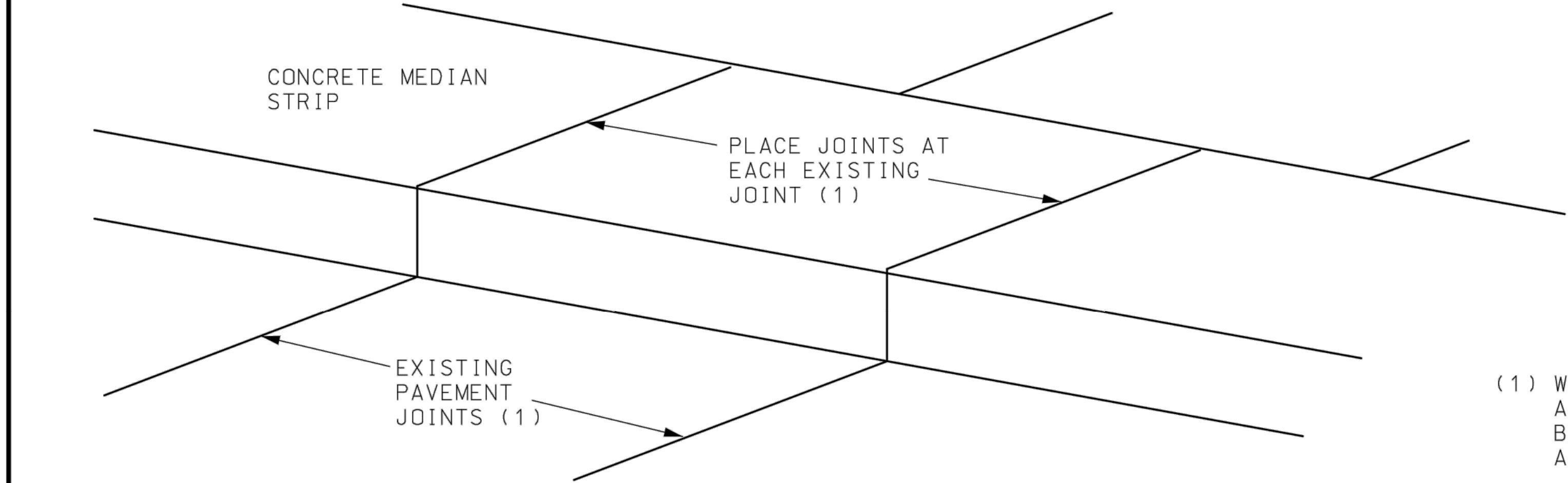
SECTION A-A
CONCRETE MEDIAN STRIP



TIE BAR LOCATIONS FOR
CONCRETE MEDIAN STRIP

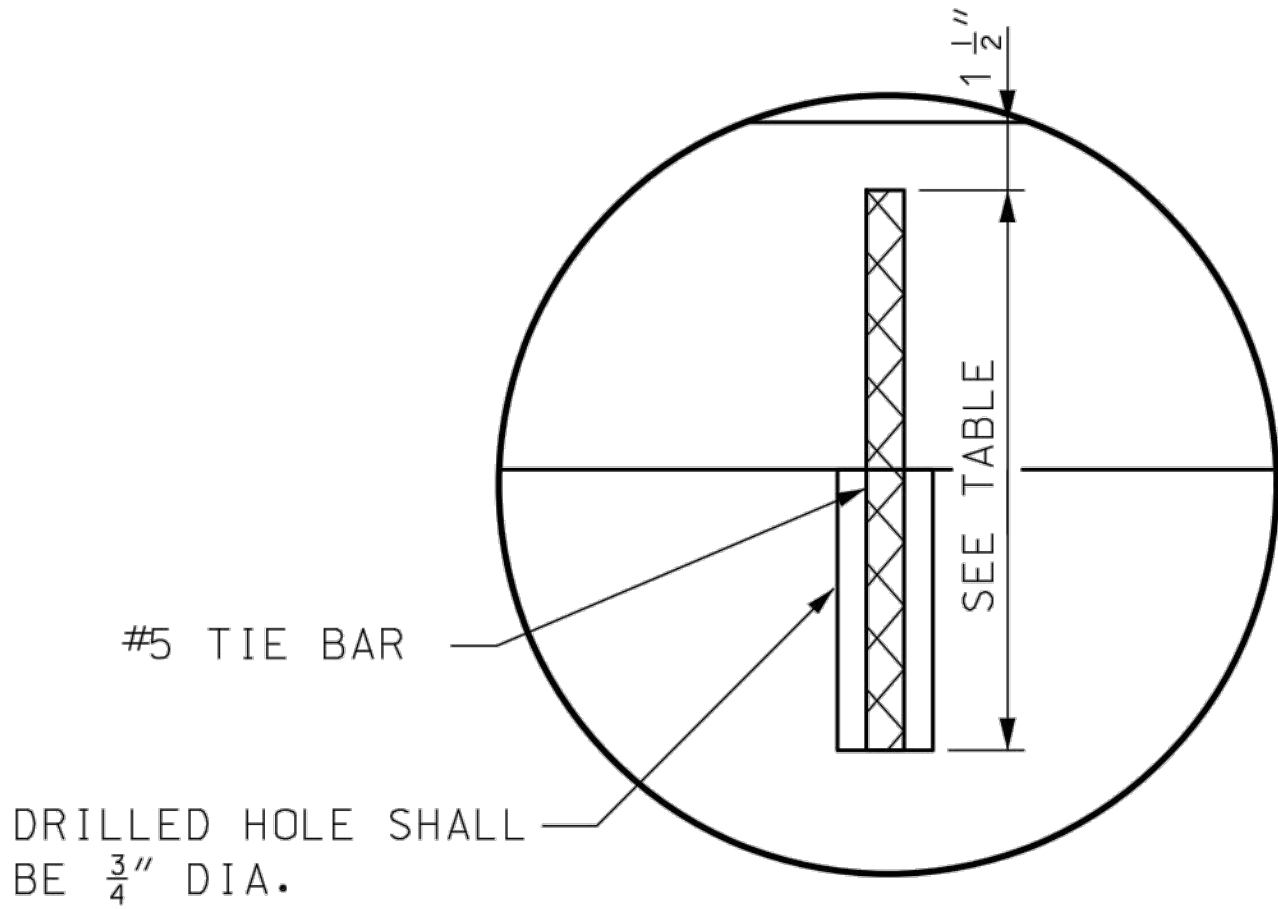


TIE BAR LOCATIONS FOR
CONCRETE MEDIAN STRIP (ISLAND)



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'.



DETAIL A

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

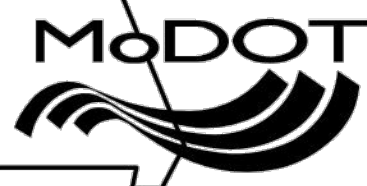
GENERAL NOTES:

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.

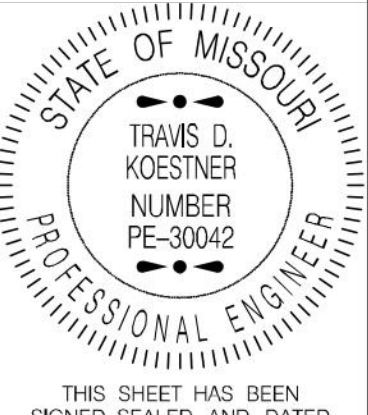
THE FACE OF THE MEDIAN MAY BE CONSTRUCTED WITHOUT BATTER WHEN CONSTRUCTED ON A RADIUS OF 6' OR LESS.

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)

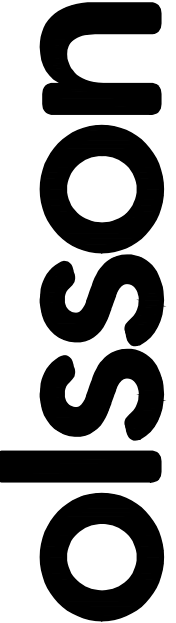


CONCRETE MEDIAN STRIP

DATE EFFECTIVE: 10/01/2020
DATE PREPARED: 7/21/2020

608.30A

SHEET NO.
1 OF 1



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JAMES PATRICK GALLAGHER
NUMBER PE-2018010499
7/14/2023
PROFESSIONAL ENGINEER

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STANDARD DETAILS

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

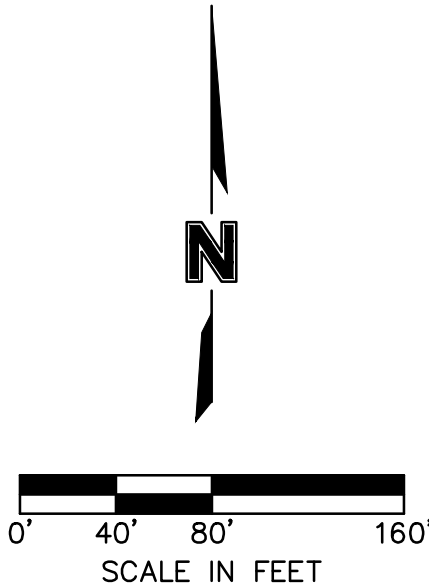
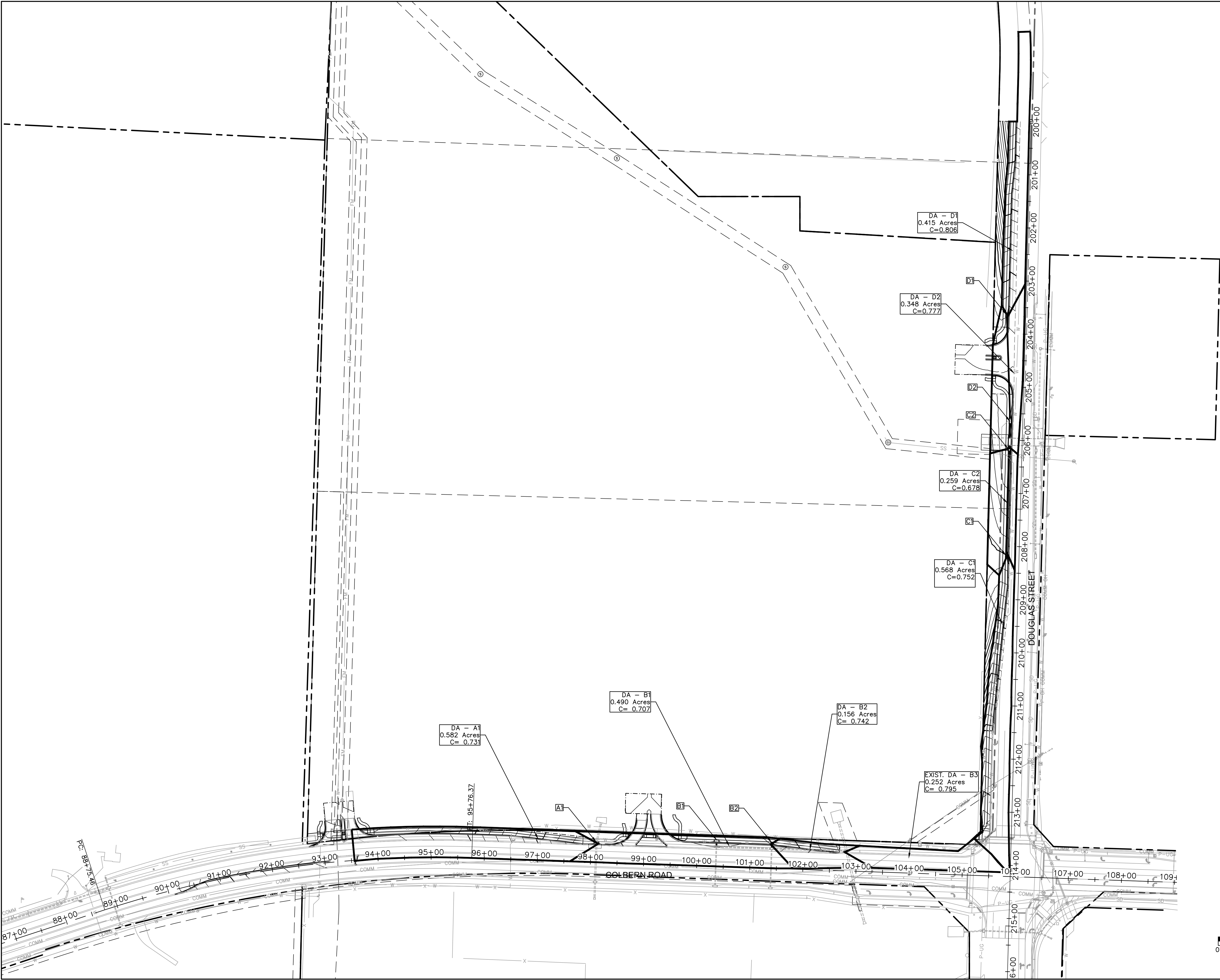
LEE'S SUMMIT, MISSOURI

2023

drawn by: BJW
checked by: KIW
approved by: JFG
QA/QC by: JJW
project no.: 021-04843
drawing no.: T_DET01_02104843
date: 7/14/2023

SHEET
36 OF 85

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DRAINAGE AREA MAP		REV. NO.		DATE	REVISIONS DESCRIPTION
THE VILLAGE AT DISCOVERY PARK					PRELIMINARY PLANS
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS					NOT FOR CONSTRUCTION
LEE'S SUMMIT, MISSOURI					REVISIONS
					2023
drawn by: BJW					
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date: 7/14/2023					
SHEET 37 OF 85					

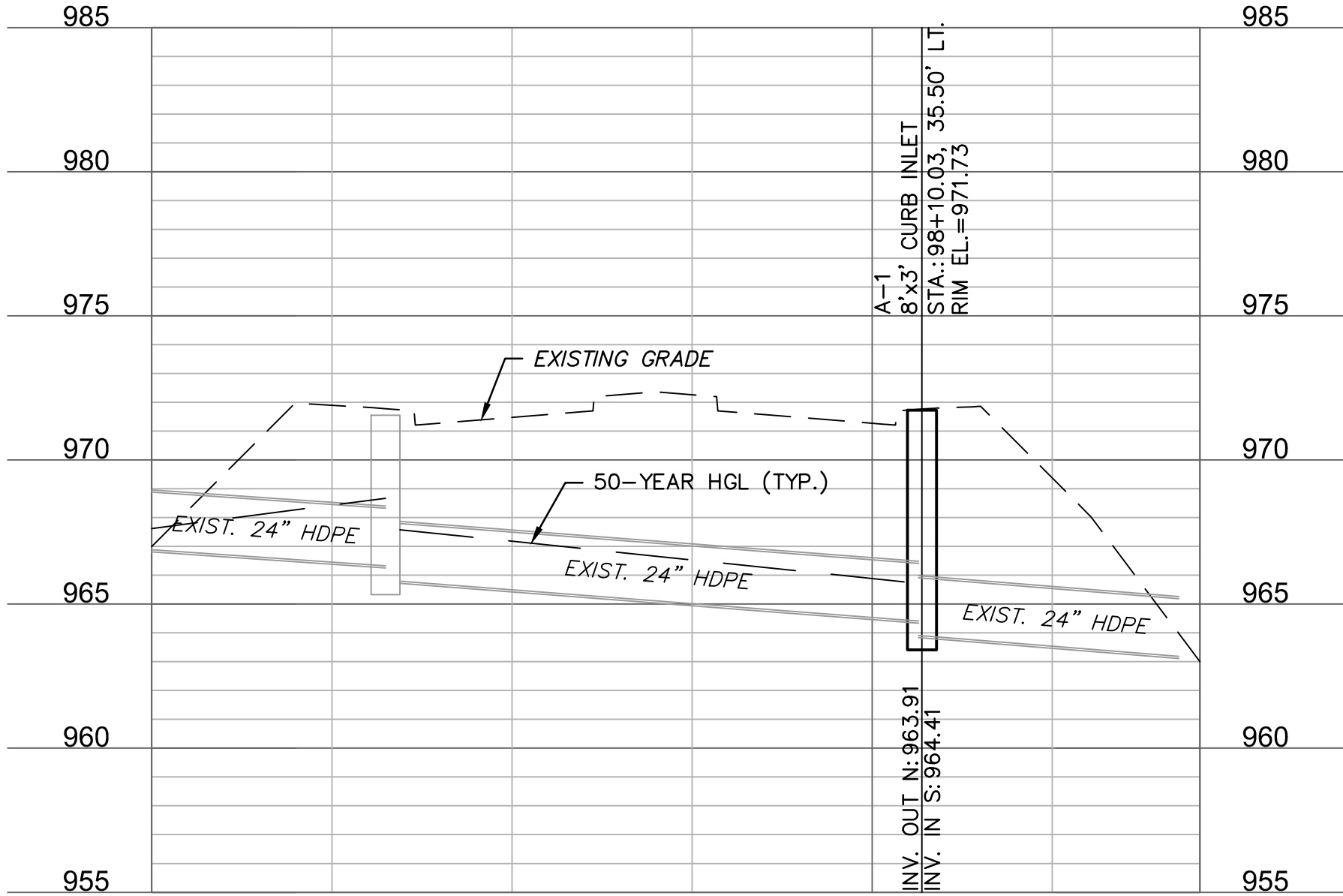
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TEL 816.361.1177 www.olsson.com

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	2.88	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	955.93	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	

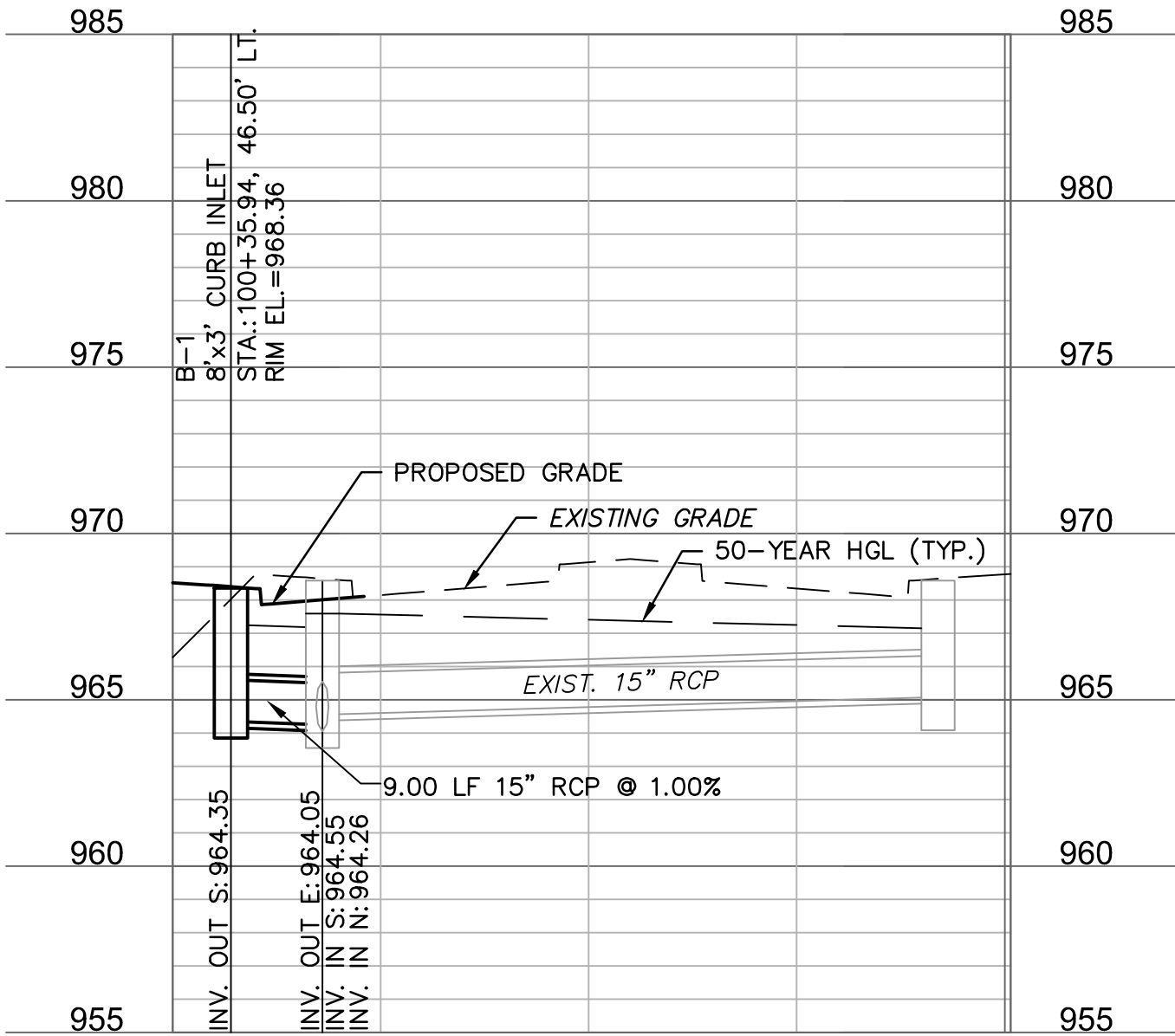
50-YEAR STORM PIPE CALCULATIONS																									
Label	Start Node	Stop Node	Upstream Inlet Area (acres)	Upstream Inlet C	Upstream Inlet Tc (min)	System CA (acres)	Time (Pipe Flow) (min)	System Flow Time (min)	System Rational Flow (cfs)	Invert (Start) (ft)	Invert (Stop) (ft)	Slope (Calculated) (%)	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	0.58	7.16	2.60	952.00	949.00	1.50	200.40	Circle	Concrete	15	2.60	5.77	7.90	32.9	952.65	949.49	952.90	950.01	
P-D2	D2	Exist. RCB	0.35	0.68	5.0	0.66	0.05	7.74	6.74	945.00	943.50	4.69	38.40	Circle	Concrete	15	6.74	11.30	13.99	48.2	946.04	944.95	946.63	945.42	

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DATE: Jul 14, 2023 10:56am XREFS: T_PBASE_D02104643 T_PBLK_D02104643 T_PSTRM_D02104643 T_PSTRMPCF_D02104643 USER: kwilliams2

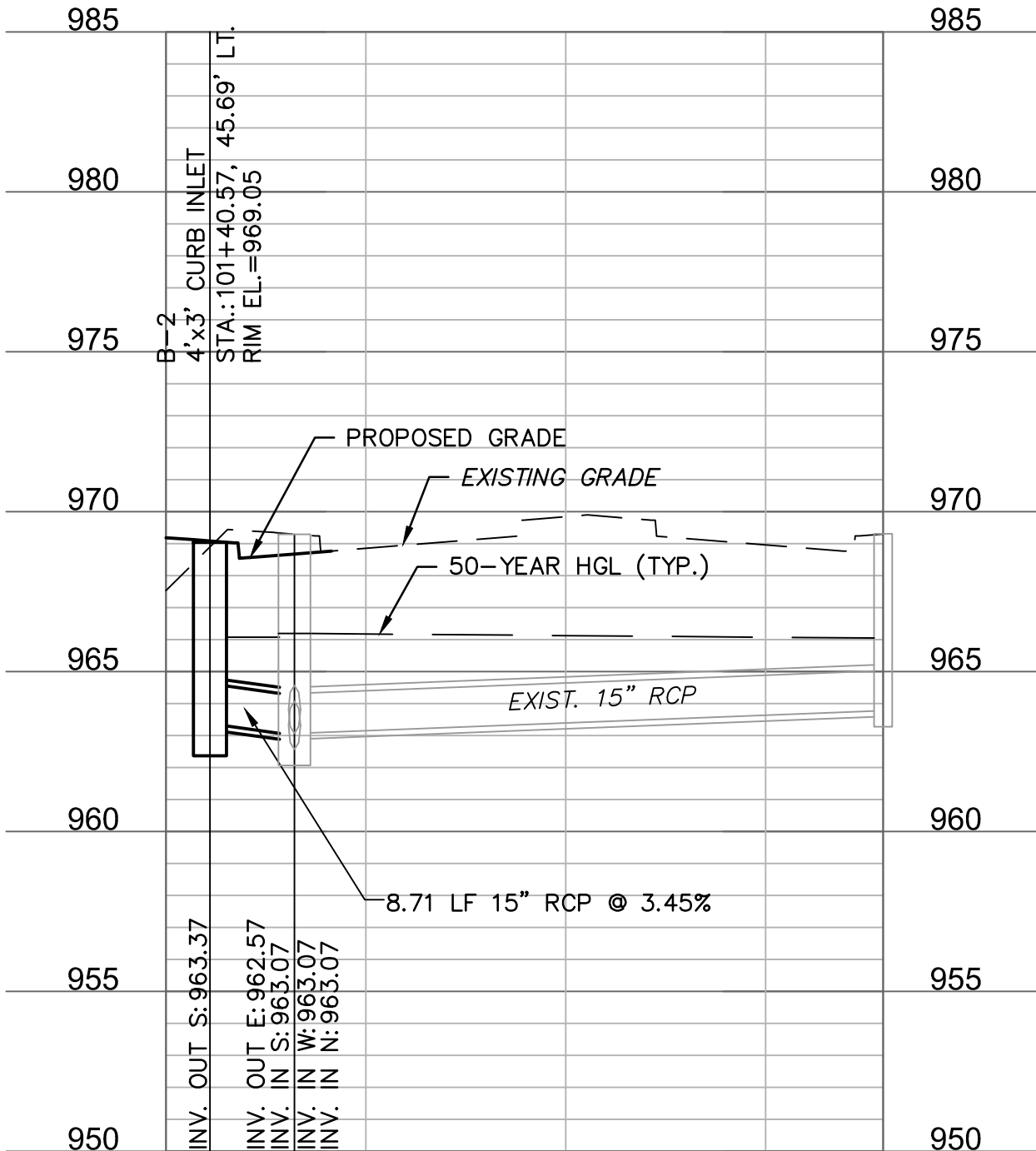
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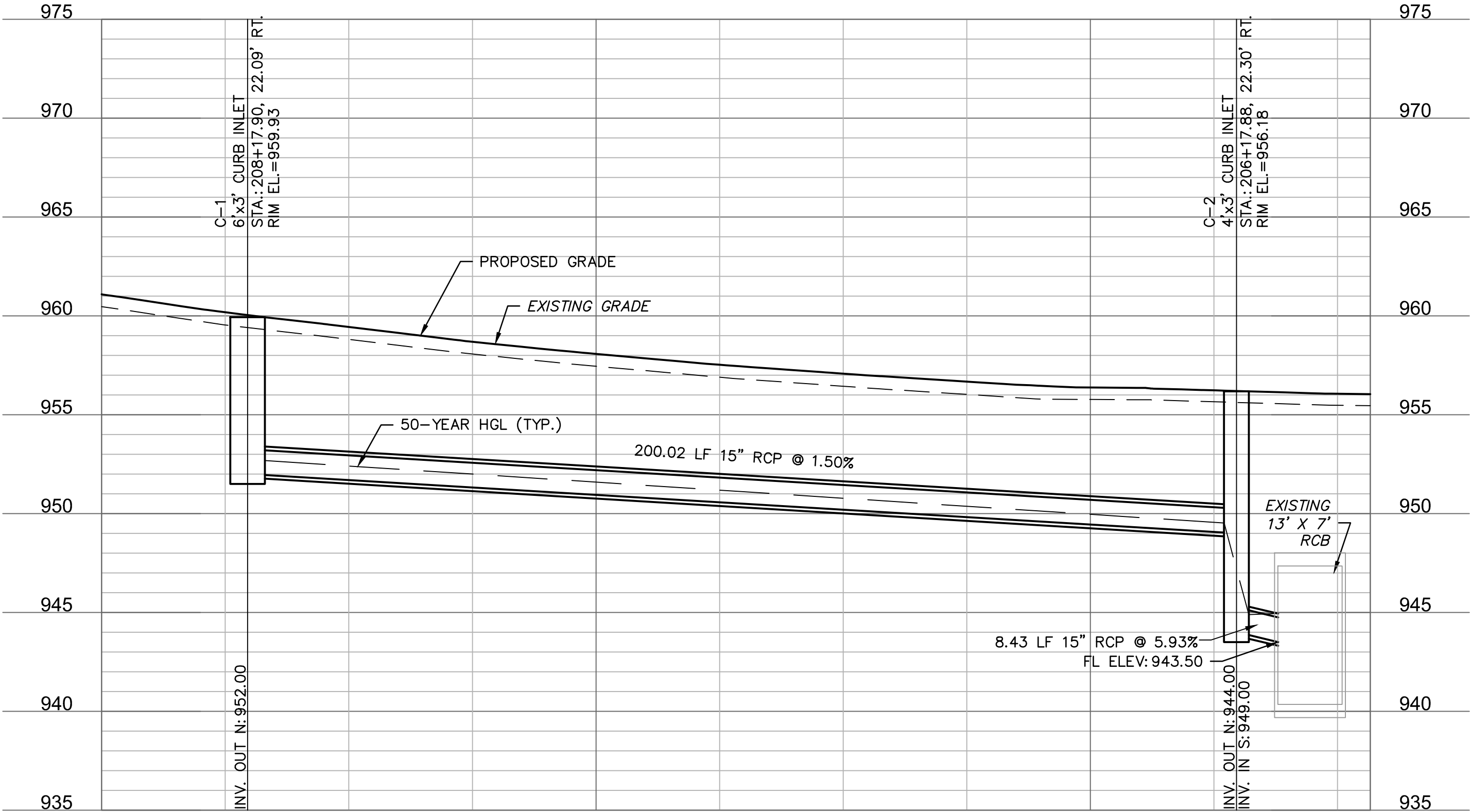
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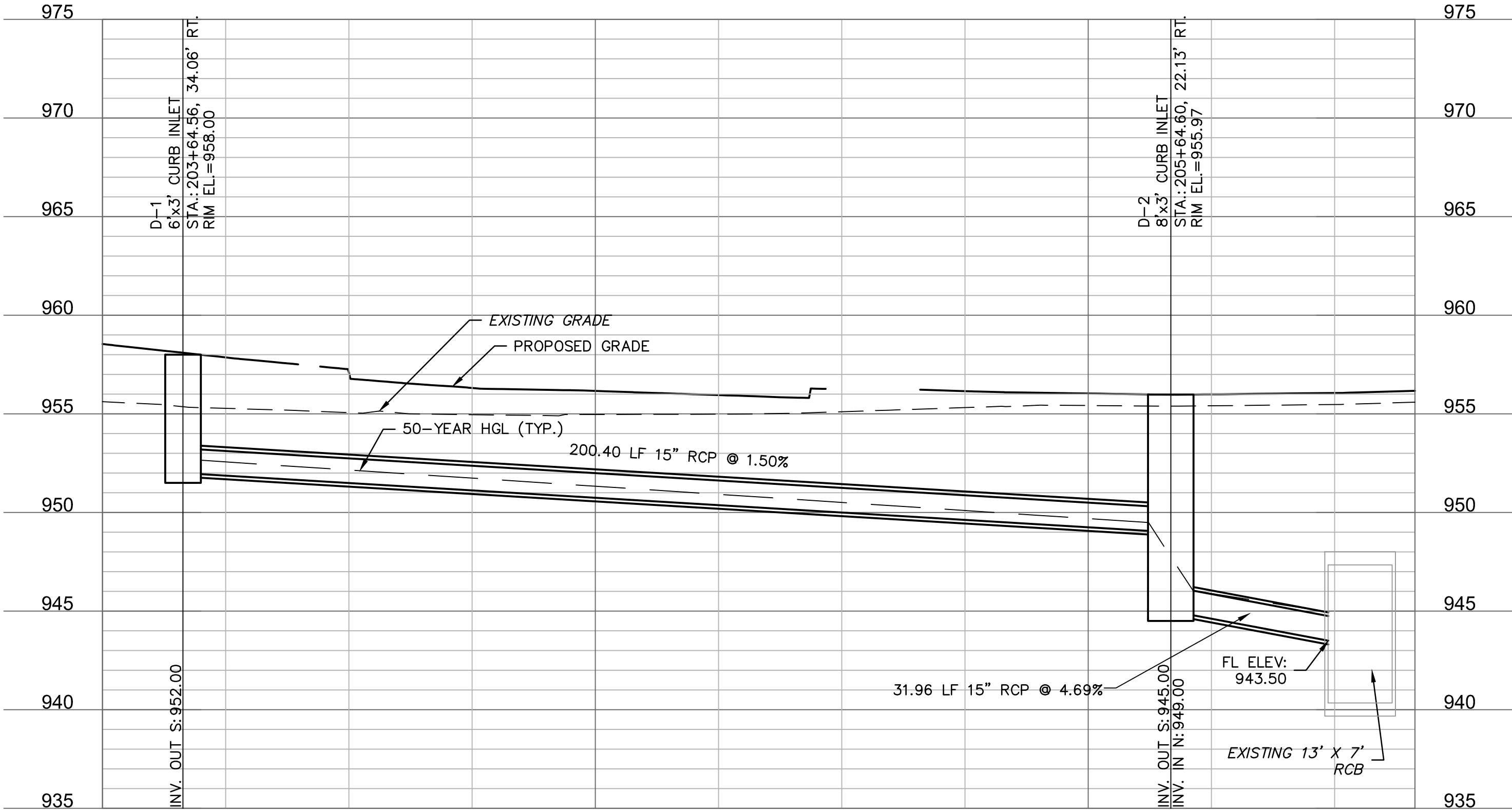
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STORMLINE C (0+00 - 2+56.63)



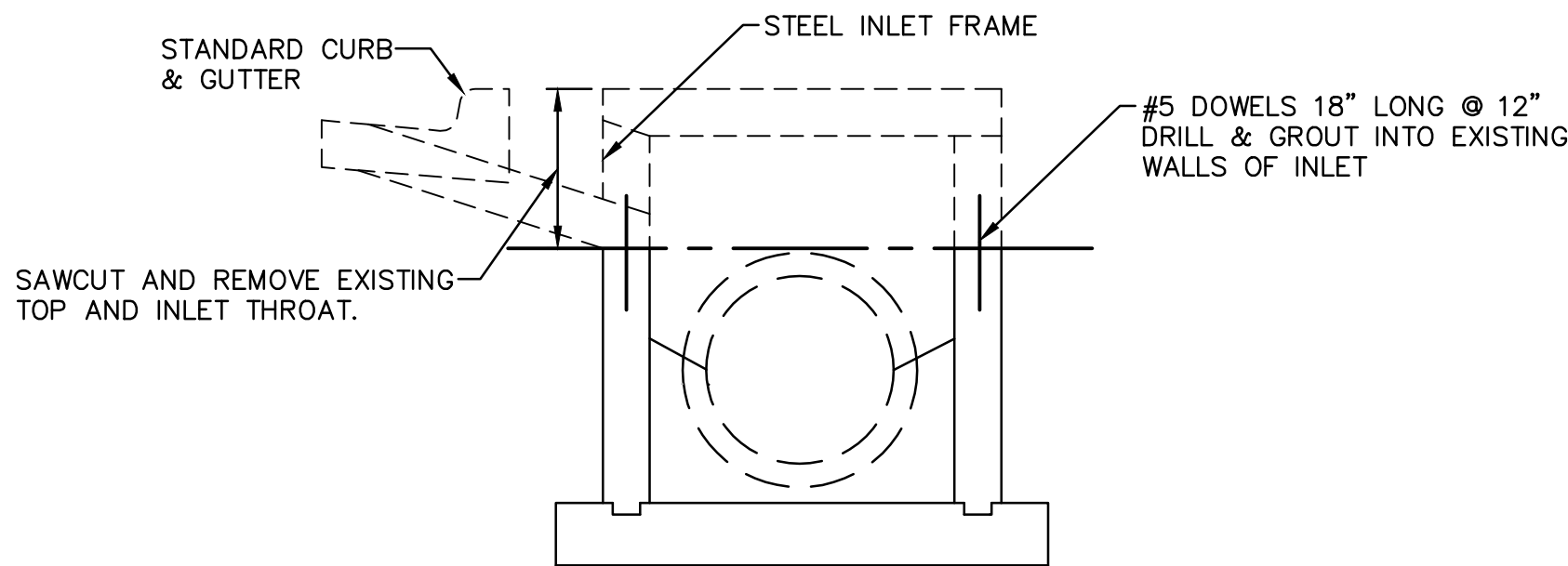
STORMLINE D (0+00 - 2+66.30)



REV. NO.	DATE	REVISIONS DESCRIPTION
		PRELIMINARY PLANS
		NOT FOR CONSTRUCTION
REVISIONS		

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: 7/14/2023



- olsson**

[illegible]

STORM SEWER DETAILS

THE VILLAGE AT DISCOVERY PARK

LEE'S SUMMIT, MISSOURI

drawn by: _____ BJW
checked by: _____ KLW
approved by: _____ JPG
QA/QC by: _____ JJW
project no.: _____ 021-04643
drawing no.: _____ STMD01 D02104643
date: _____ 7/14/2023

GENERAL NOTES:

1. 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.
2. 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.
3. 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.
4. 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.
5. 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".
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. Bracket arms shall be oriented perpendicular to the roadway unless otherwise indicated on the plans.
15. 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.
16. 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.
17. All grounding requirements and National Electric Code requirements shall be met for the street lighting installation to prevent any hazards to the public.
18. 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.
19. 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.
20. The Contractor shall take all precautions necessary to minimize the downtime of the existing street lighting systems to be modified.
21. 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.
22. Any equipment damaged during construction shall be replaced at the contractor's expense.
23. 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.
24. 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.
25. 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:

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

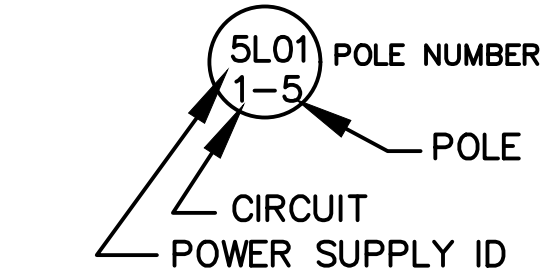
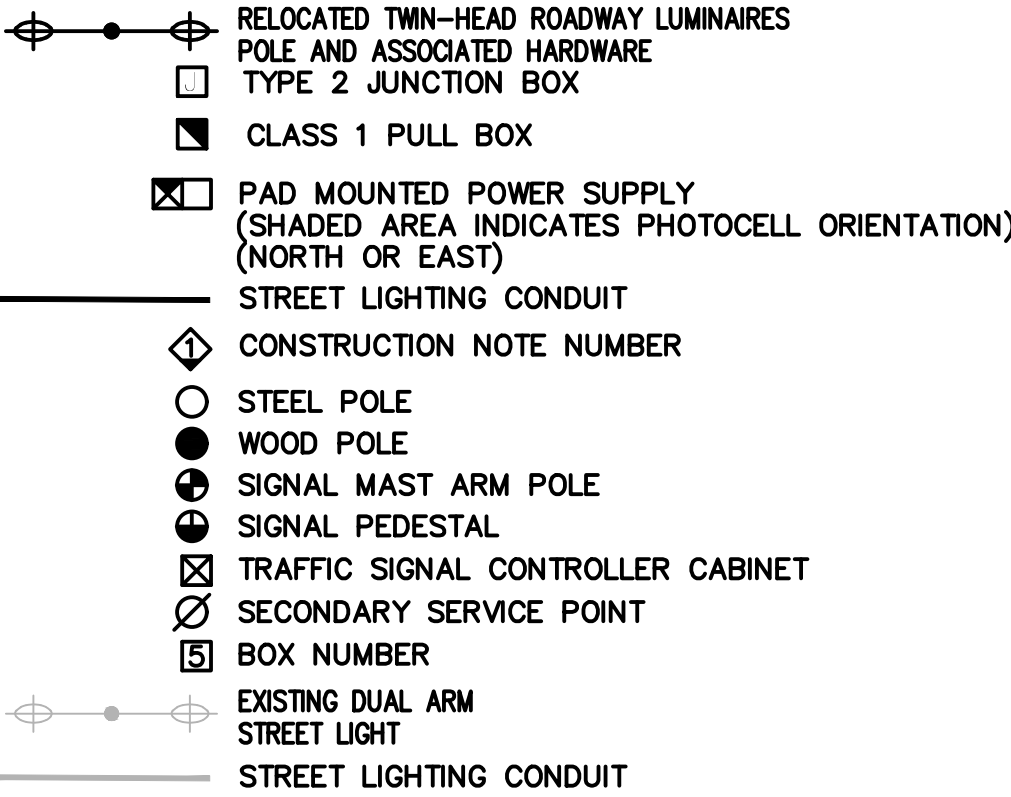
RECAPITULATION OF QUANTITIES

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.

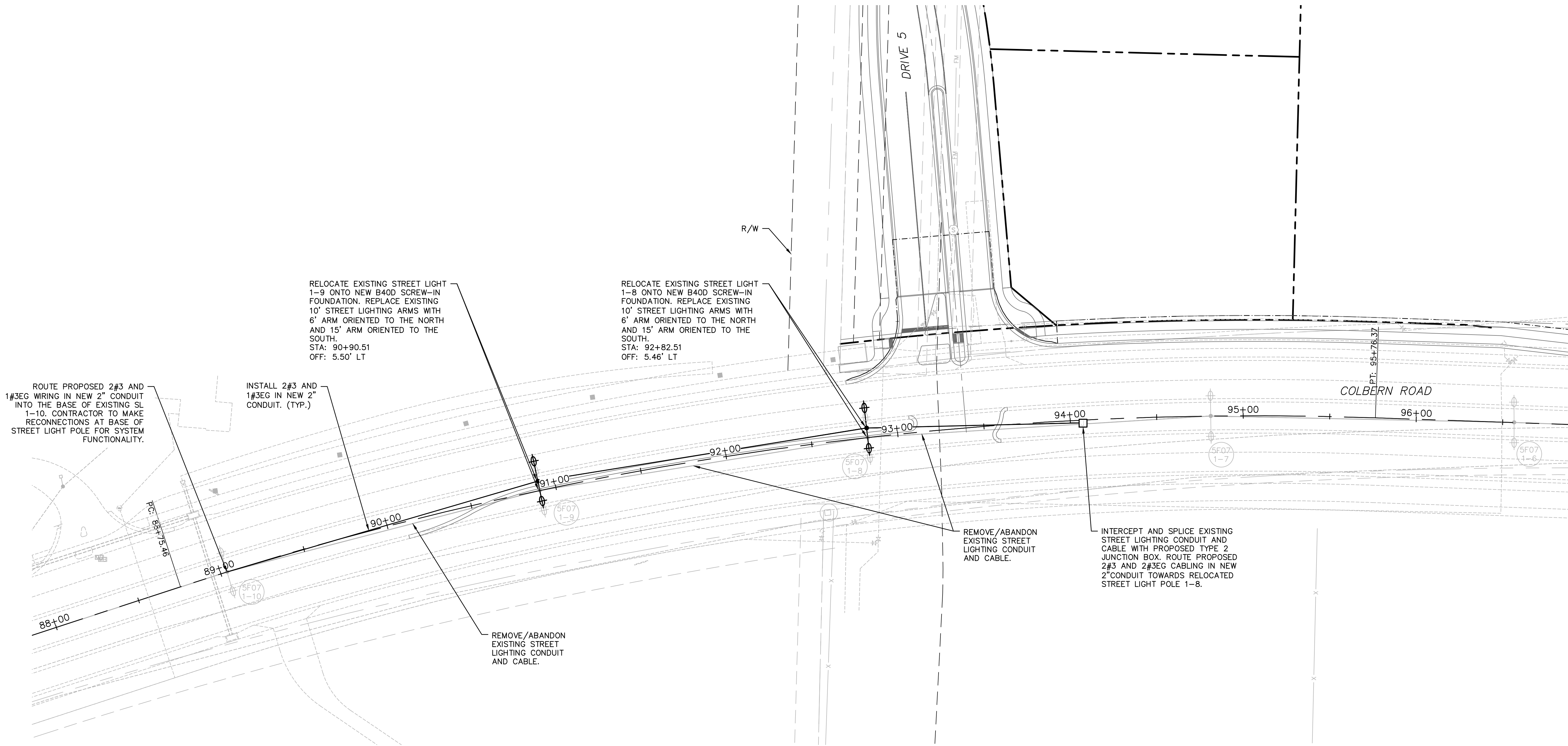
STREET LIGHT LEGEND



WIRING DIAGRAM

drawn by: _____ SRH checked by: _____ JSC approved by: _____ JSS QA/QC by: _____ SLJ project no.: 021-04543 drawing no.: 1 OF 2 (04/06/2023) date: 7/14/2023 1301 Burlington Street North Kansas City, MO 64116 TEL 816.381.1177 www.olsson.com	
STREET LIGHTING PLAN GENERAL NOTES & LEGEND	REV. NO. DATE REVISIONS DESCRIPTION
THE VILLAGE AT DISCOVERY PARK COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	PRELIMINARY PLANS NOT FOR CONSTRUCTION
LEE'S SUMMIT, MISSOURI	2023 REVISIONS
SHEET 42 OF 85	

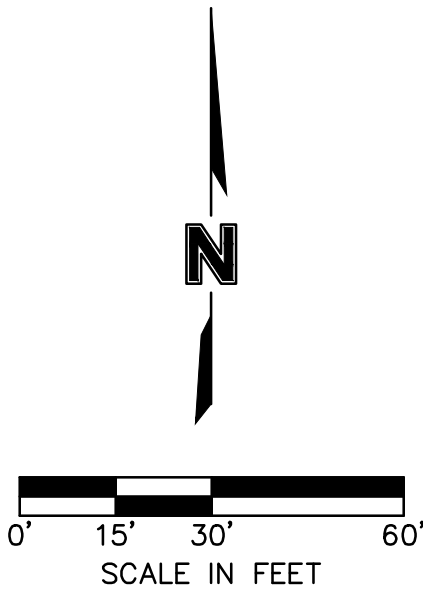
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DATE: Jul 14, 2023 10:57am XREFS: T_PSTRM_D02104643 C_PBASE_D2104643 C_XALTA_B2104643 C_PBN DY_D2104643



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



olsson

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

LIGHTING RELOCATION
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: SLT

project no.: 021-04643

drawing no.: 43 OF 85

date: 7/14/2023

REVISIONS DESCRIPTION

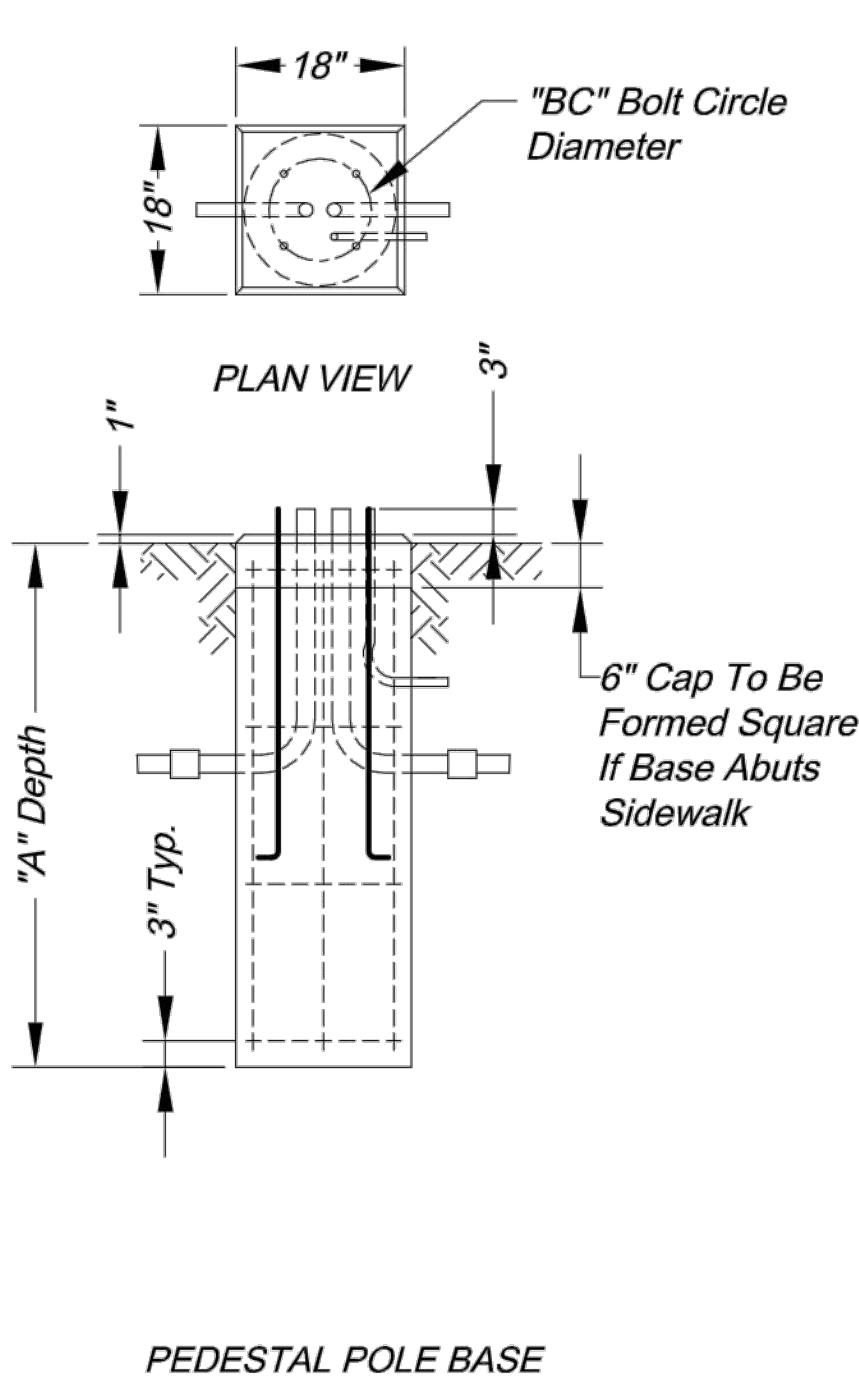
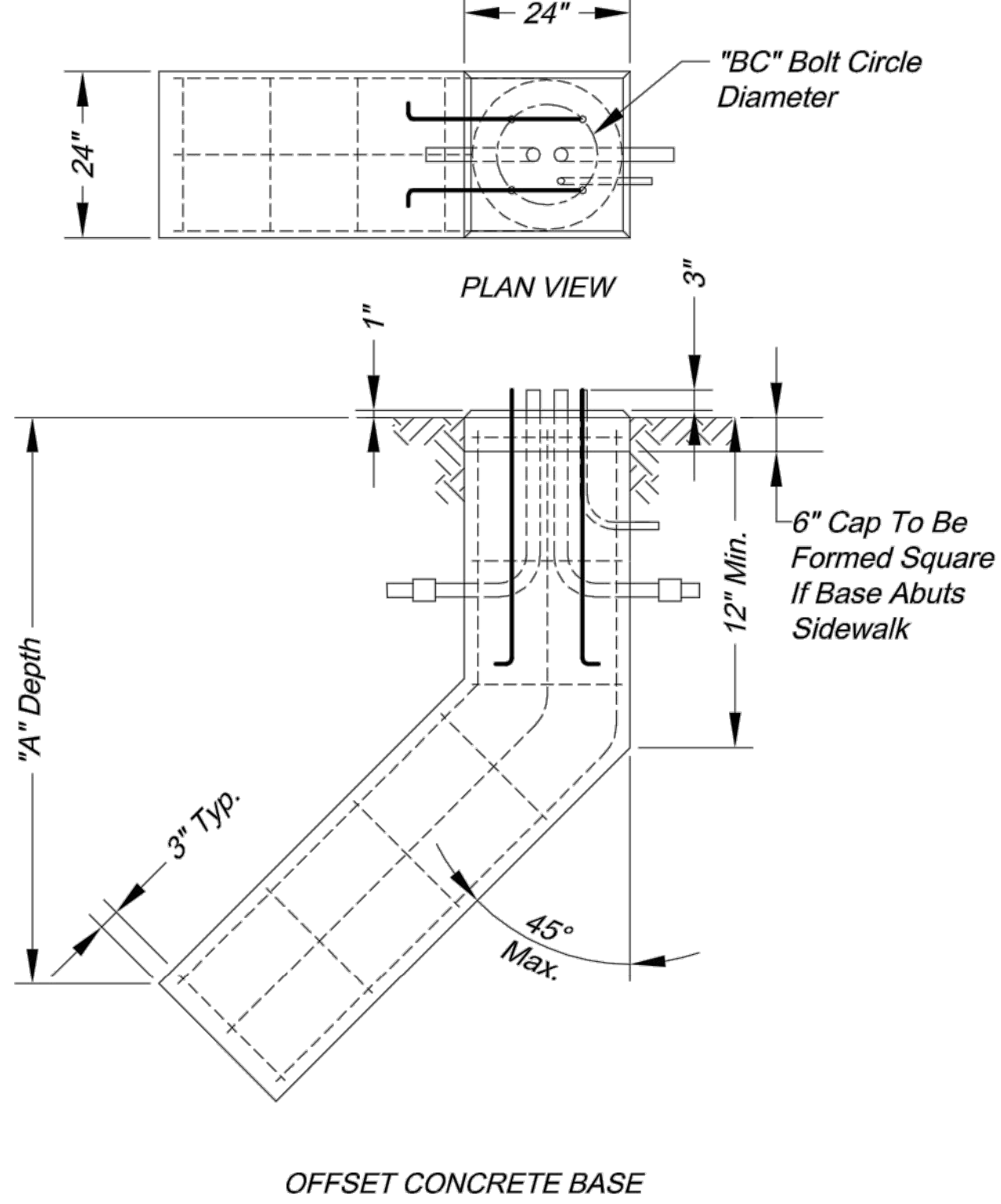
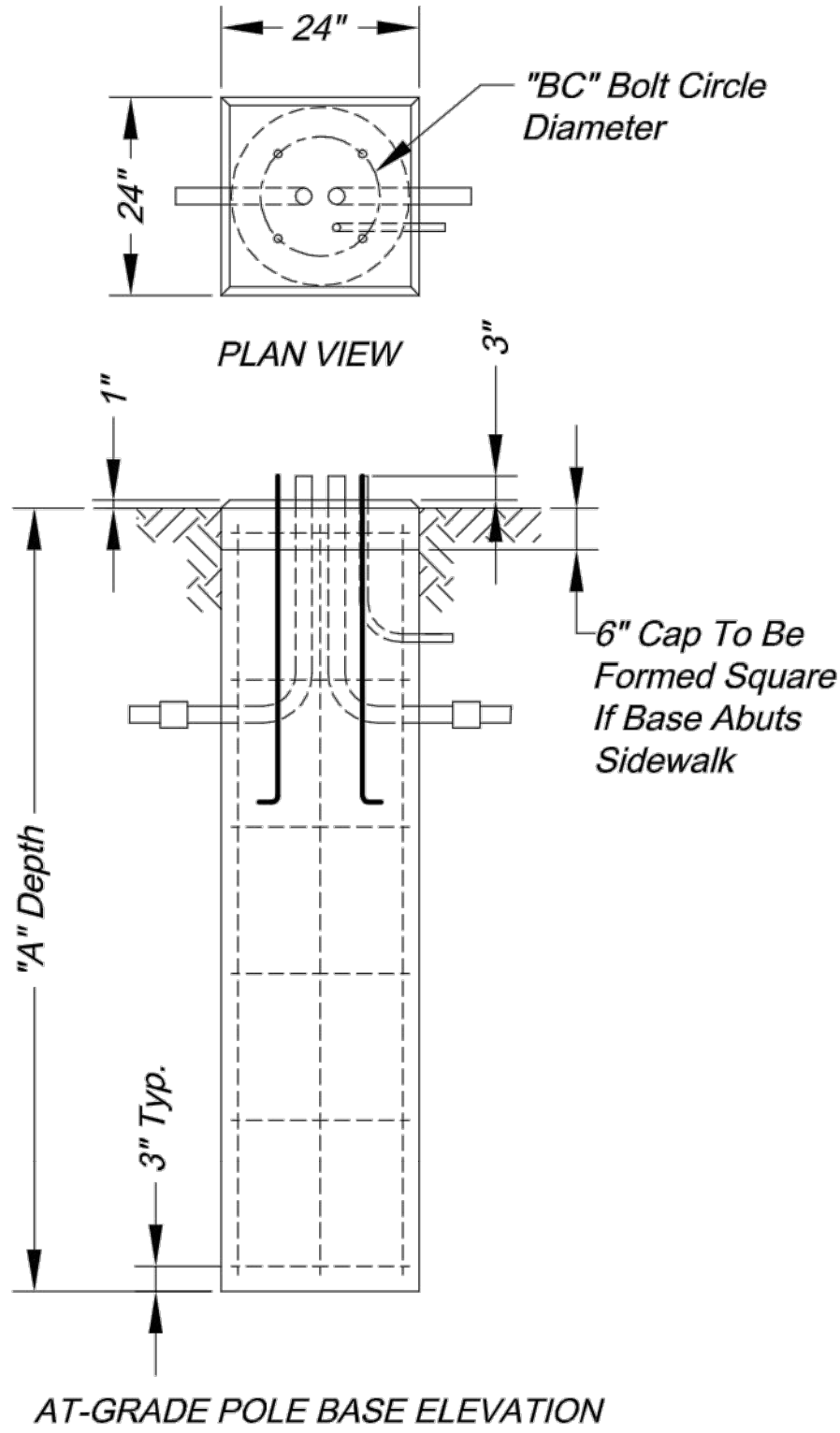
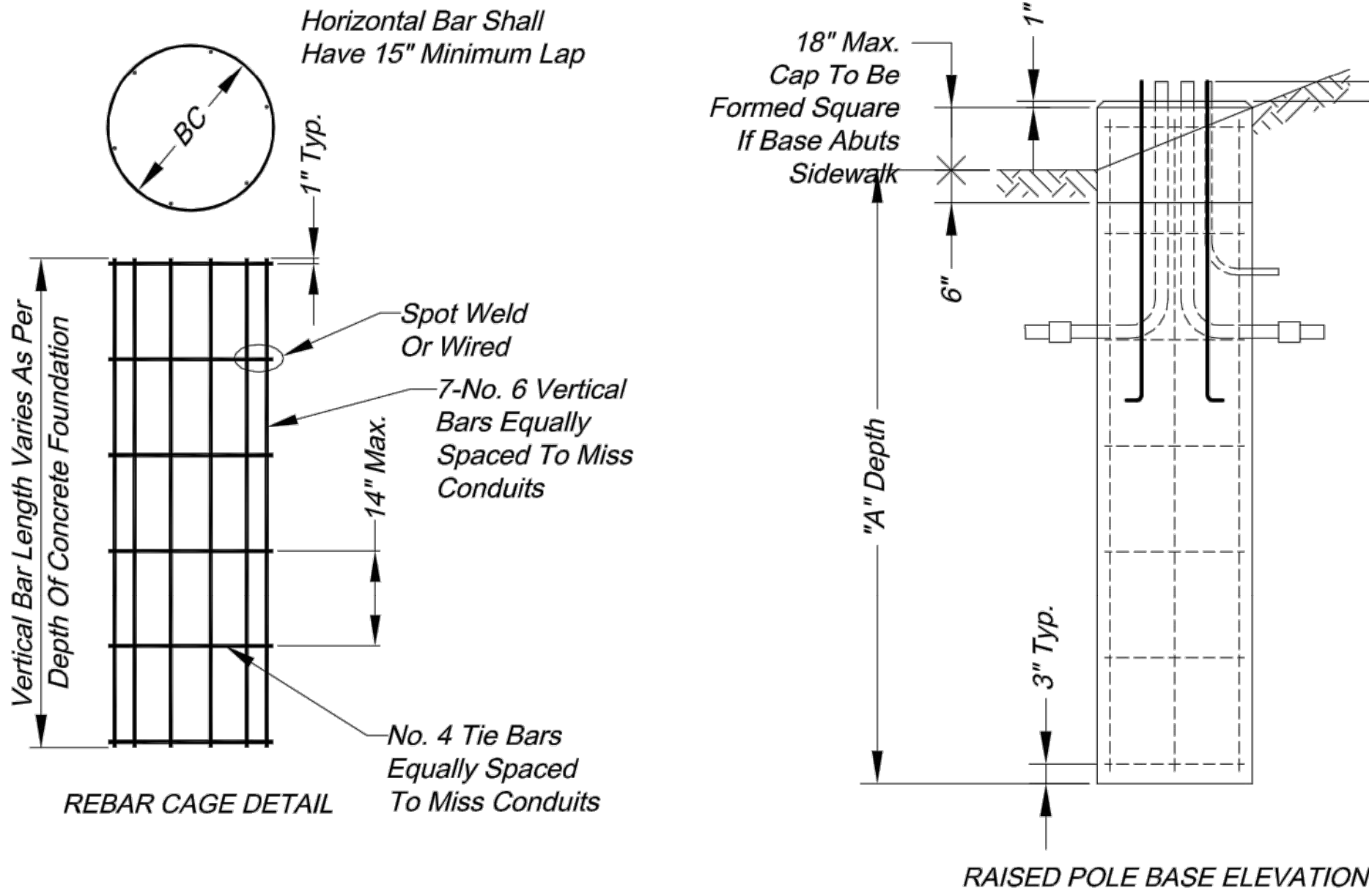
PRELIMINARY PLANS

NOT FOR CONSTRUCTION

REV. NO.

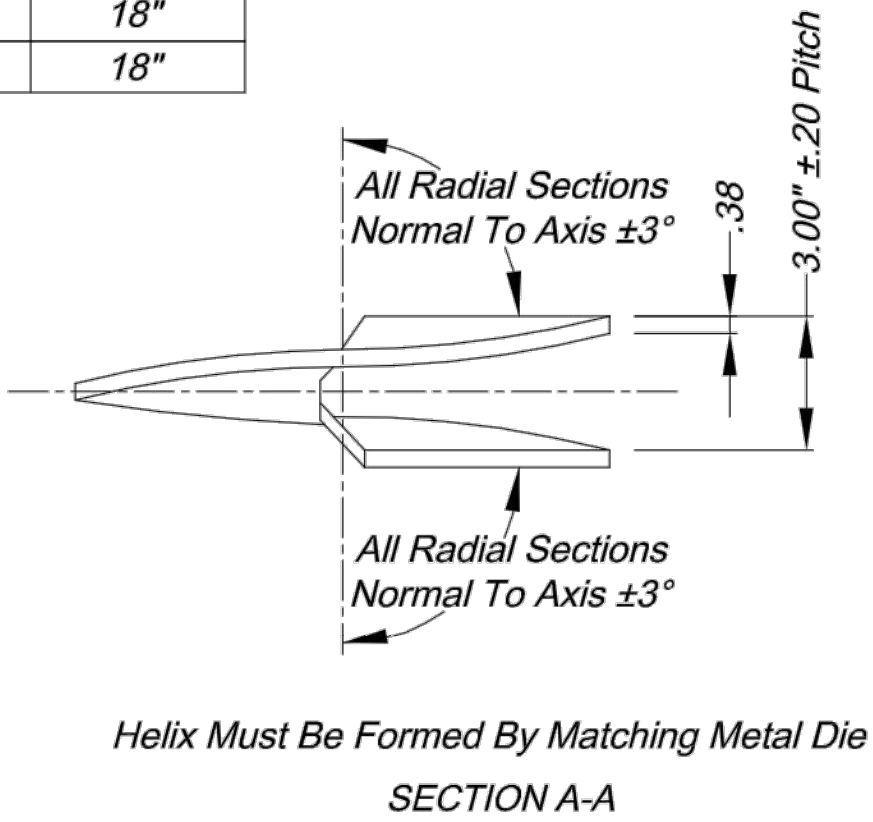
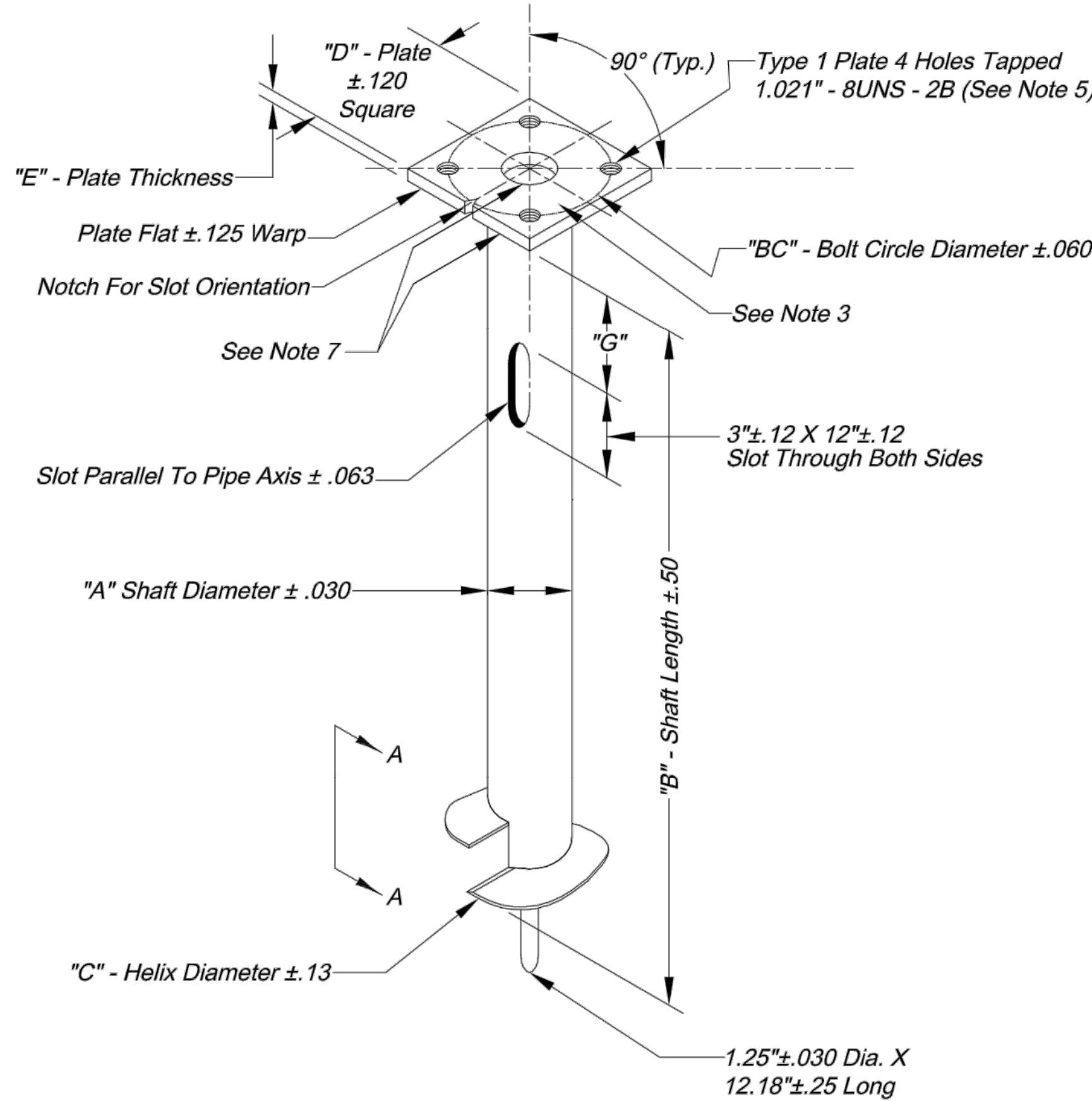
2023

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"

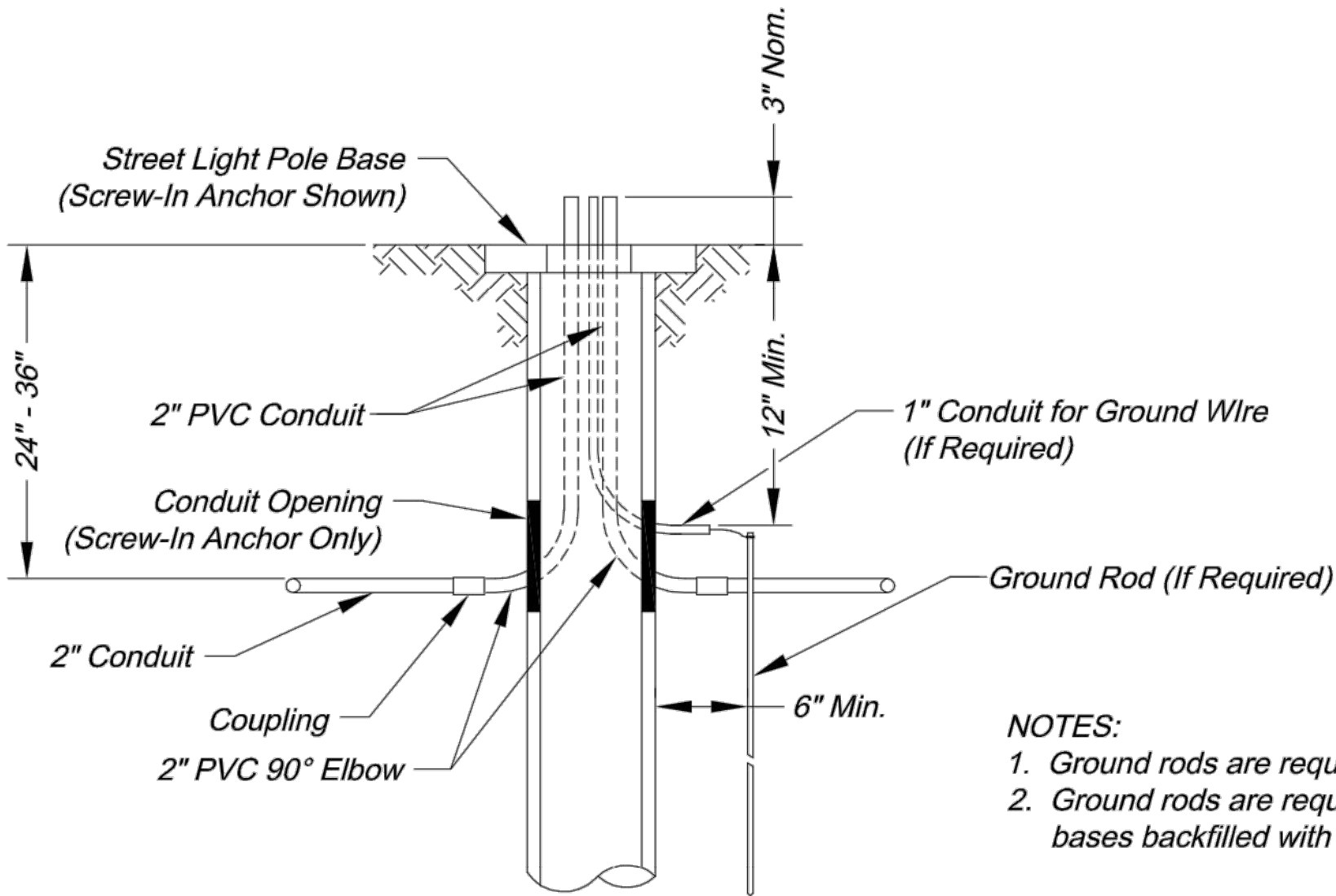


CONCRETE BASE DETAILS

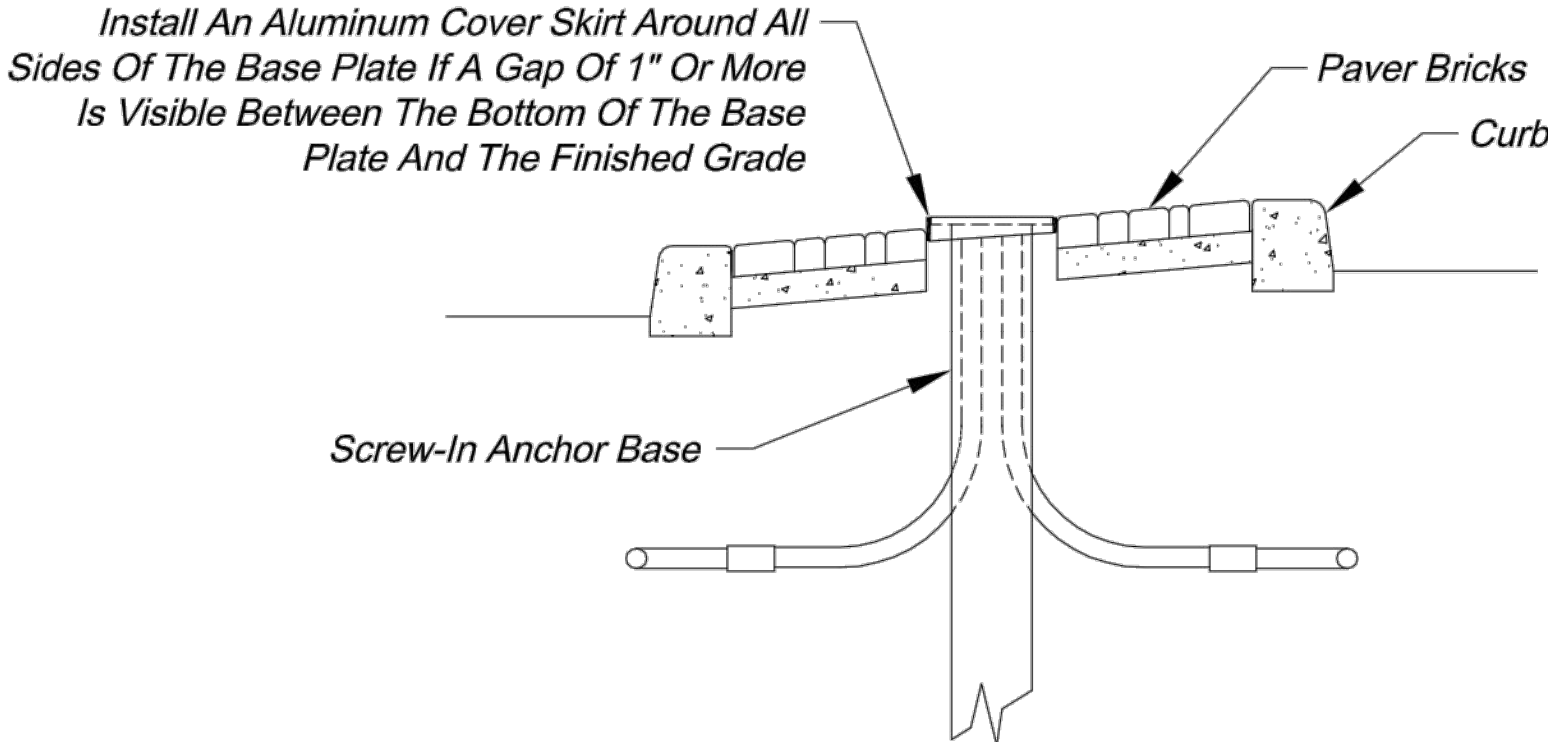
BASE TYPE	POLE TYPE	MINIMUM TORQUE RATING (lbs. ft.)	MAXIMUM TORQUE RATING (lbs. ft.)	SHAFT DIA. (A)	SHAFT LENGTH (B)	HELIX DIA. (C)	PLATE SIZE (D)	PLATE THICKNESS (E)	BOLT CIRCLE (BC)	SLOT LOCATION (G)
B14	P14	2,000	15,000	6"	48"	12"	10"	0.75"	9.5"	12"
B30	P30S & P30D	2,000	15,000	6"	60"	12"	12"	1.0"	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 ($\pm .188$ 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 ($\pm .125$ 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.



CONDUIT ENTRANCE AND GROUNDING



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

COLBORN ROAD

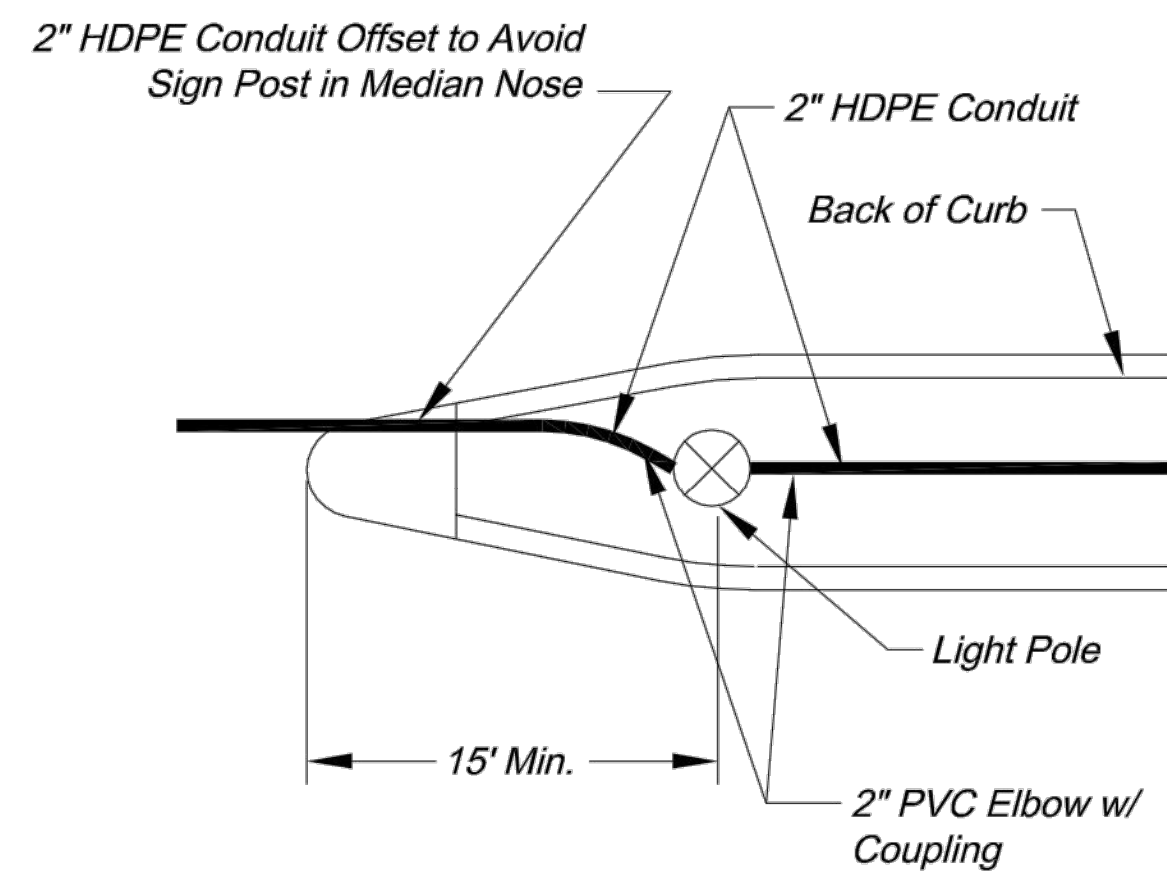
POLE BASE DETAILS

STANDARD DRAWING SL-2

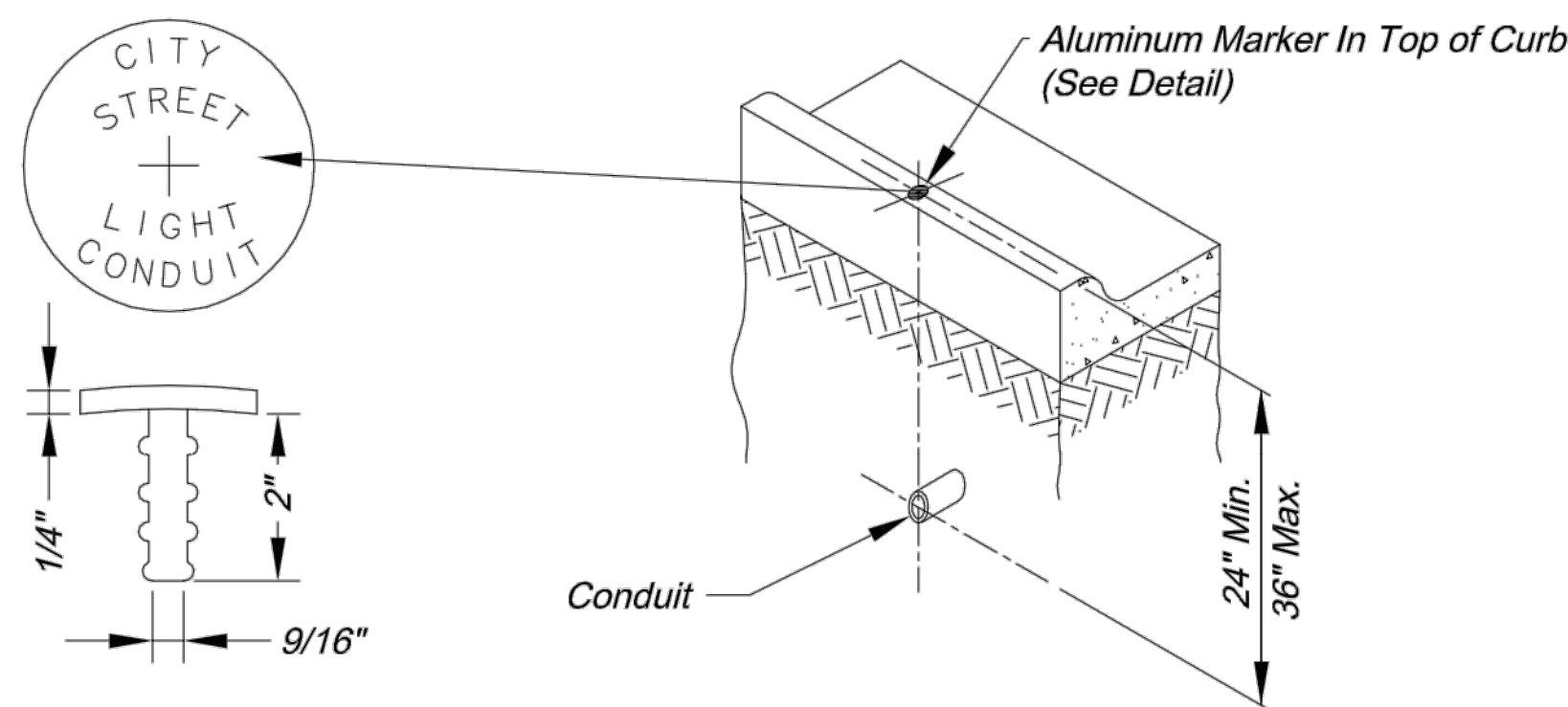
Project:

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

2 OF 5

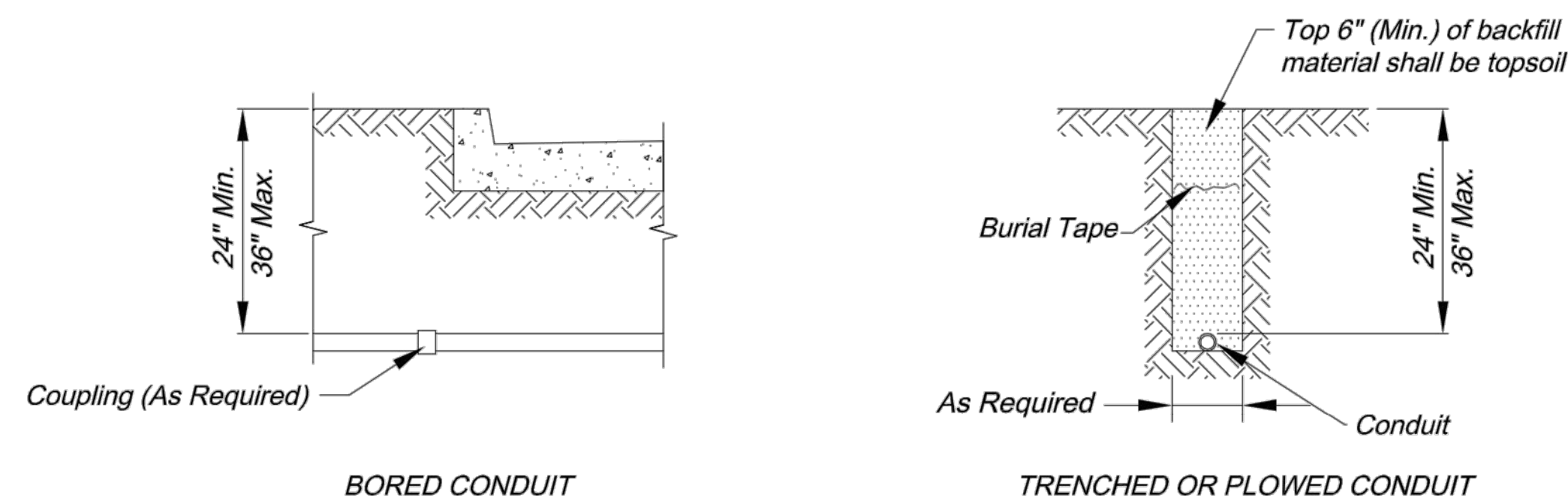


**STREET LIGHT POLE
IN MEDIAN**



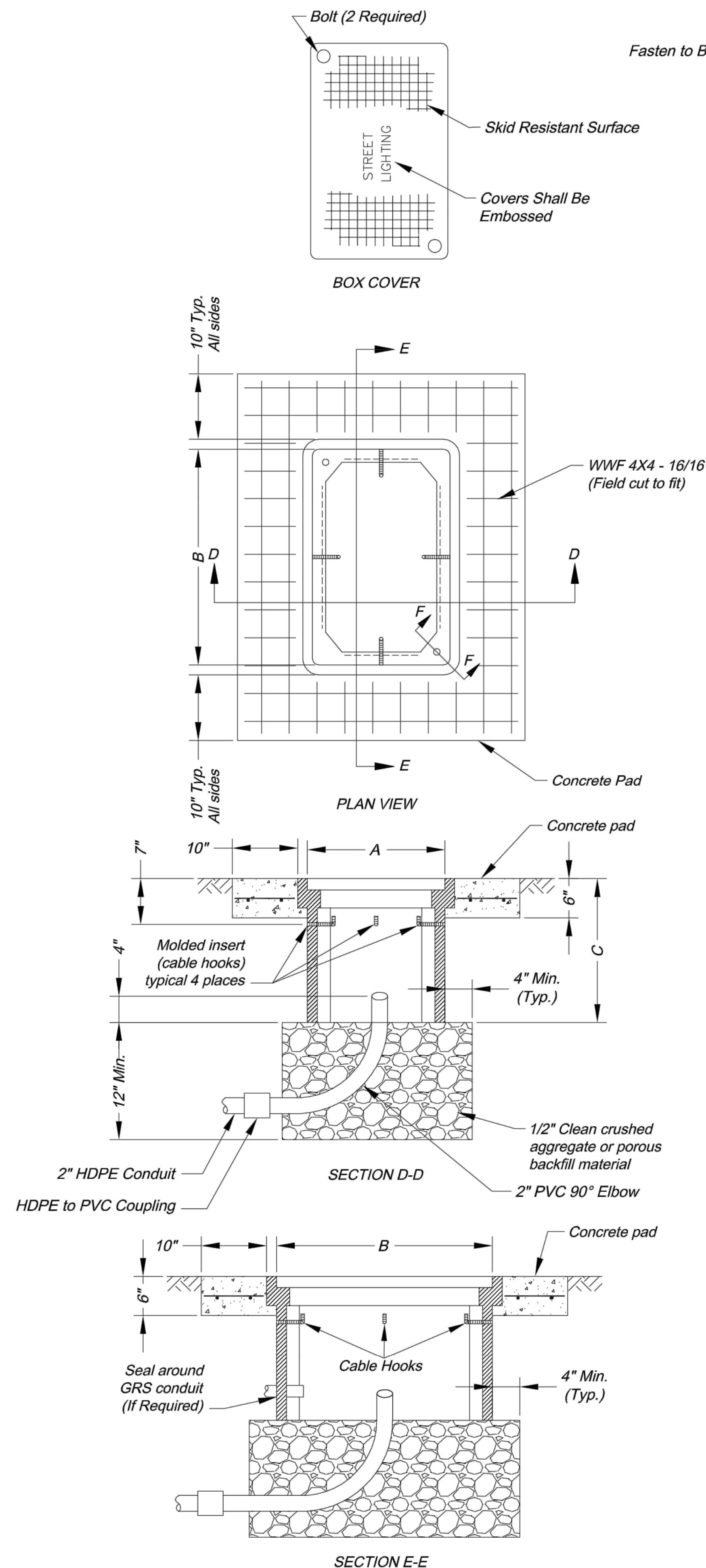
CONDUIT MARKING DETAIL

- 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.

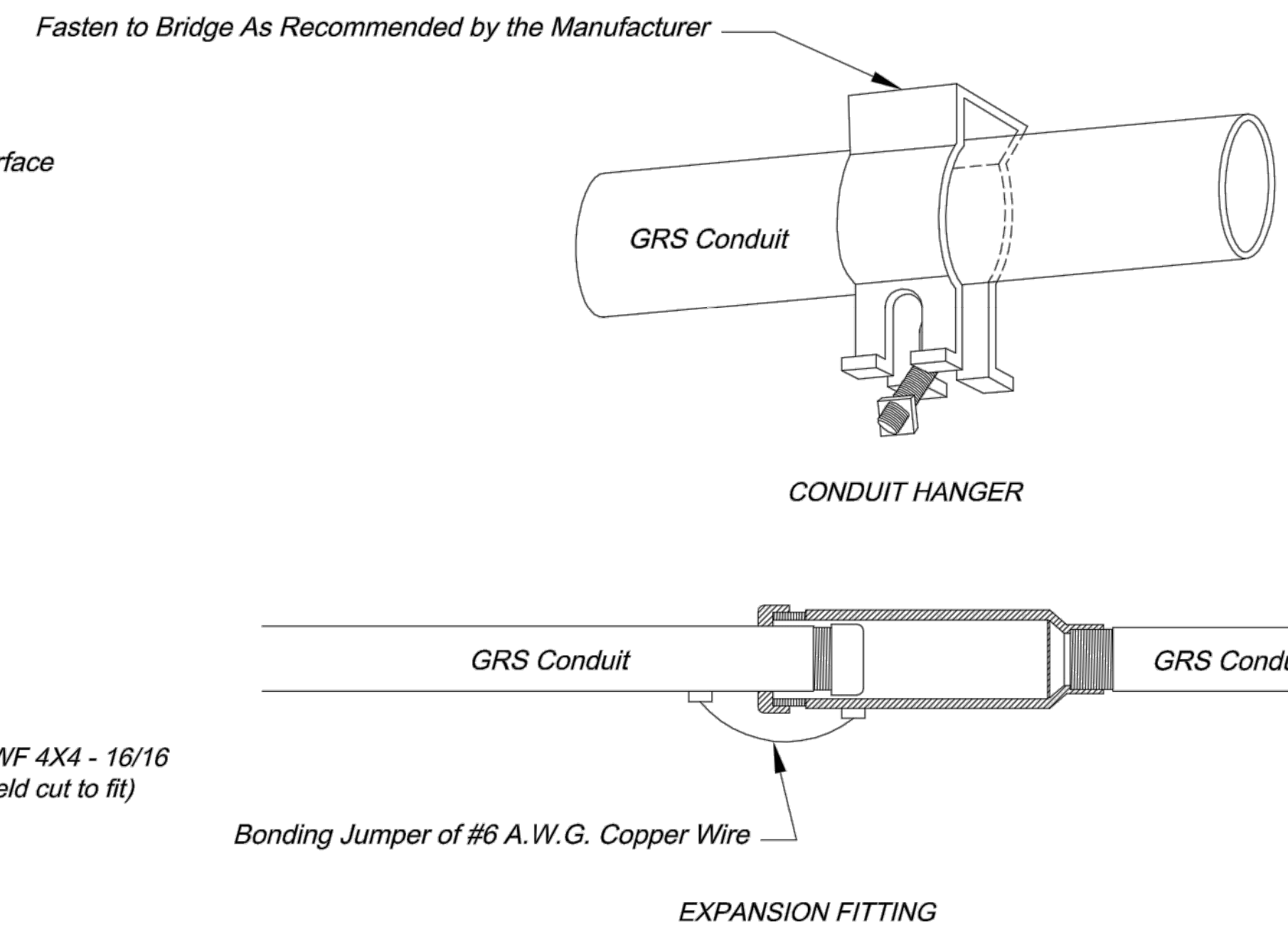


CONDUIT LOCATIONS

- 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.



PULL OR JUNCTION BOX DETAILS

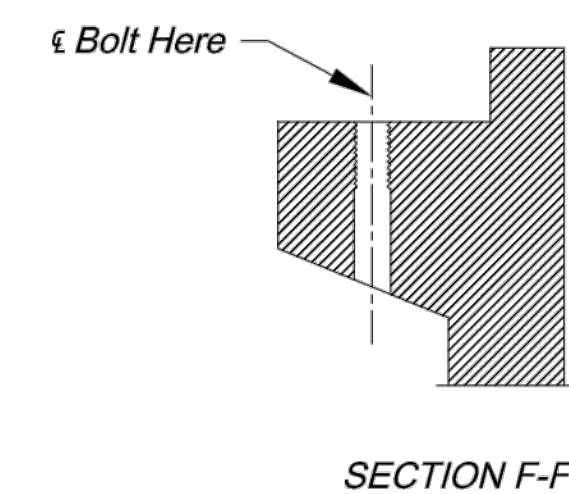


GRS CONDUIT DETAILS

- 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.

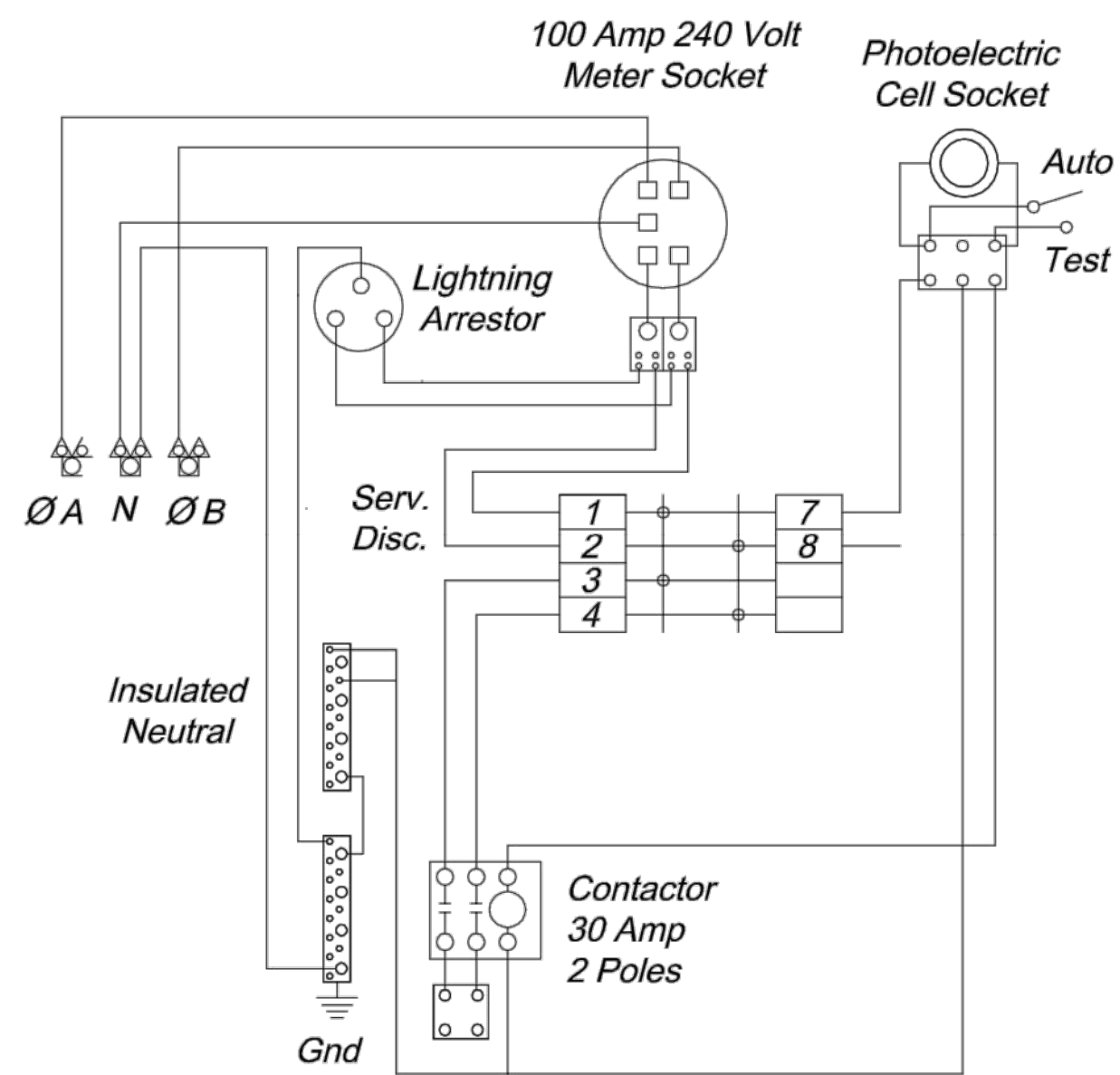
Number of Entering/Exiting Conduits	Box Type	Minimum Box Dimensions		
		A	B	C
1 - 2	Type 1 Junction Box	12"	12"	12"
3 - 4	Type 2 Junction Box	12"	18"	12"
> 4	Class 1 Pull Box	17"	30"	22"

All dimensions shown are nominal

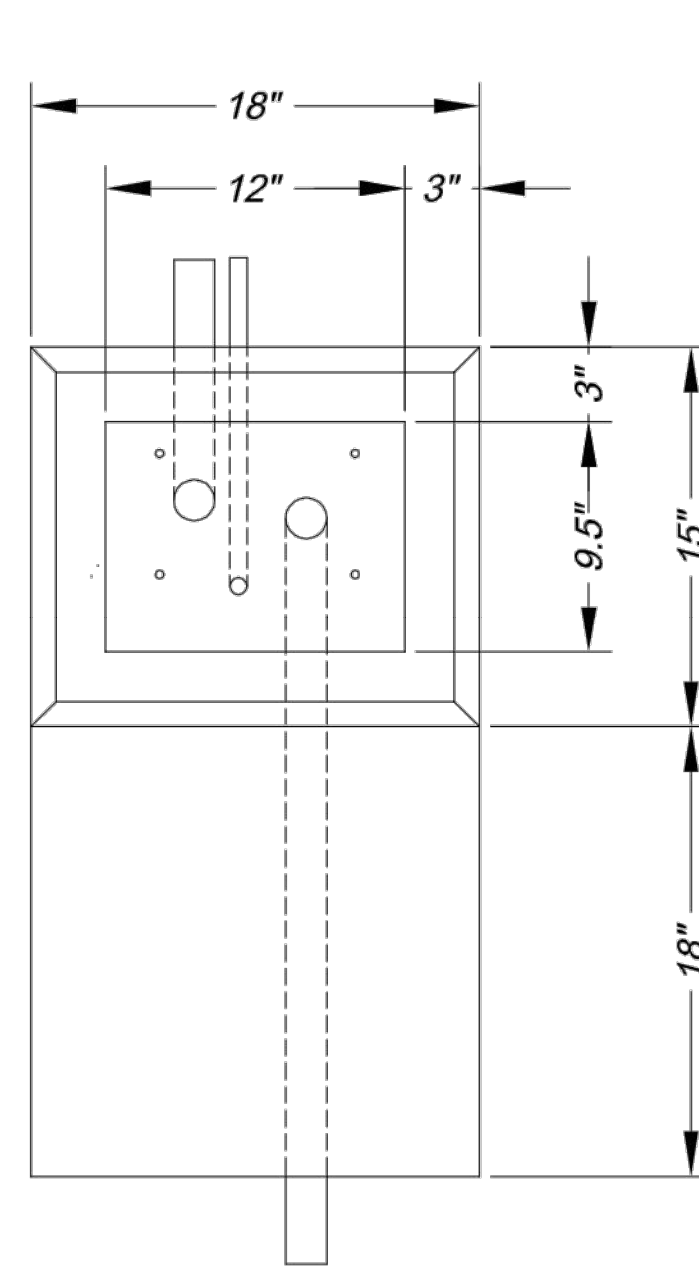


- NOTES:**
1. Lift opening required on all covers.
 2. Preformed box walls may be either flared or vertical. The bottom of boxes shall be open to below.
 3. If an extension is used with a preformed box, the lip of the extension may be interior or exterior. The extension shall be compatible and from the 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.



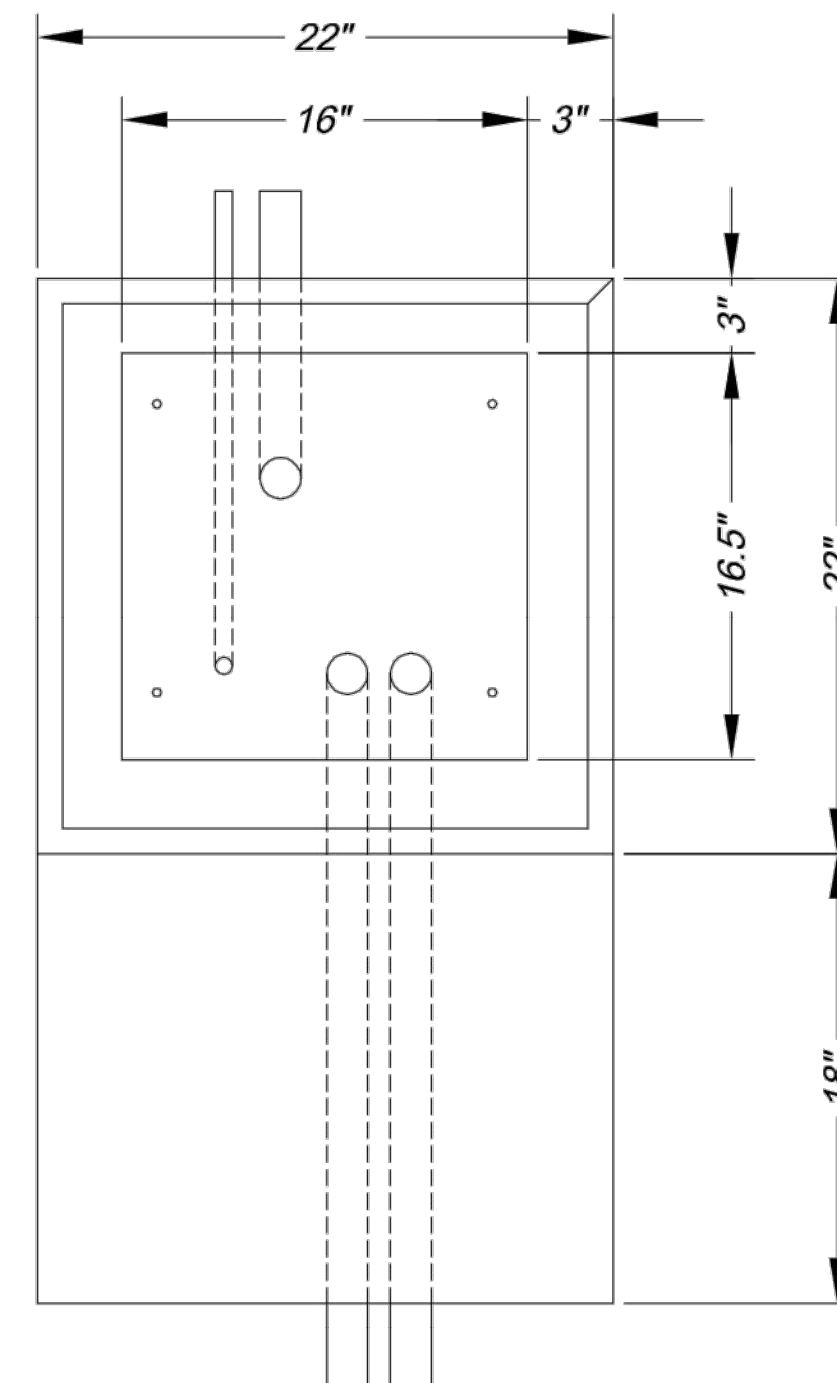


WIRING SCHEMATIC

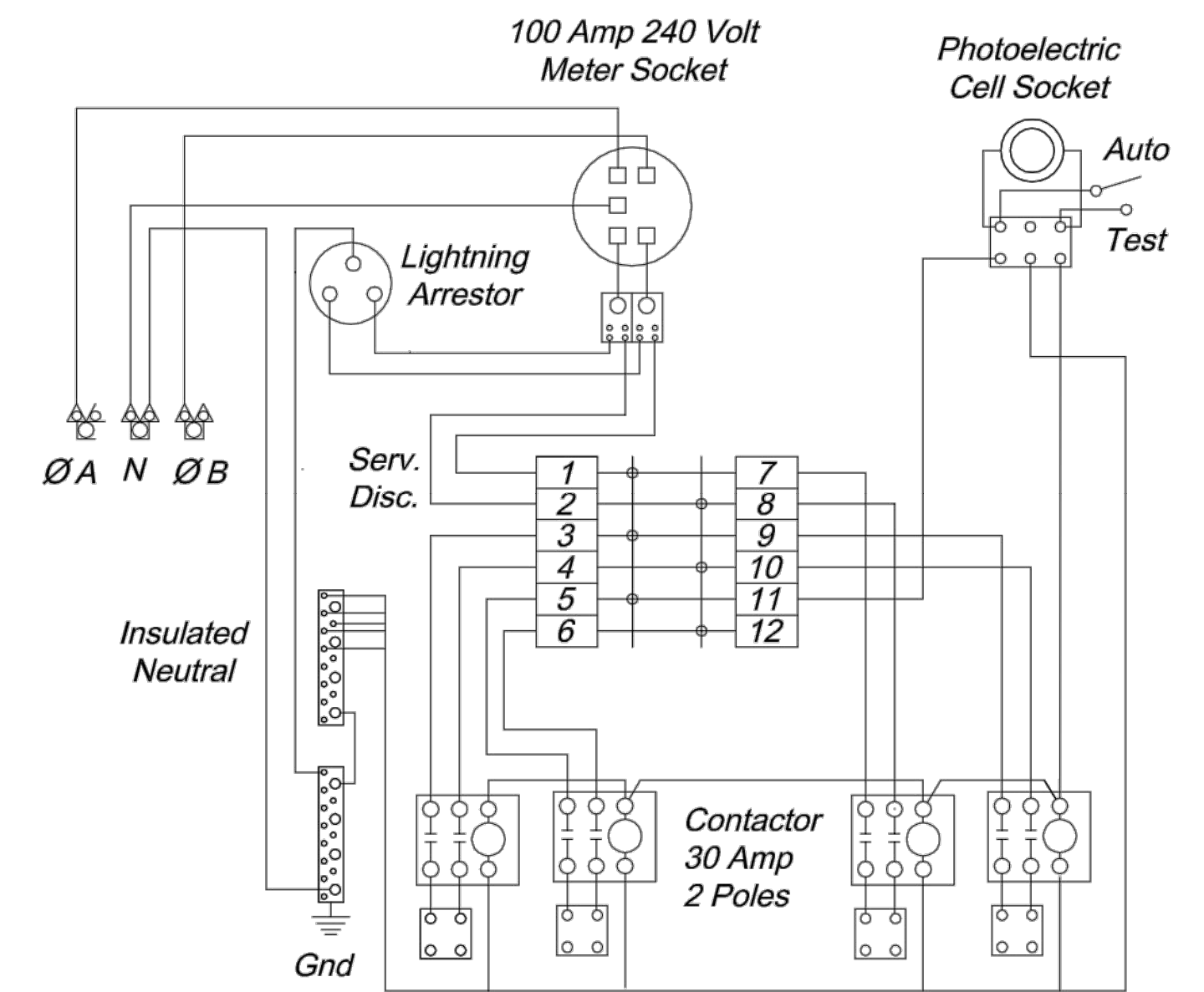


PLAN VIEW

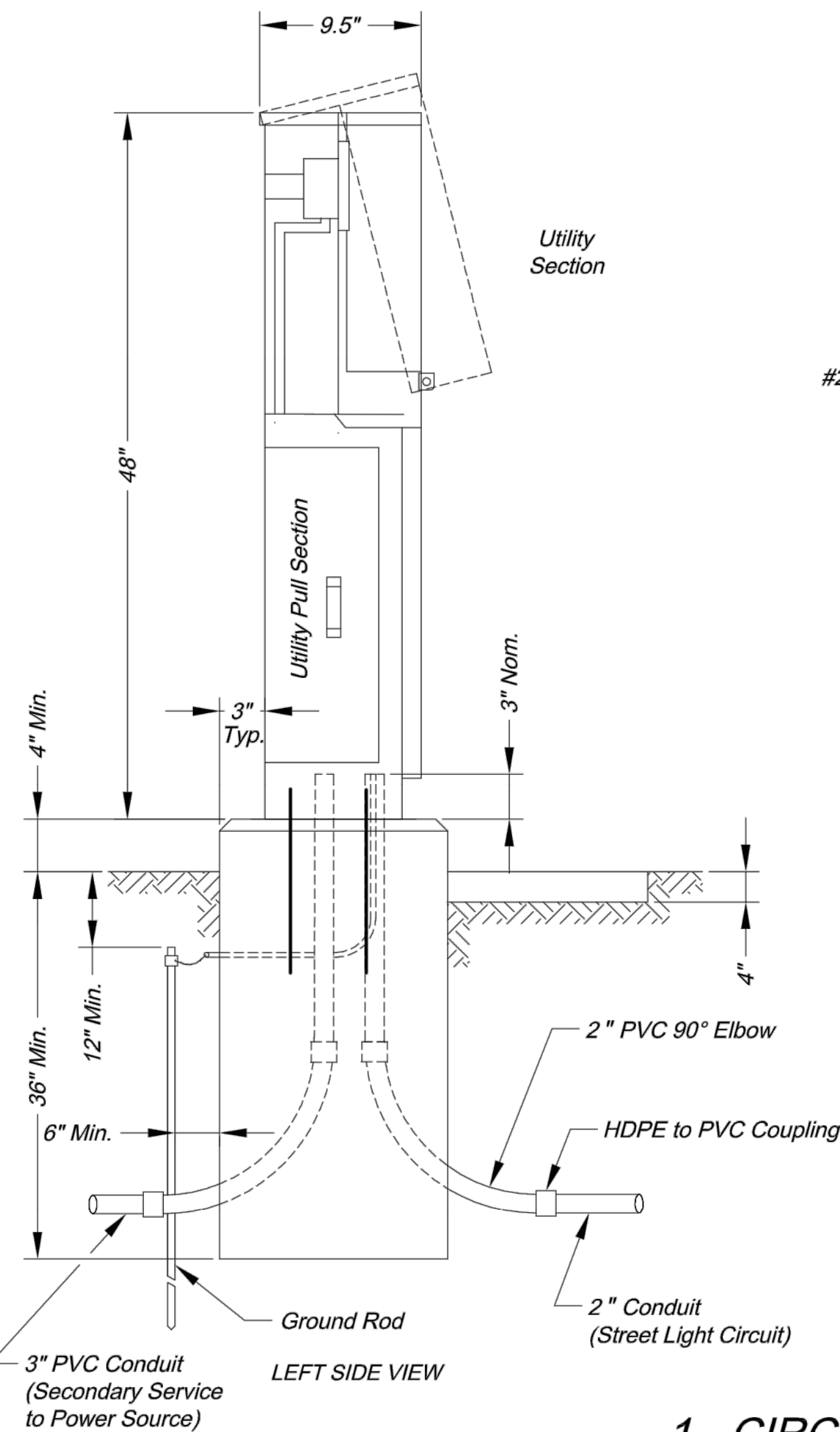
FUSED CONTACTORS
ARE NOT PERMITTED



PLAN VIEW

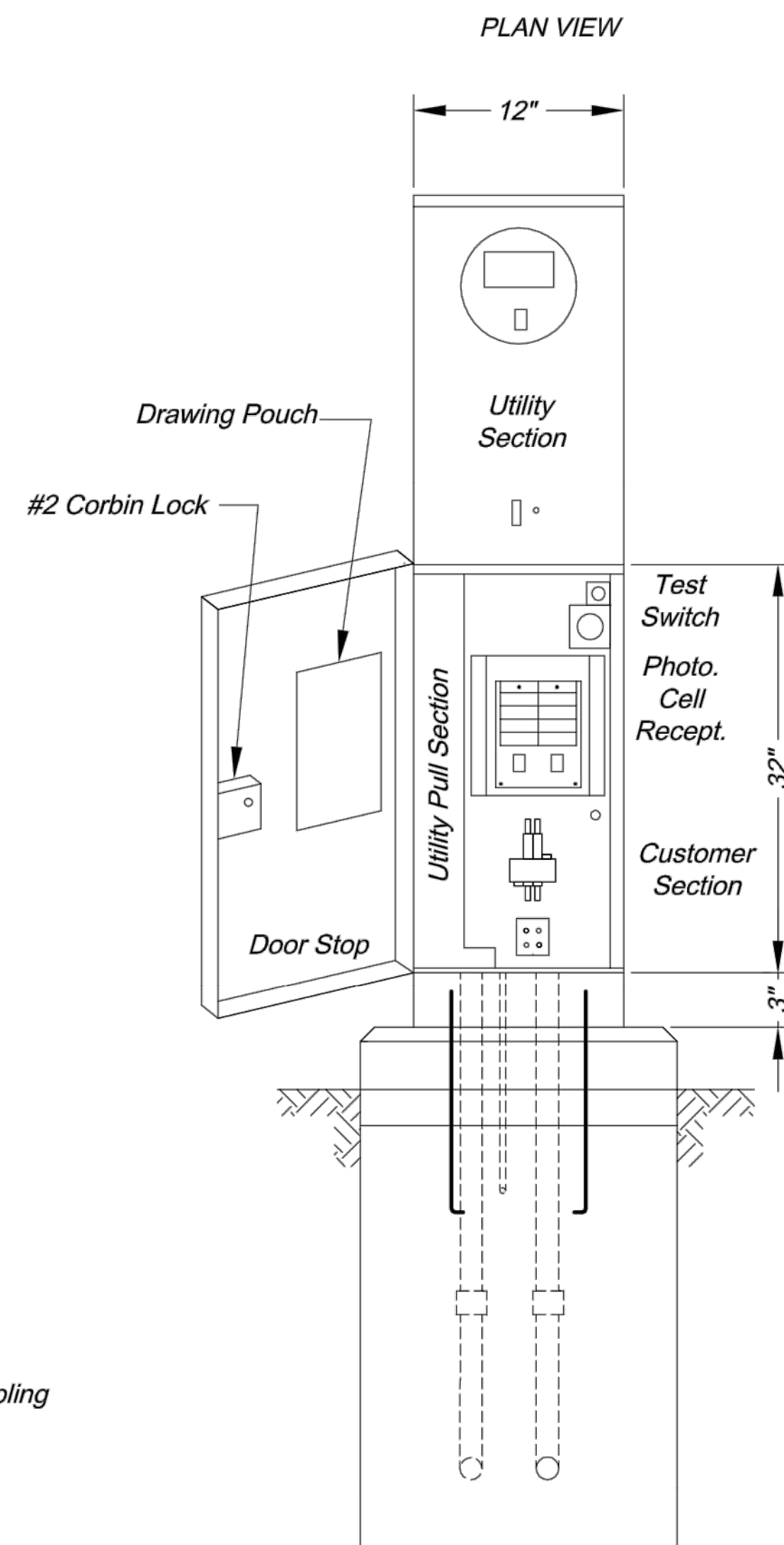


WIRING SCHEMATIC



LEFT SIDE VIEW

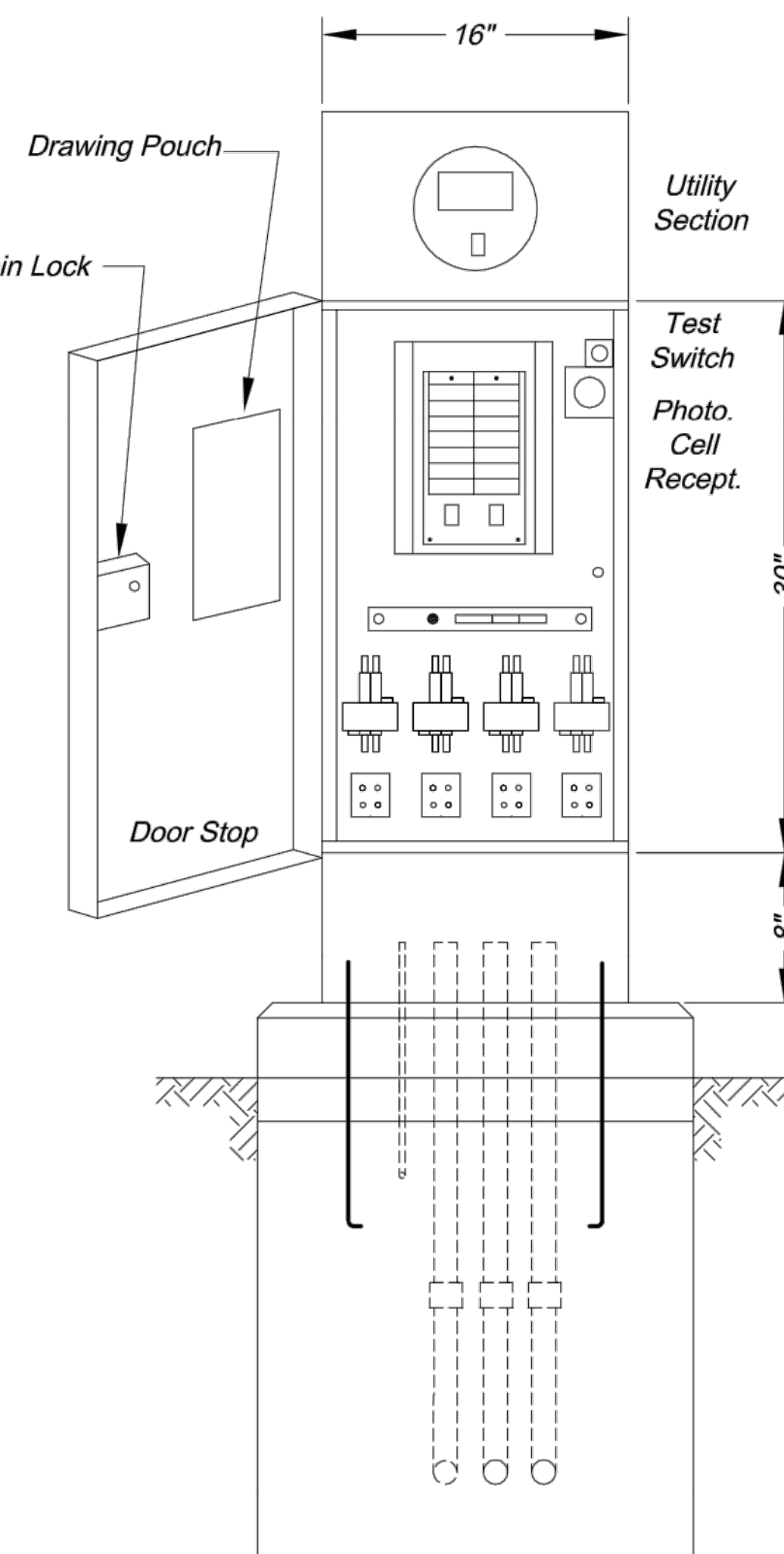
1 - CIRCUIT POWER SUPPLY



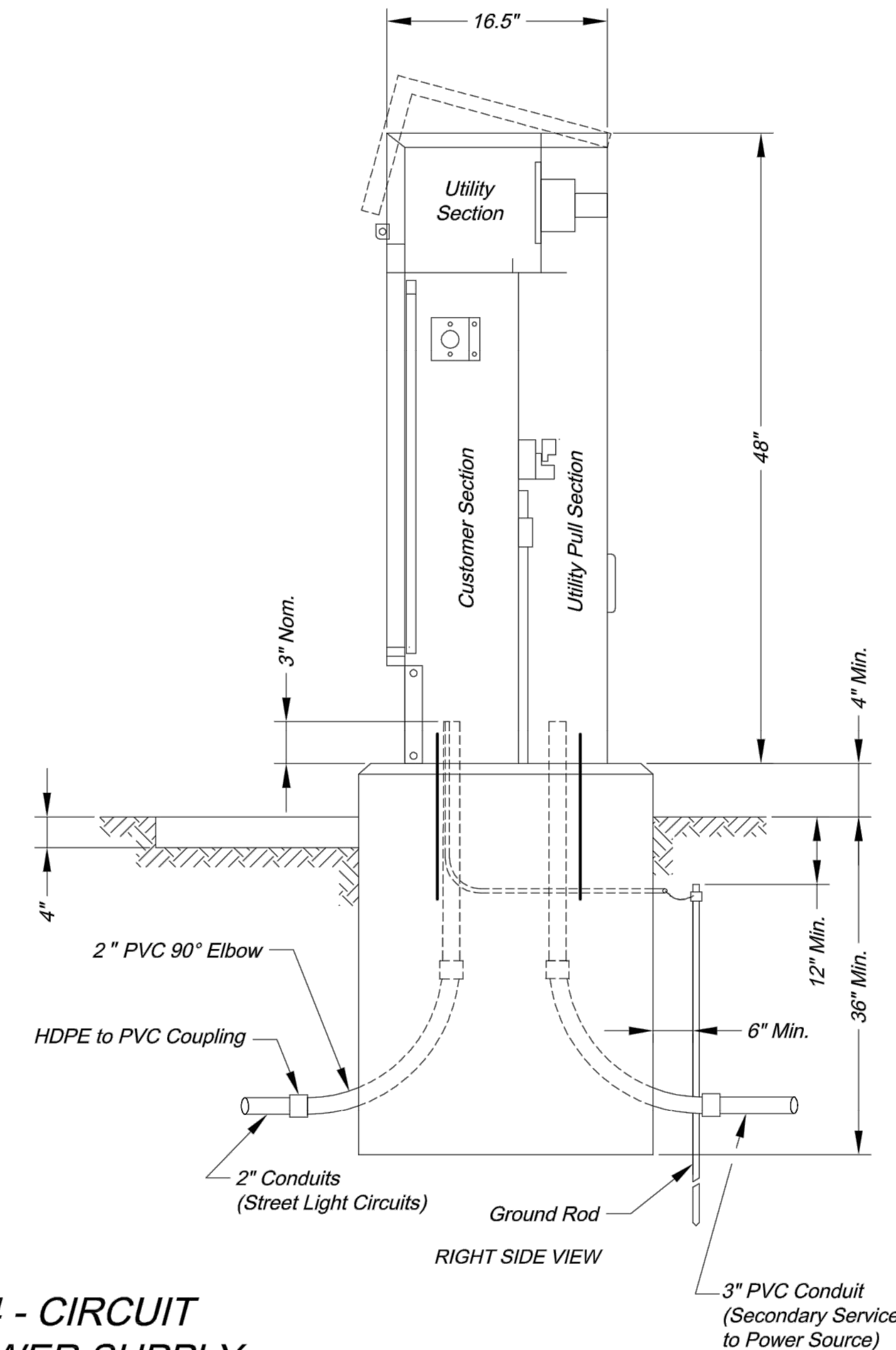
FRONT VIEW

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.

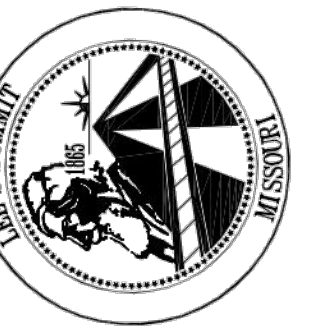


FRONT VIEW



RIGHT SIDE VIEW

4 - CIRCUIT POWER SUPPLY



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

COLBURN ROAD

POWER SUPPLY DETAILS

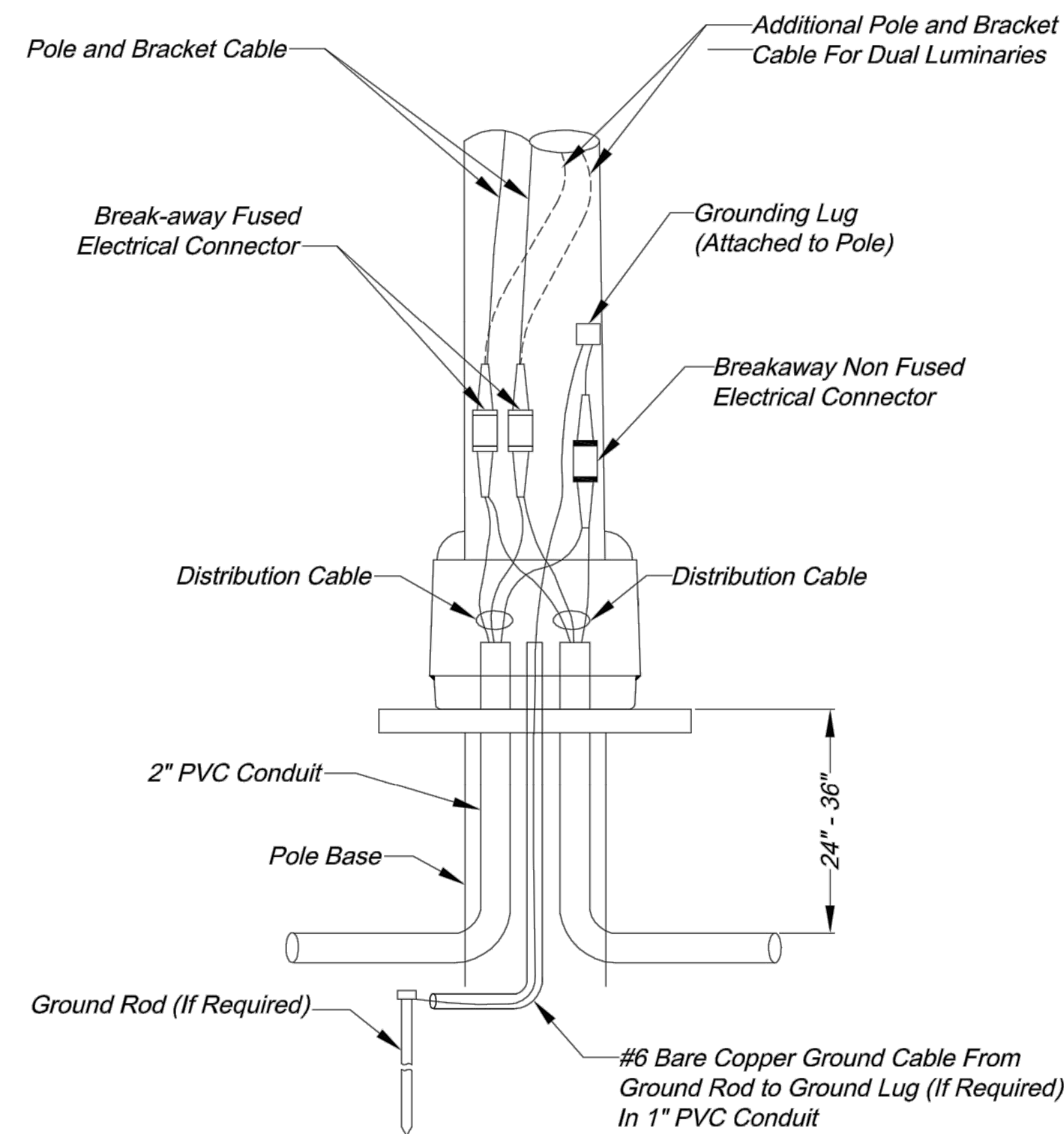
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Project:

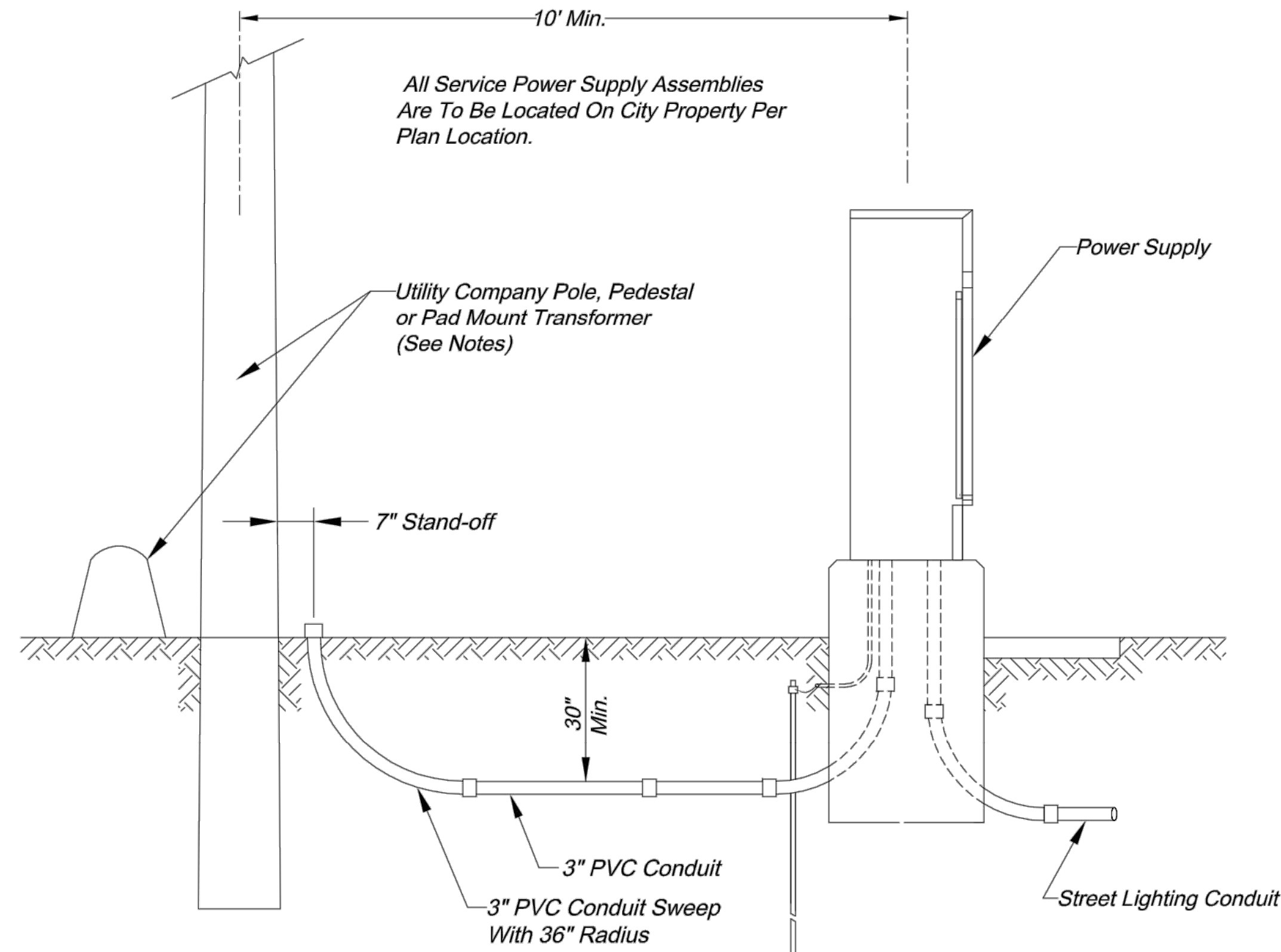
Drawn By: JH
Checked By: JW
Date: 08/21/2009

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46

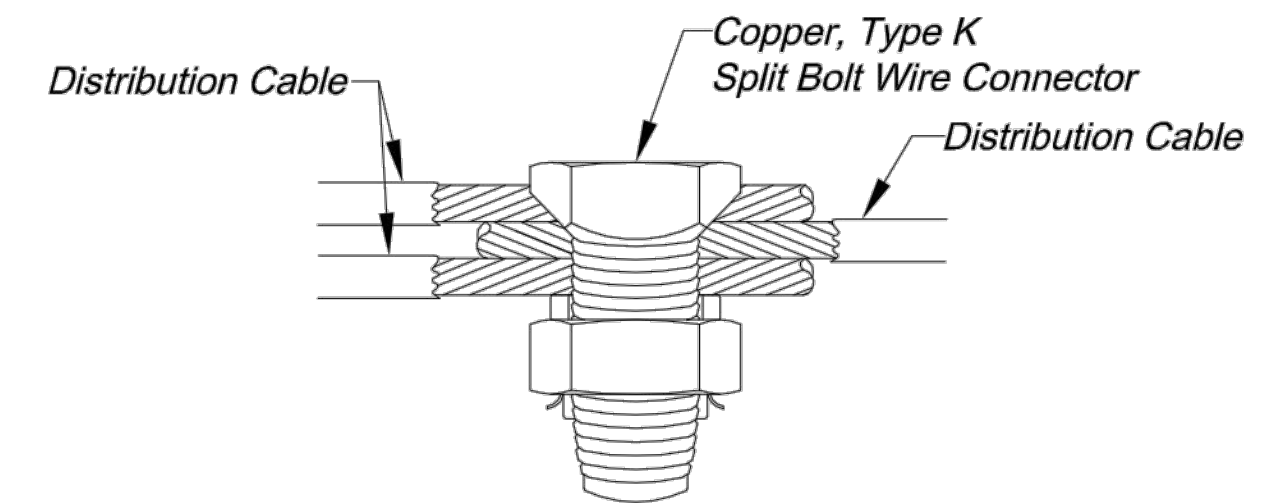


POLE WIRING DETAILS



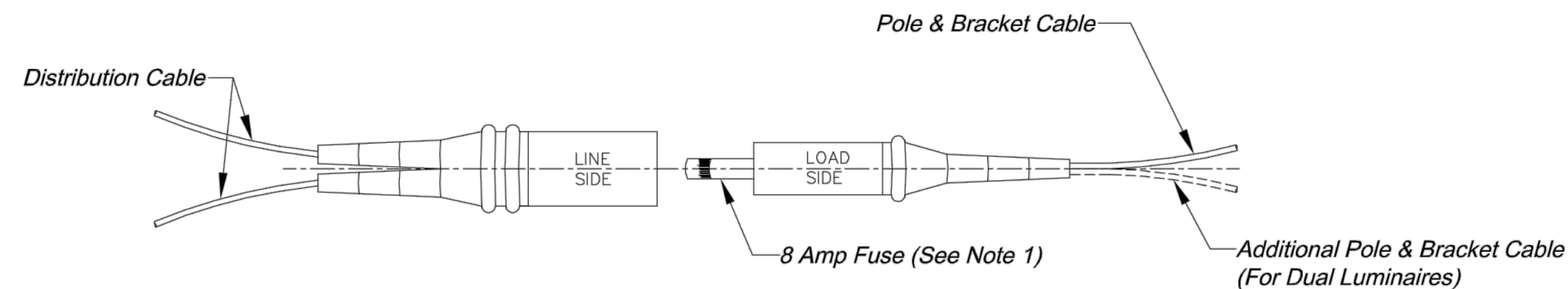
SECONDARY SERVICE CONNECTION DETAILS

- NOTES:
- 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.
 - 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.

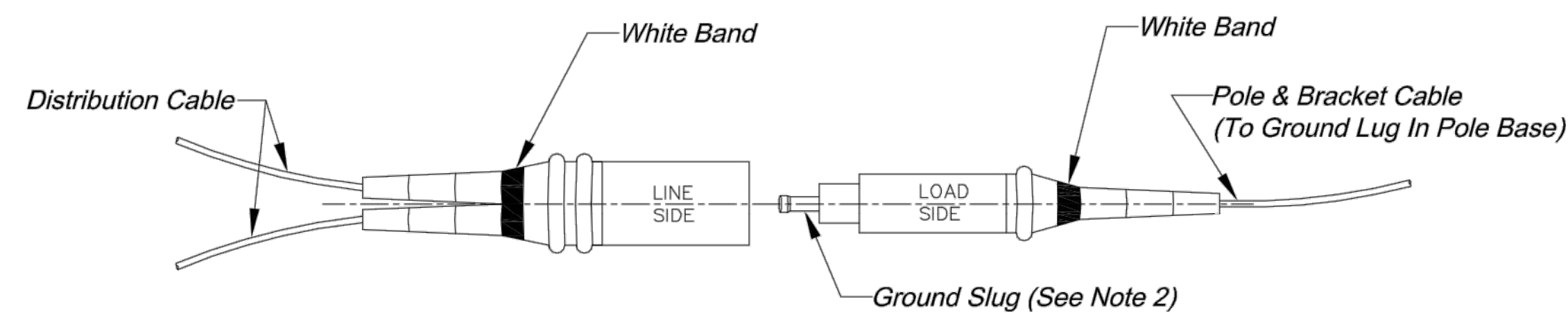


SPLICE KIT DETAILS

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

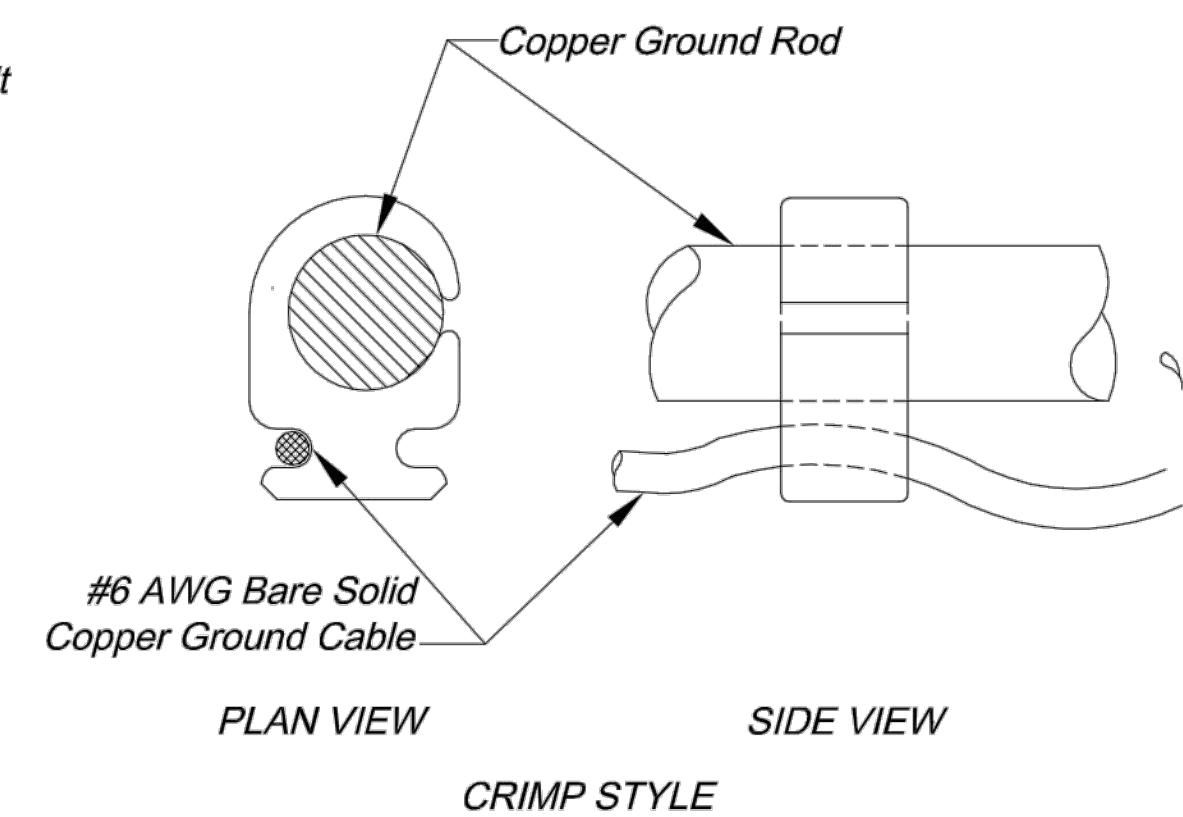
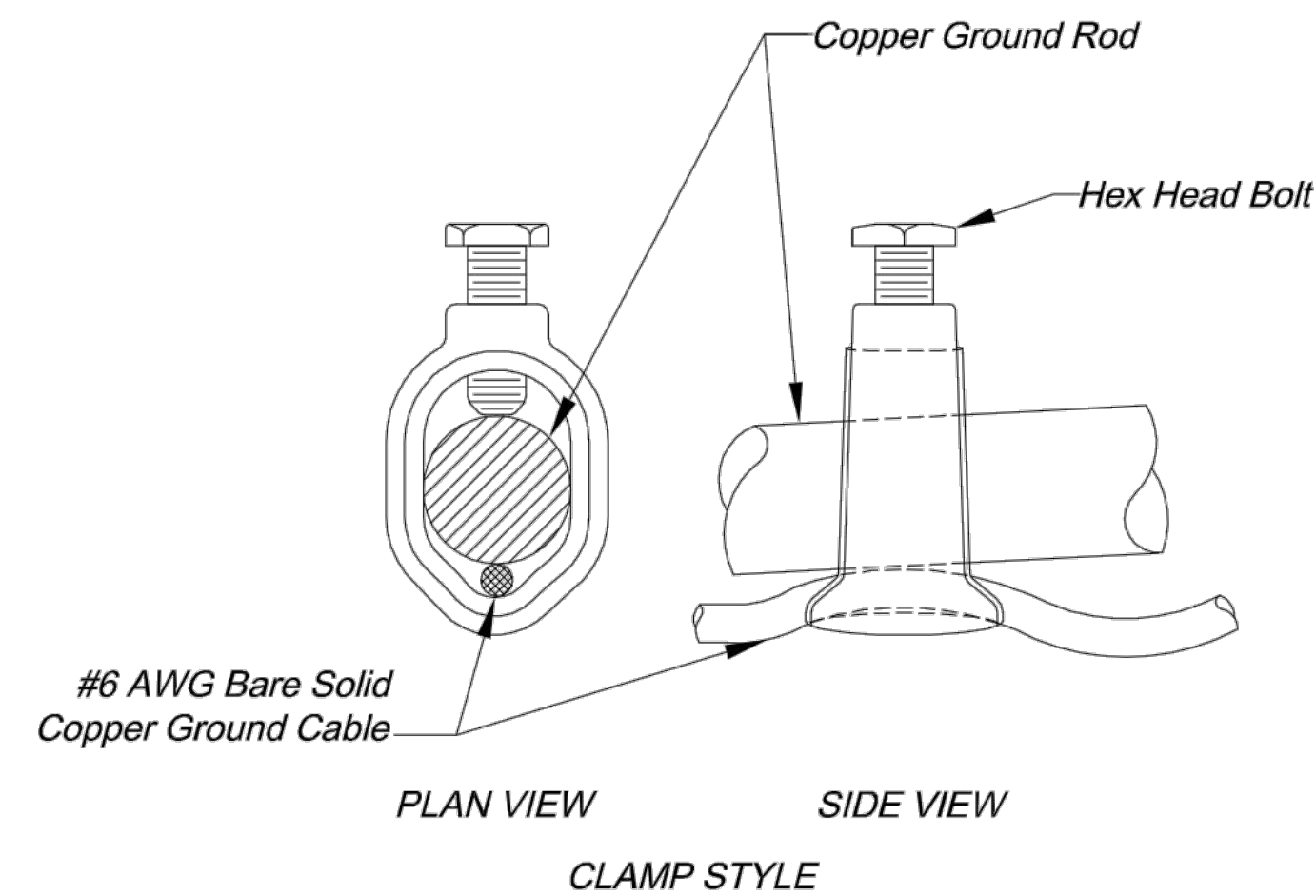


BREAK-AWAY FUSED ELECTRICAL CONNECTORS



BREAK-AWAY NON FUSED ELECTRICAL CONNECTOR

- NOTES:
- Fuse remains in "Load Side" after break-away.
 - Ground "Slug" remains in "Load Side" after break-way.
 - Connectors shall have set screw type terminals to attach cables.

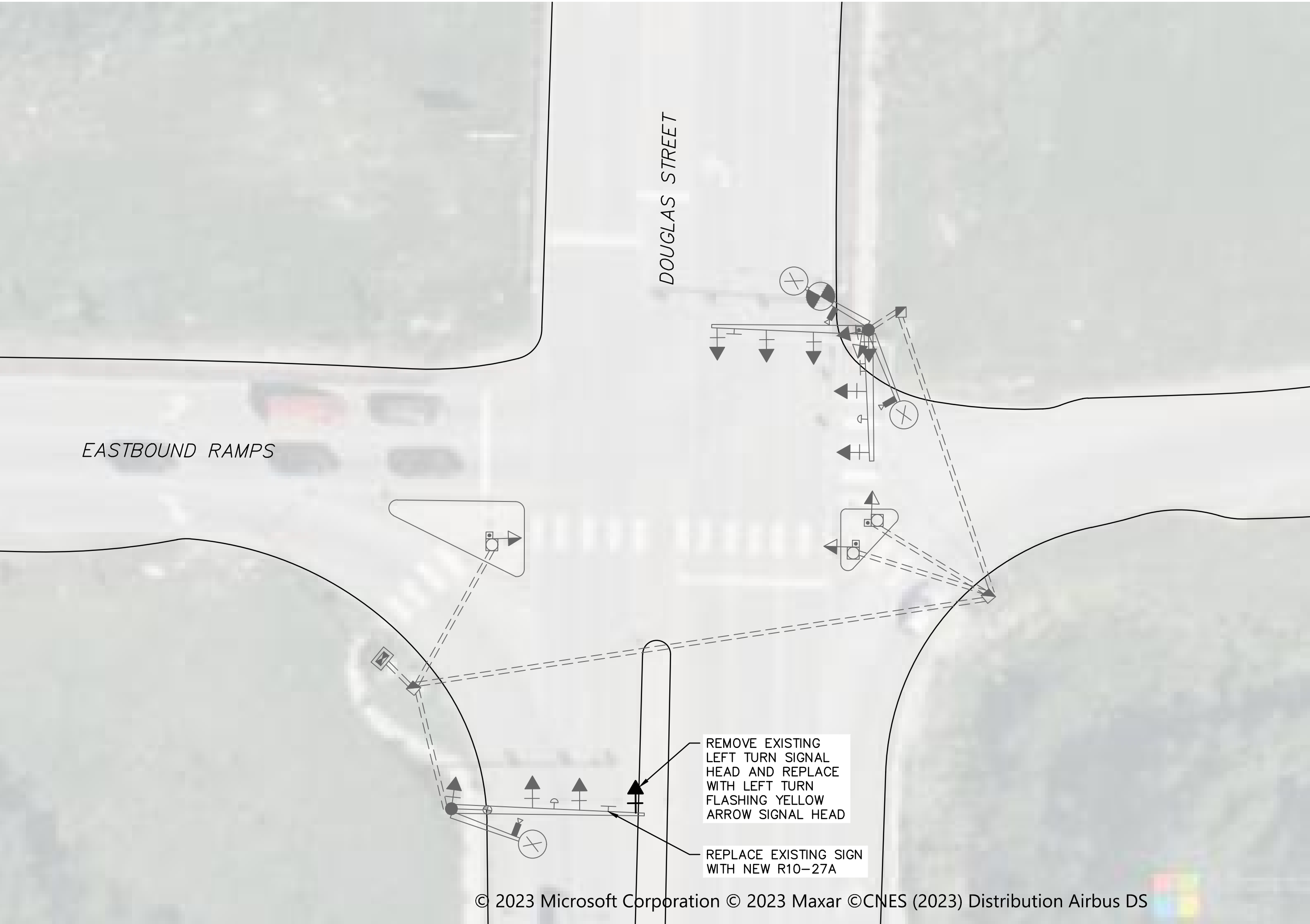


GROUND ROD CONNECTION DETAILS



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- FLASHING YELLOW IMPLEMENTATION DETAILS:
1. CONFIGURE FOR FLASHING YELLOW ARROW MODE "G" USING THE PEDESTRIAN YELLOW OUTPUT OF THE PEDESTRIAN LOAD SWITCHES.
 2. ANY AND ALL REQUIRED CABINET MODULES OF COMPONENTS TO MAKE THE FLASHING ARROW FUNCTION PROPERLY SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR. THIS INCLUDES, BUT IS NOT LIMITED TO, SUCH THINGS AS LOAD SWITCHES, DETECTOR CARDS, AND LOAD RESISTORS.
 3. IN ORDER TO TEST THE FLASHING ARROW CONFIGURATION, A "MMU2" SHALL ALSO BE SUPPLIED IN THE CABINET. THE MMU2 SHALL HAVE COMMUNICATION ABILITY WITH AN ETHERNET PORT TO ALLOW FOR REMOTE MONITORING.
 4. THE FOLLOWING PERSON SHALL BE CONTACTED TO OBTAIN THE REQUIRED CONTROLLER TIMING AND DATA CHANGES AT LEAST ONE WEEK IN ADVANCE OF THE DESIRED IMPLEMENTATION:
ALEJANDRO MARTINEZ
SENIOR TRAFFIC STUDIES SPECIALIST
PHONE: 816-607-2038
CELL PHONE: 816-835-5607
EMAIL: ALEJANDRO.MARTINEZ@MODOT.MO.GOV
 5. THE CONTRACTOR SHALL FOLLOW THE APPROPRIATE CONFLICT MONITOR UNTIL MANUAL TO PROPERLY CONFIGURE AND IMPLEMENT THE FLASHING YELLOW ARROW AND ENSURE THE TRAFFIC SIGNALS/PHASES ARE SAFELY MONITORED.



TRAFFIC SIGNALS LEGEND			
	CONTROLLER		PUSH BUTTON DETECTOR
JCT	JUNCTION BOX		PREFORMED PULL BOX TYPE 1
	POWER SOURCE		PREFORMED PULL BOX TYPE 2
P.S.	POWER SUPPLY		CONCRETE PULL BOX TYPE 1
	WOOD POST		CONCRETE PULL BOX TYPE 2
	SIGNAL HEAD (OPT LIM CONV)	ITS	ITS PULL BOX TYPE 2
	SIGNAL HEAD (OPT LIM)	ITS	ITS PULL BOX TYPE 5
	SIGNAL HEAD (PEDESTRIAN)		SIGNS
	SIGNAL HEAD (STANDARD)		VIDEO DETECTION
	SIGNAL HEAD (FUTURE)		RADAR DETECTOR
			VIDEO DETECTION ZONE
			FUTURE VIDEO DETECTION ZONE
			CONDUIT MEDIAN
			CONDUIT PUSHED
			CONDUIT BRIDGE
			CONDUIT EXISTING
			CONDUIT TRENCHED
			SPAN WIRE
			MAST ARM - TYPE A BASE
			MAST ARM - TYPE C BASE
			MAST ARM - TYPE F BASE
			TYPE C BASE
			PREFORMED PULL BOX TYPE 5
			CCTV CAMERA

- R

RED BALL

Y

YELLOW BALL

G

GREEN BALL

RL

RED LEFT ARROW

YL

YELLOW LEFT ARROW

FYL

FLASHING YELLOW LEFT ARROW

GL

GREEN LEFT ARROW

YR+

YELLOW RIGHT ARROW

GR+

GREEN RIGHT ARROW

S

STRAIGHT GREEN ARROW

W

PEDESTRIAN INDICATIONS SHALL BE

DW

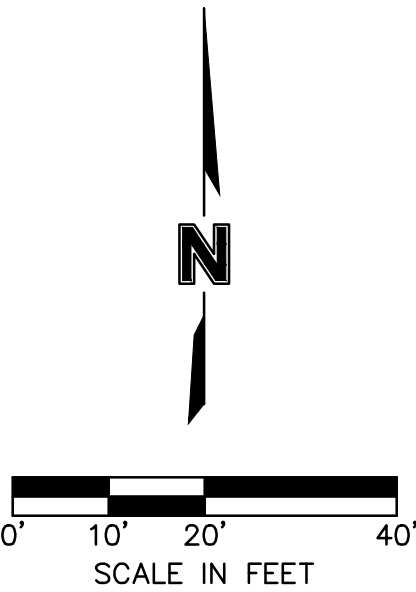
LED COUNTDOWN TYPE.
- ALL 12" LENS WITH TUNNEL VISOR

NOTE:

1.) ALL TRAFFIC SIGNAL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE MISSOURI STANDARDS SPECIFICATION FOR HIGHWAY CONSTRUCTION, SECTION 902 (TRAFFIC SIGNALS), UNLESS OTHERWISE NOTED.

2.) ALL SIGNAL WORK LISTED HEREIN IS TO BE BID UNDER THE LUMP SUM TRAFFIC SIGNAL MODIFICATION PAY ITEM FOR EACH INTERSECTION. WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND PLACING INTO OPERATION A FULLY FUNCTIONING TRAFFIC SIGNAL EQUIPPED WITH ALL ITEMS LISTED HEREIN.

DOUGLAS STREET & I-470 EASTBOUND RAMPS



1301 Burlington Street
North Kansas City, MO 64116

TEL 816.361.1177
www.olsson.com

REVISIONS		REVISIONS DESCRIPTION	
REV. NO.	DATE	PRELIMINARY PLANS	NOT FOR CONSTRUCTION
2023			

TRAFFIC SIGNAL MODIFICATION PLAN
DOUGLAS STREET & I-470 EASTBOUND RAMPS

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: SLT

project no.: 021-04643

drawing no.: F IRS D2104643

date: 7/14/2023

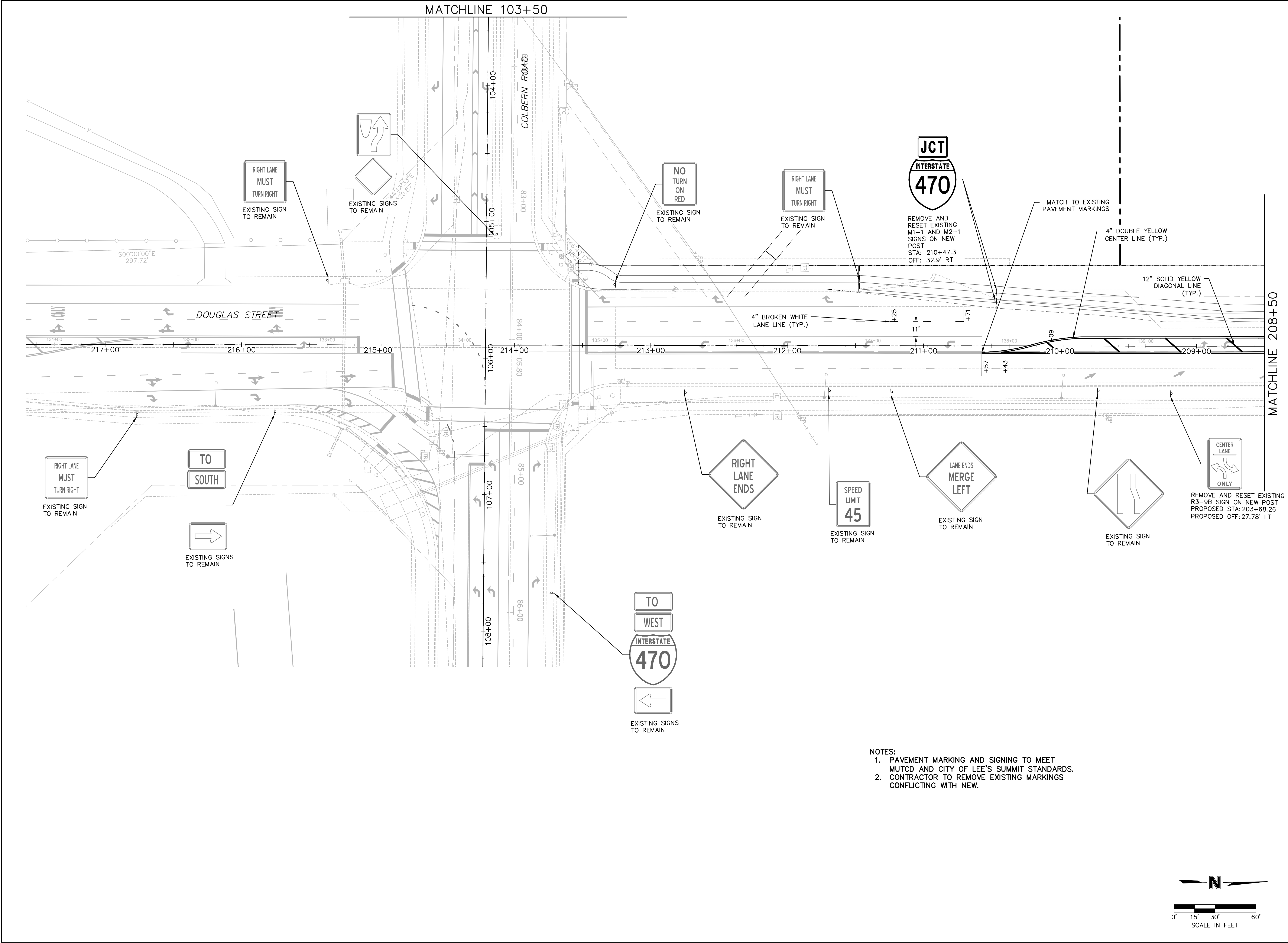
SHEET

49 OF 85



A north arrow pointing upwards with the letter 'N' in the center. Below it is a scale bar labeled 'SCALE IN FEET' with markings at 0', 15', 30', and 60'.

DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final\Plans\Sheets\JTTC\PAVEMENT MARKING AND SIGNING\LE_SAS_D2104643.dwg USER: kwilliams2 F_SAS-DTLS_D2104643
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- 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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PAVEMENT MARKING AND SIGNING PLAN
DOUGLAS STREET

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

LEE'S SUMMIT, MISSOURI

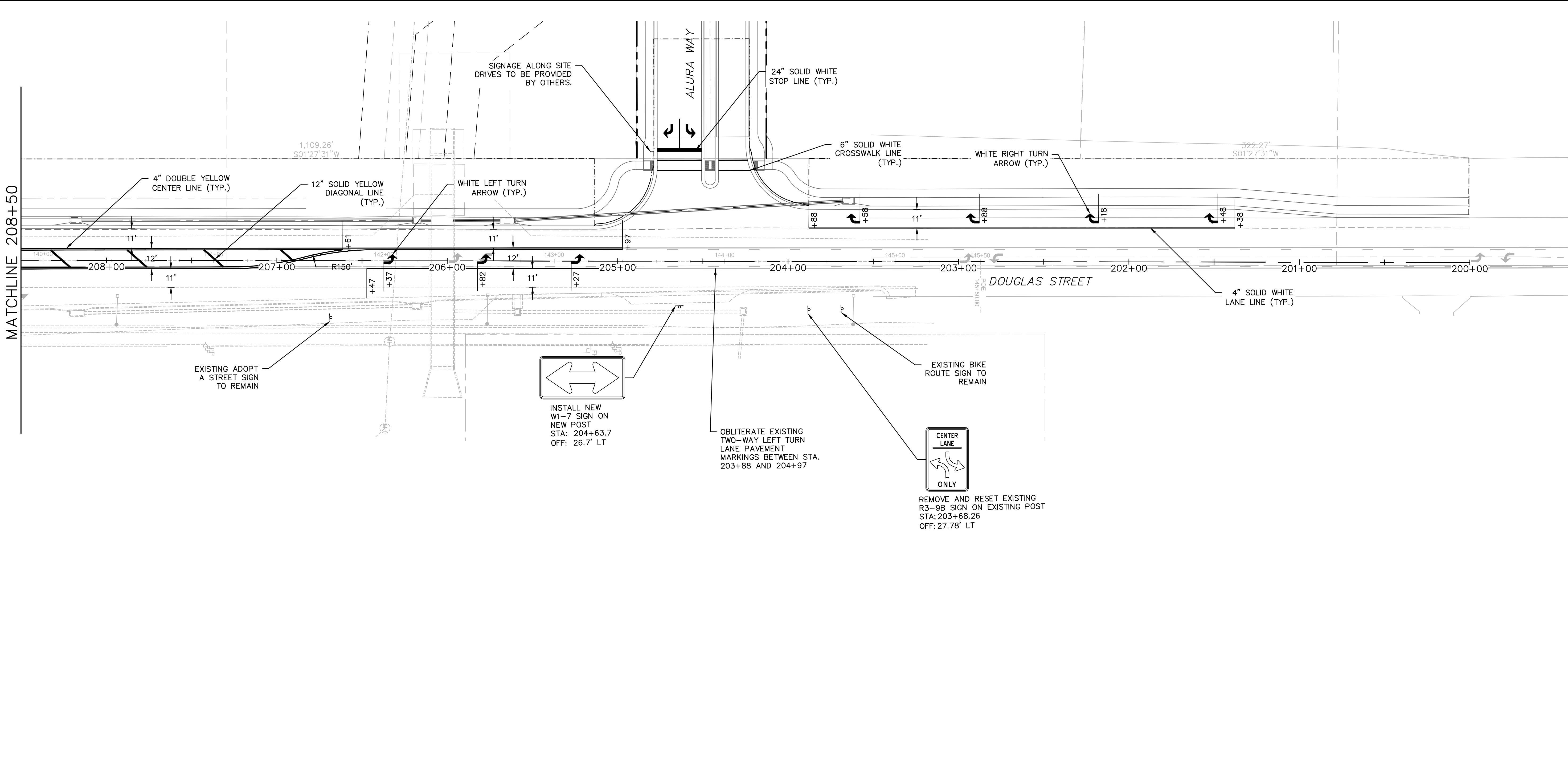
drawn by: SRH
checked by: JSC
approved by: JSS
QA/QC by: SLT
project no.: 021-04643
drawing no.: 51 OF 85
date: 7/14/2023

2023

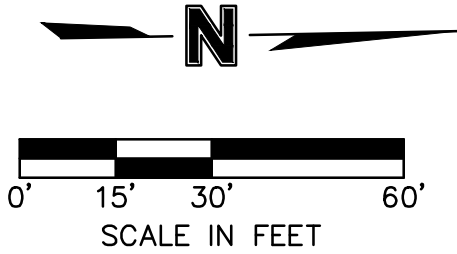
REV. NO.	DATE	REVISIONS DESCRIPTION
		PRELIMINARY PLANS
		NOT FOR CONSTRUCTION
REVISIONS		

SHEET

51 OF 85



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



PAVEMENT MARKING AND SIGNING PLAN
DOUGLAS STREET

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

LEE'S SUMMIT, MISSOURI

2023

REV. NO.

DATE

REVISIONS DESCRIPTION

PRELIMINARY PLANS

NOT FOR CONSTRUCTION

REVISIONS

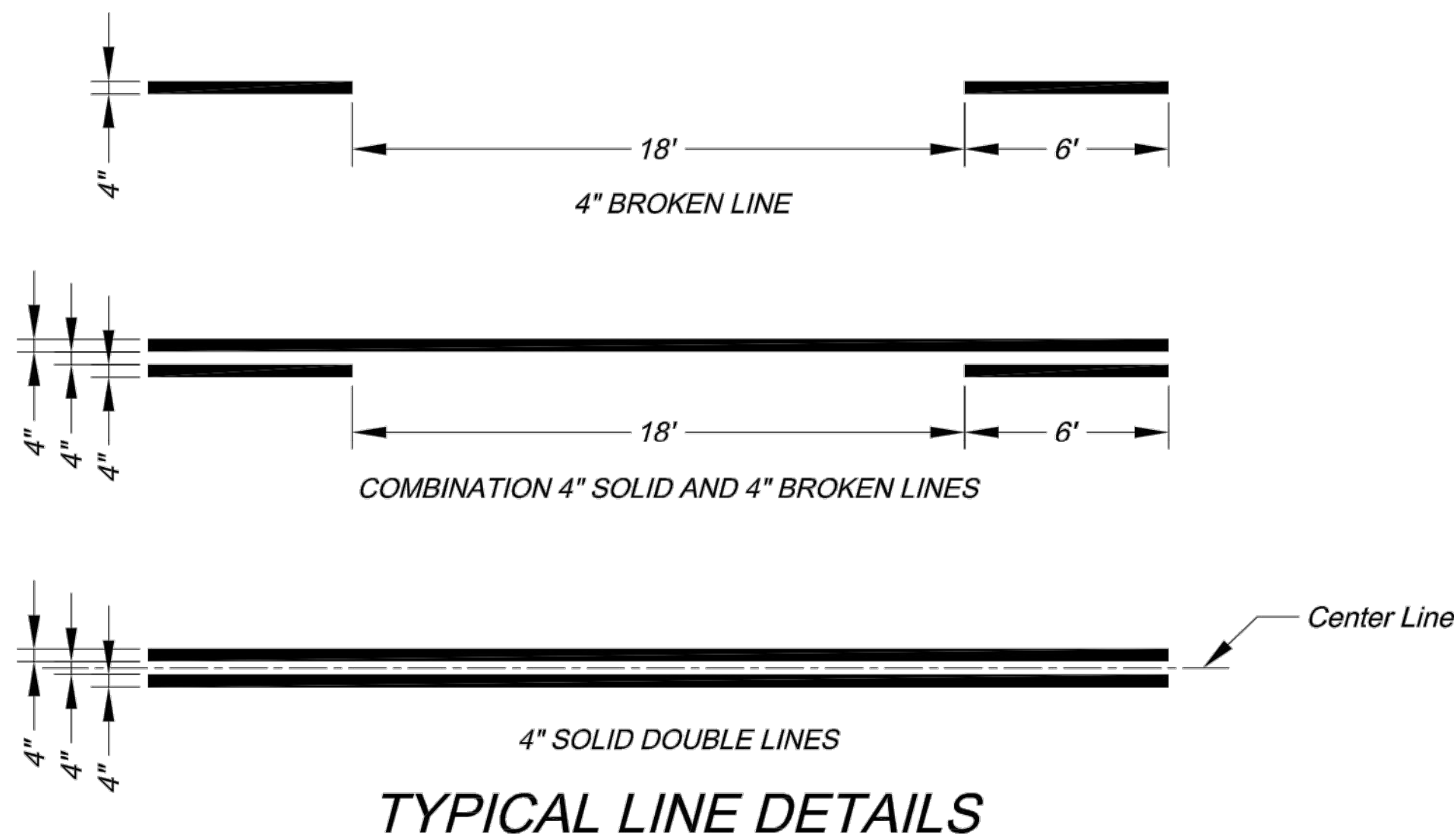
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checked by: JSC
approved by: JSS
QA/QC by: SLT
project no.: 021-04643
drawing no.: 52 OF 86
date: 7/14/2023

SHEET

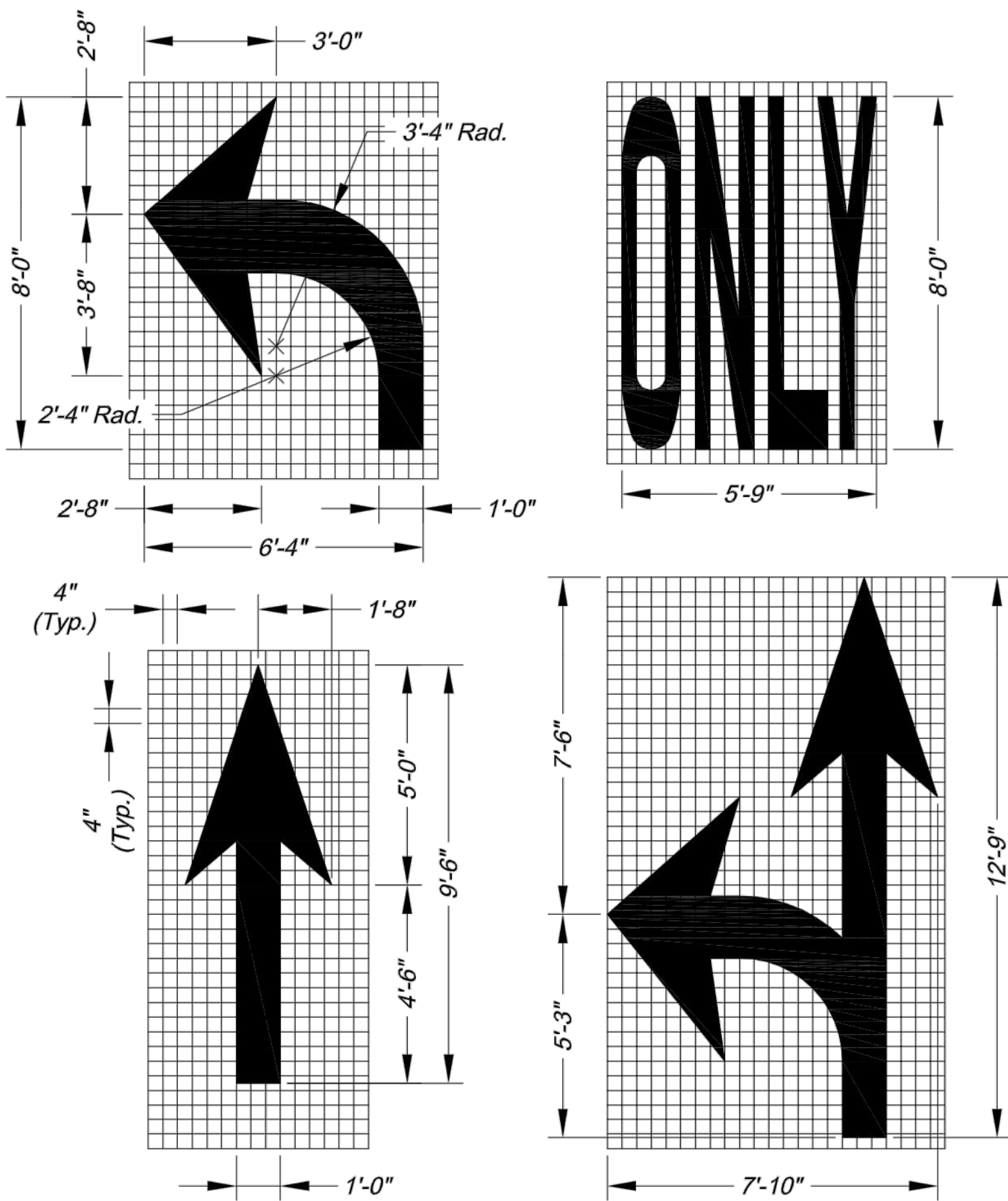
52 OF 85

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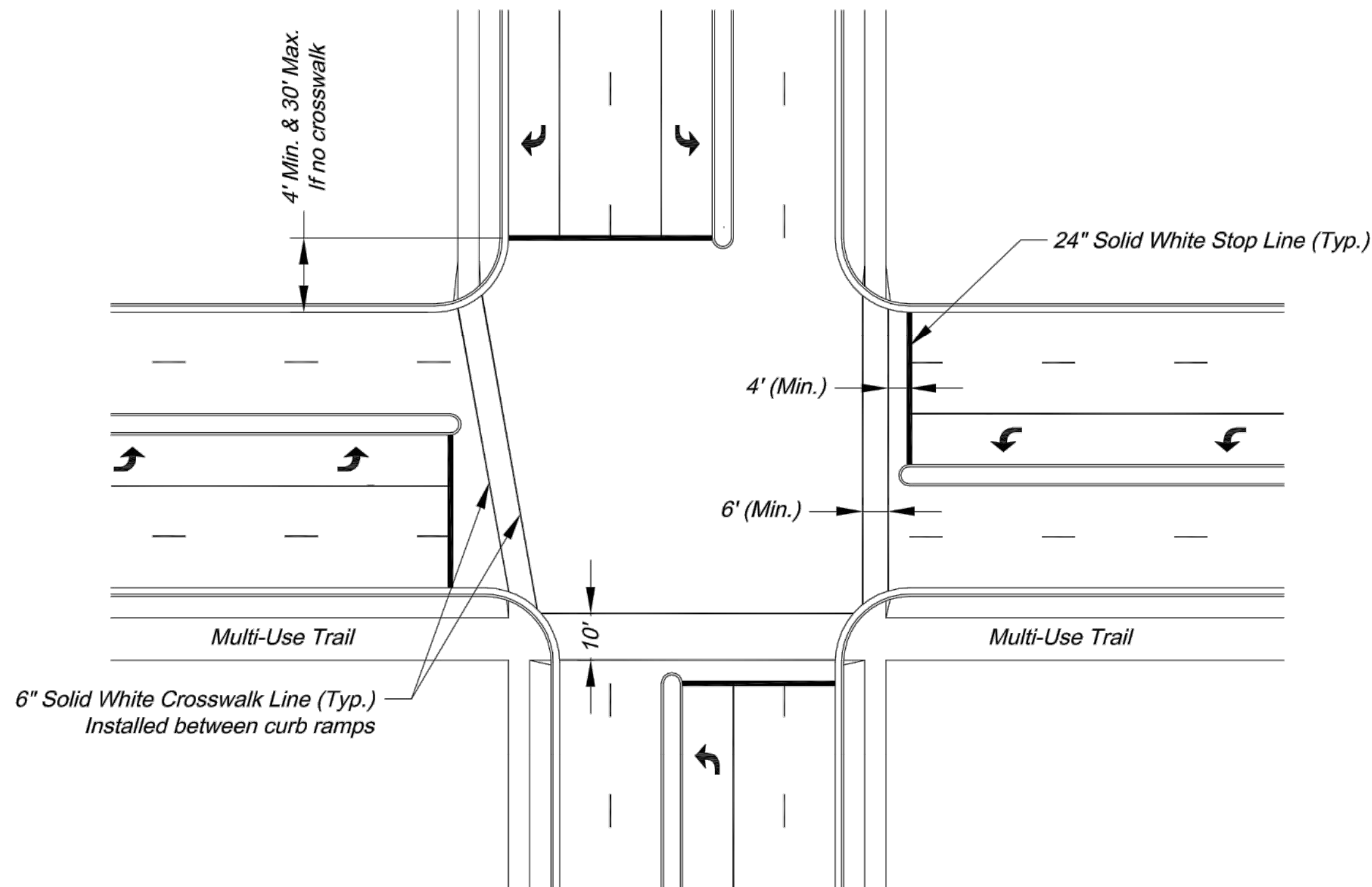


- NOTES:
1. All edge line, center line, and lane line pavement markings shall be 4" wide unless otherwise noted.
 2. Edge lines shall be continuous solid white or yellow lines. Right side edge lines shall be solid white. Median or left side edge lines on divided roadways are to be solid yellow. Edge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



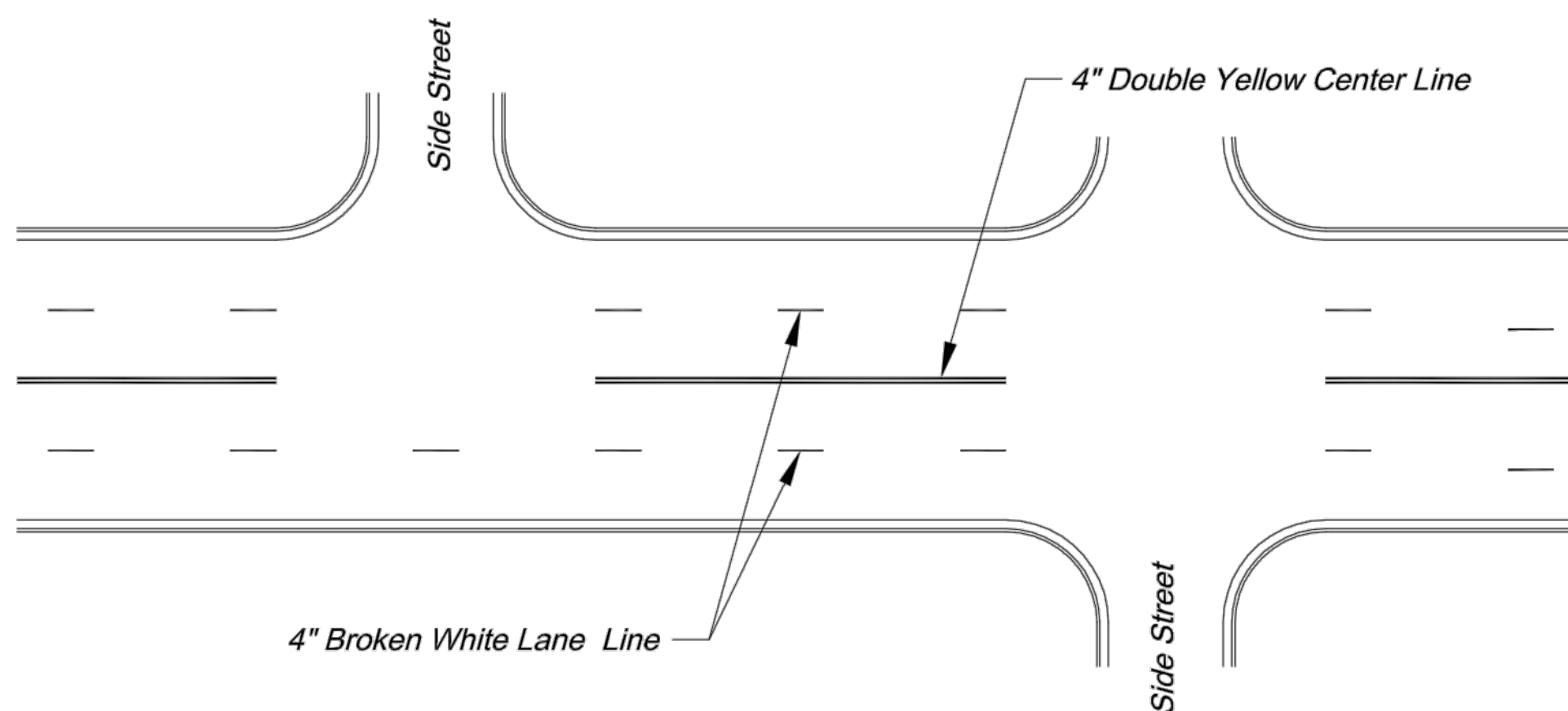
ARROW AND SYMBOL DETAILS

- 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.



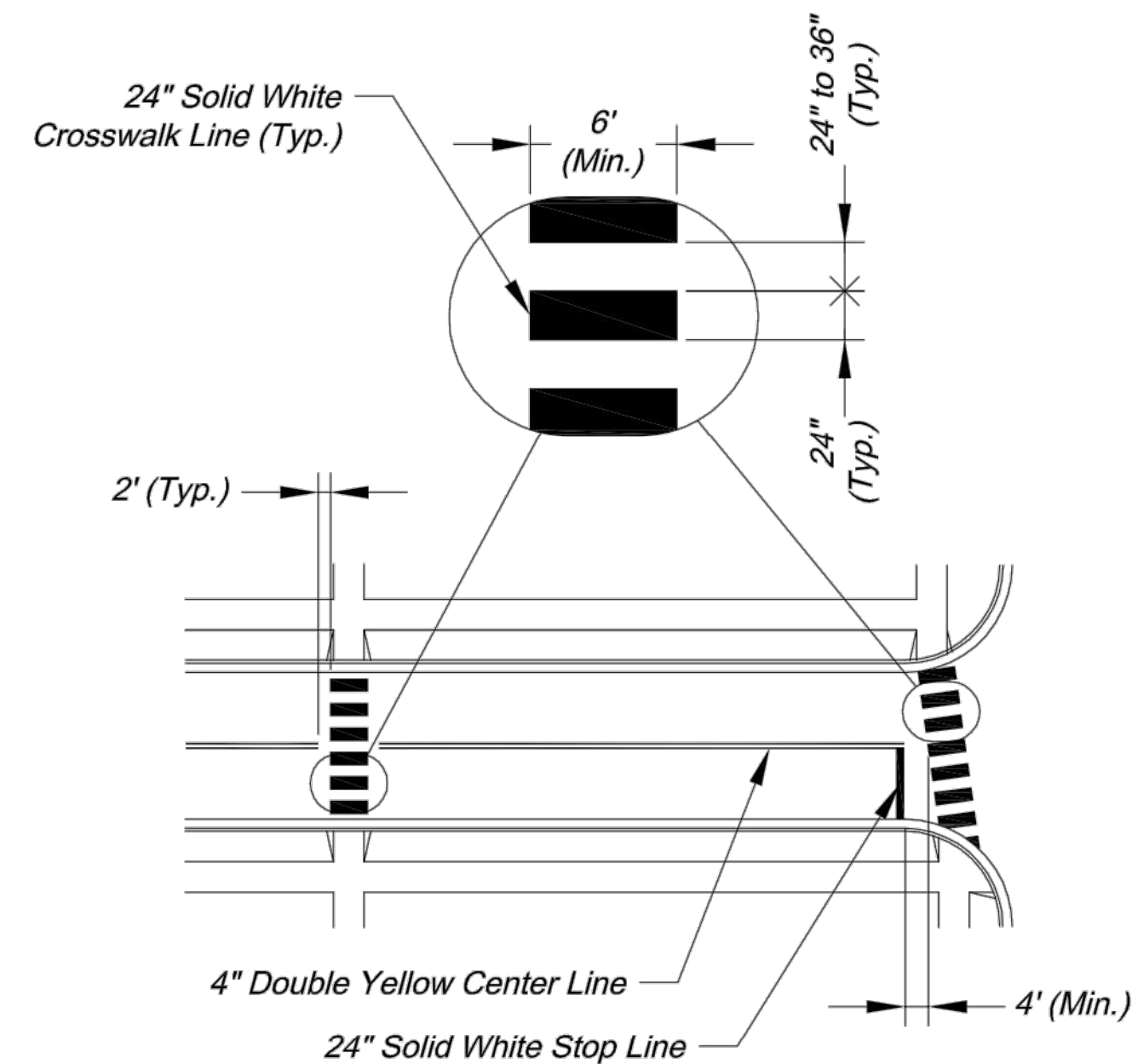
TYPICAL INTERSECTION MARKINGS

- 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.

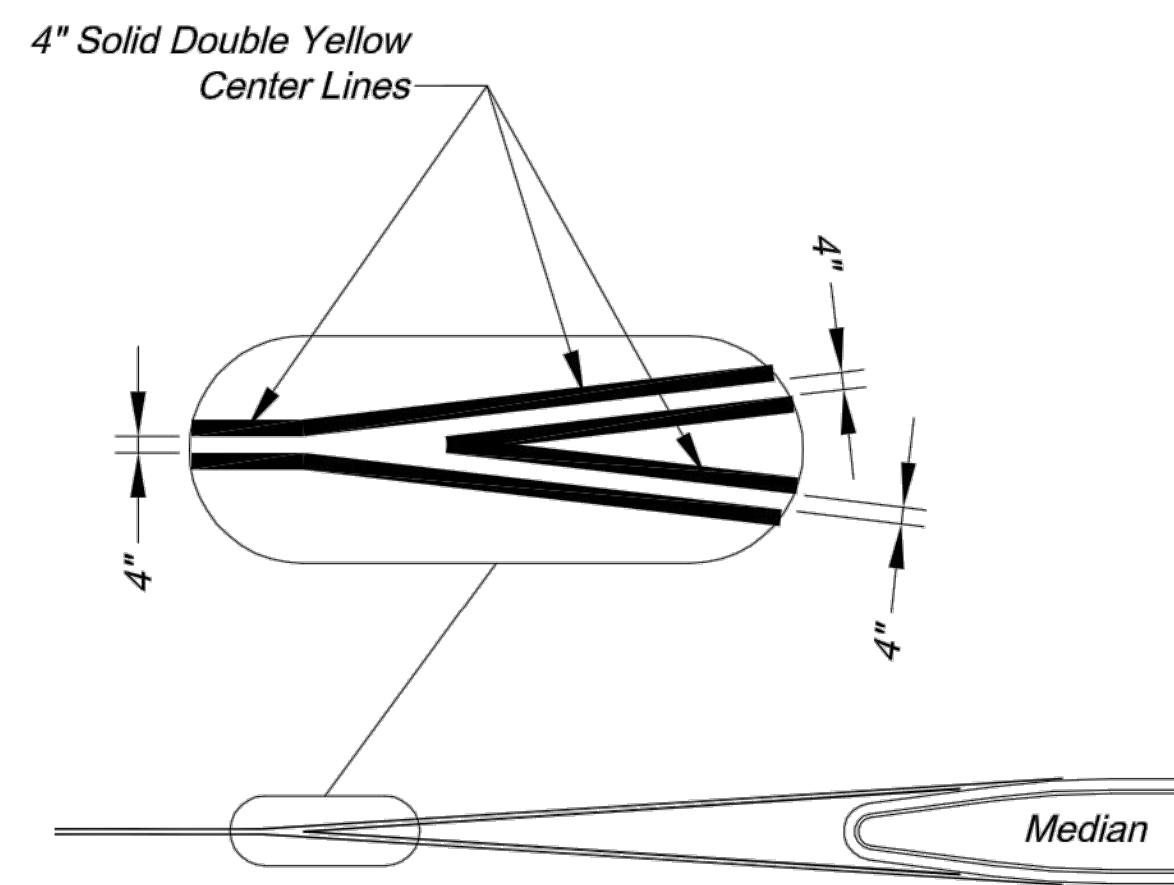


TYPICAL MARKINGS FOR FOUR-LANE UNDIVIDED ROADWAY

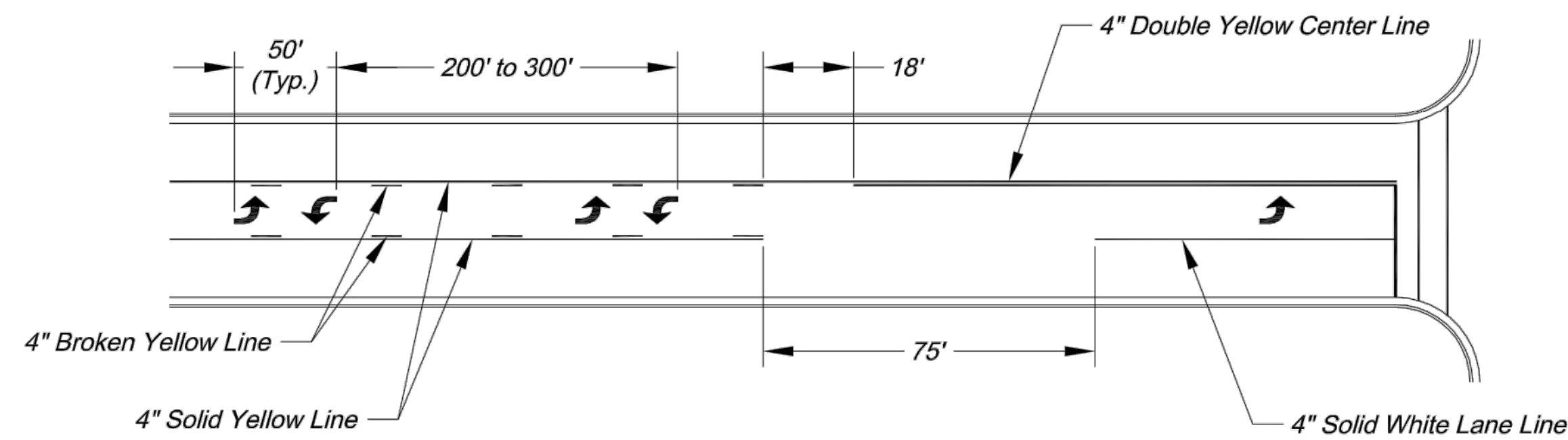
- PAVEMENT MARKING GENERAL NOTES:
1. All pavement markings shall be in accordance with the latest edition of the *Manual on Uniform Traffic Control Devices (MUTCD)*.
 2. All words and symbols shall conform to the latest edition of *Standard Alphabets for Highway Signs and Pavement Markings* printed by 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.



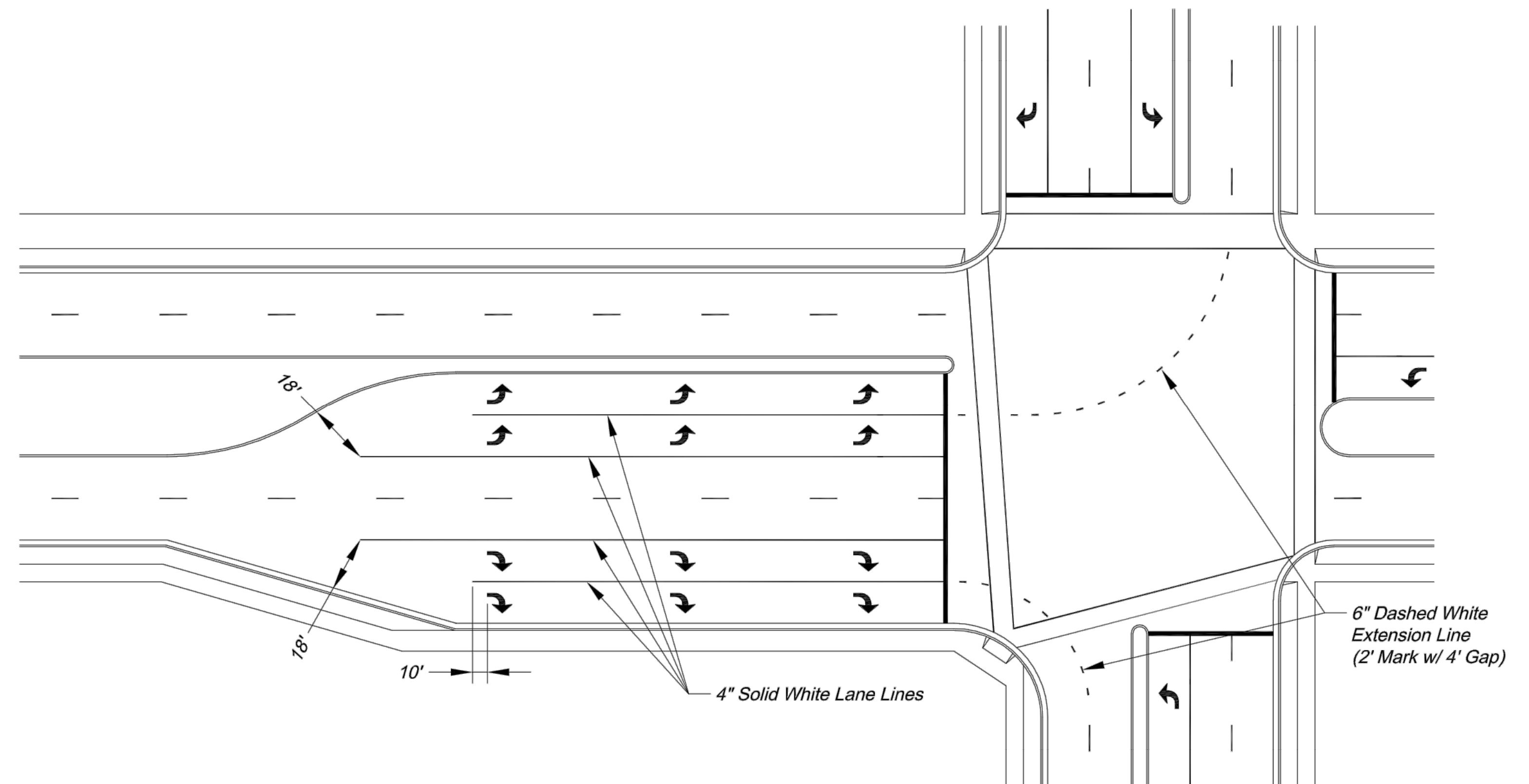
TYPICAL MIDBLOCK OR SCHOOL CROSS WALK



TYPICAL MEDIAN NOSE CENTER LINE DETAIL

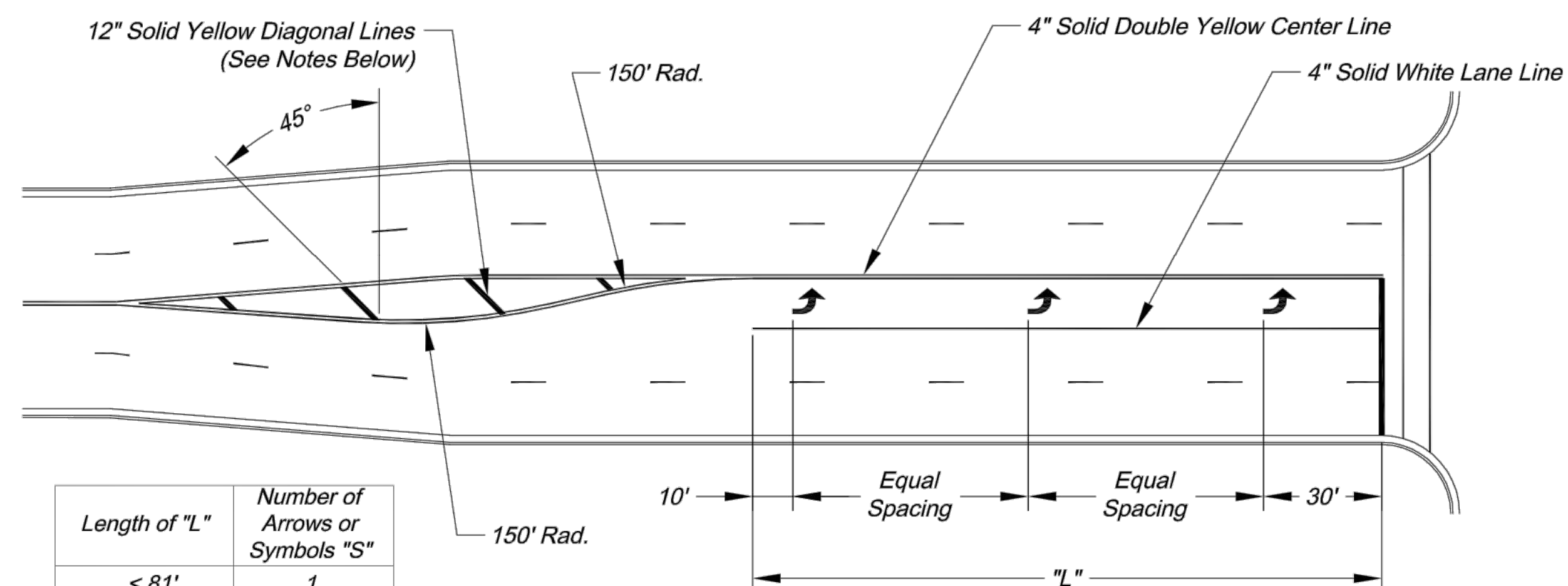


TYPICAL MARKINGS FOR TWO-WAY LEFT-TURN LANE



TYPICAL DUAL TURN LANE MARKINGS

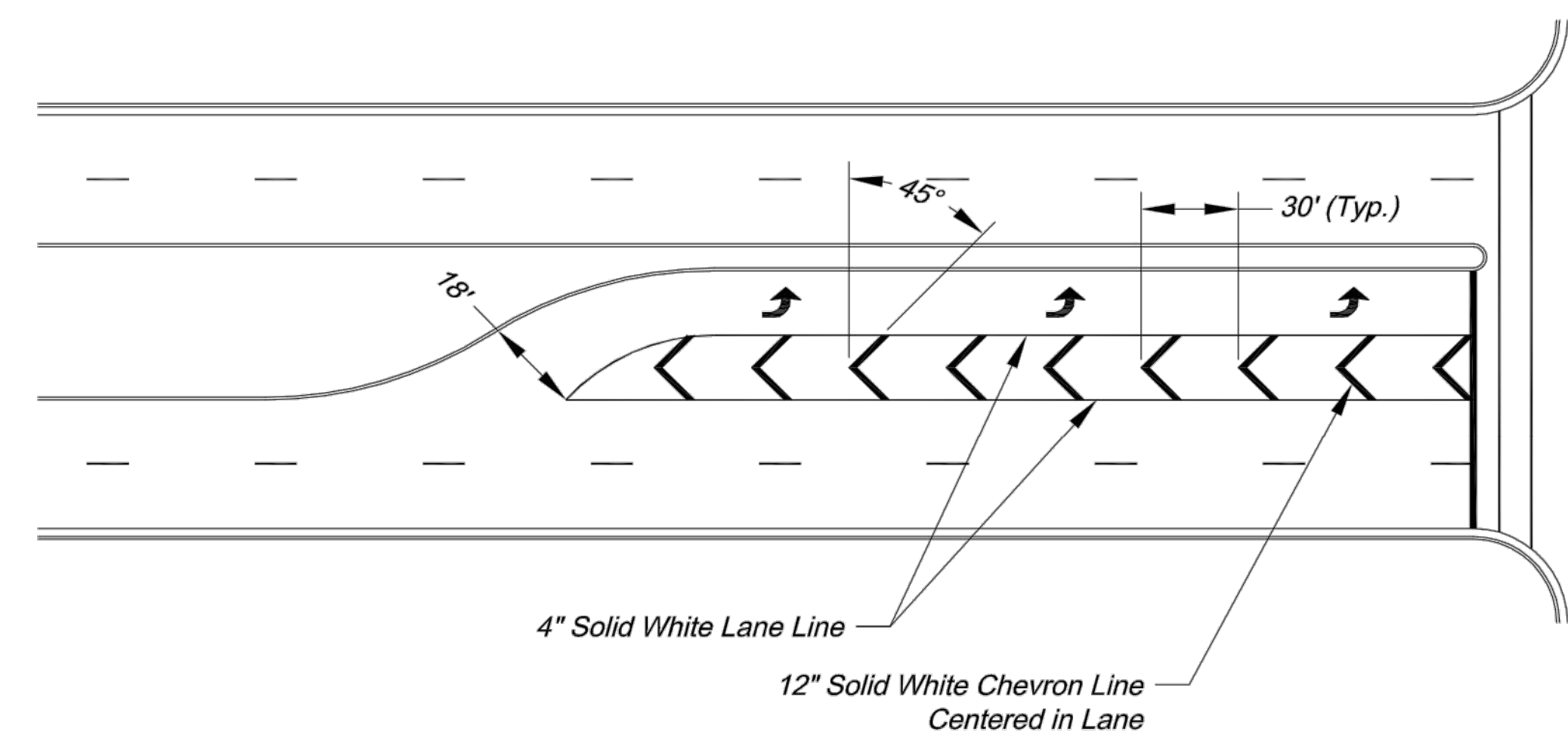
NOTE:
1. Dashed extension lines shall not extend through crosswalks.



Length of "L"	Number of Arrows or Symbols "S"
< 81'	1
81' - 120'	2
121' - 200'	3
201' - 280'	4
281' - 360'	5
361' - 440'	6

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

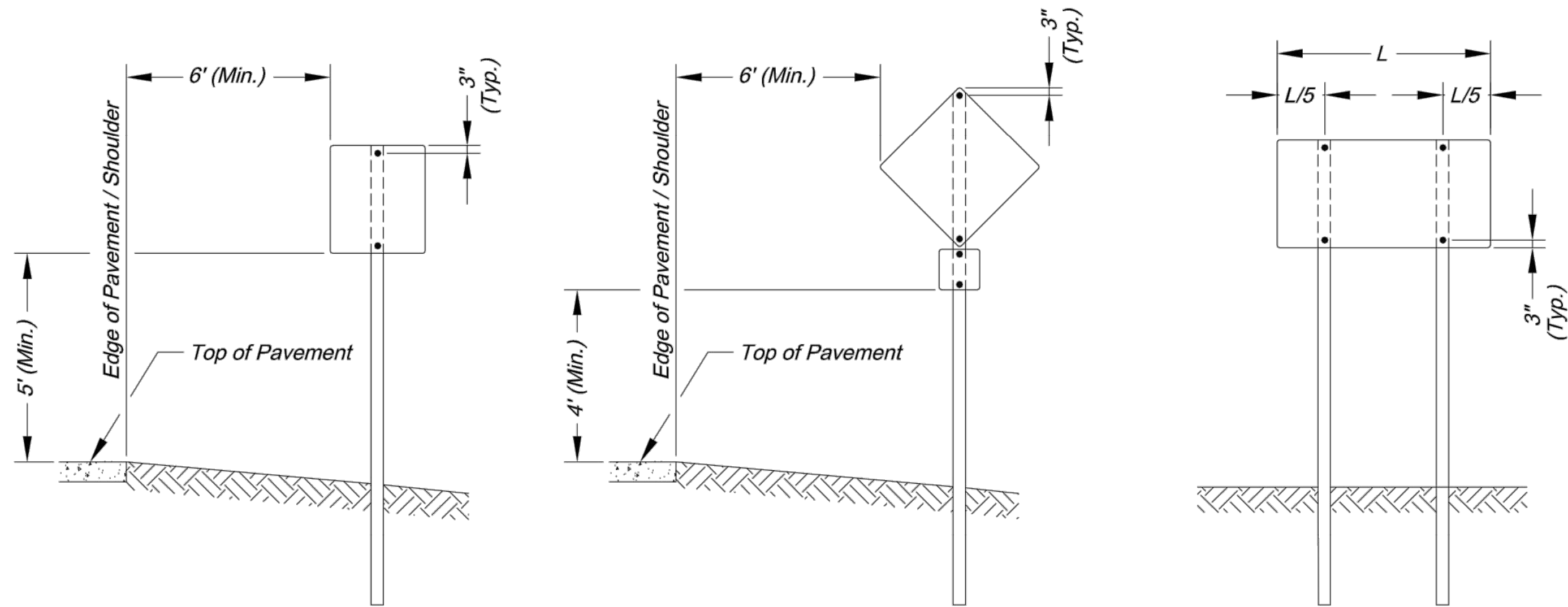


CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

Project: COLBERN ROAD AND DOUGLAS STREET
INTERSECTION MARKING DETAILS
Sheet Name: STANDARD DRAWING PM-2

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

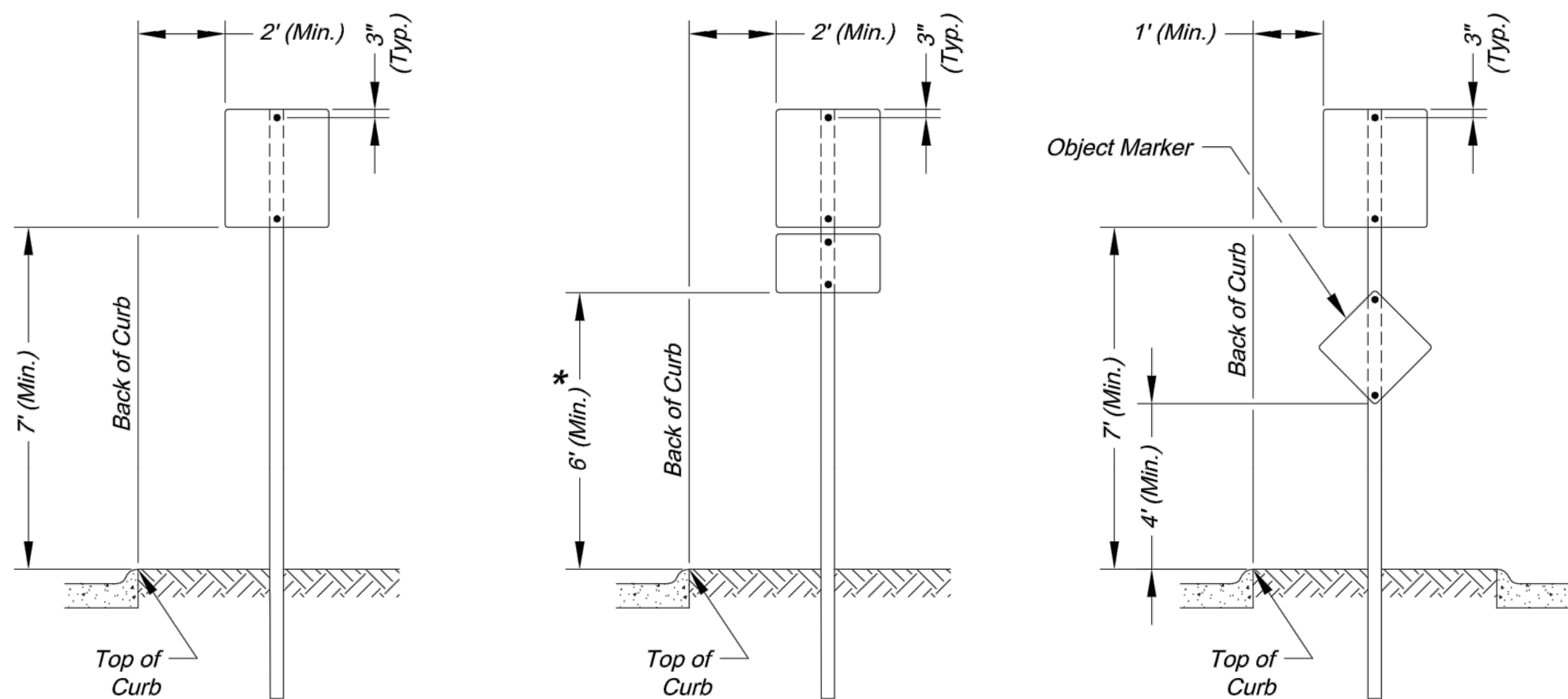
2 OF 2



SIGN INSTALLATION FOR
NON-CURBED STREET

SIGN INSTALLATION WITH
AUXILARY SIGN FOR
NON-CURBED STREET

SIGN INSTALLATION WITH
TWO SIGN POSTS



SIGN INSTALLATION FOR
CURBED STREET

SIGN INSTALLATION WITH
AUXILARY SIGN FOR
CURBED STREET

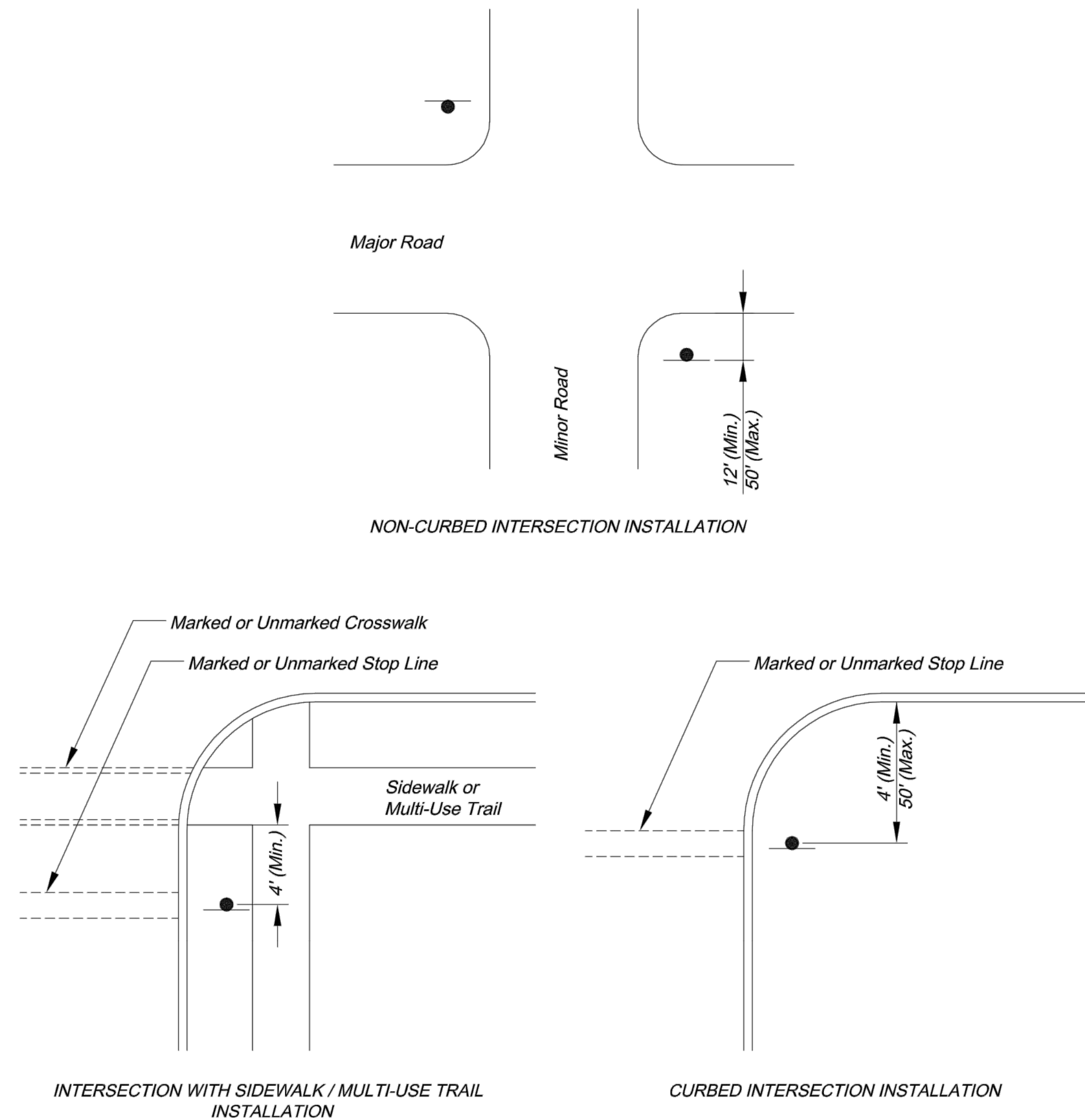
SIGN INSTALLATION FOR
RAISED MEDIANS

SIGN MOUNTING DETAILS

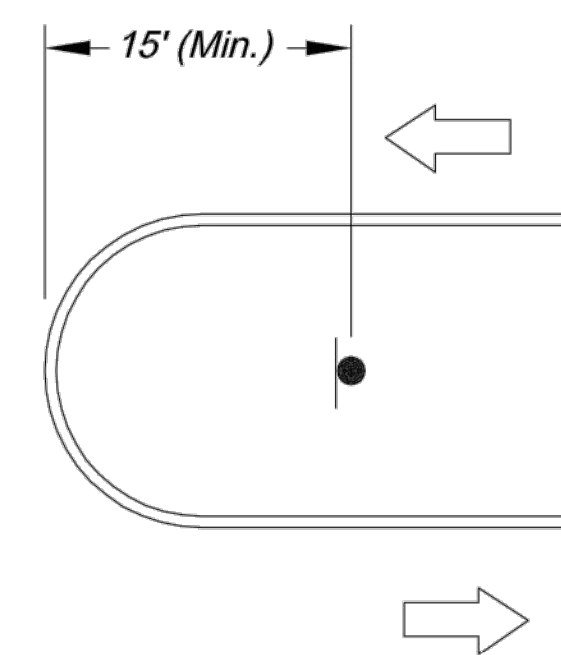
* The height to the bottom of a sign when it is located in a pedestrian walkway or extends into a walkway shall be a minimum of 80 inches above the walkway.

NOTE:

- Generally, the sign mounting height should not be more than 1' greater than the minimum mounting height.



CONTROL SIGN LOCATION



TYPICAL MEDIAN SIGN LOCATION

MEDIAN SIGN LOCATION

NOTES:

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



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 MOUNTING DETAILS

Sheet Name: STANDARD DRAWING SN-1

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

1 OF 3

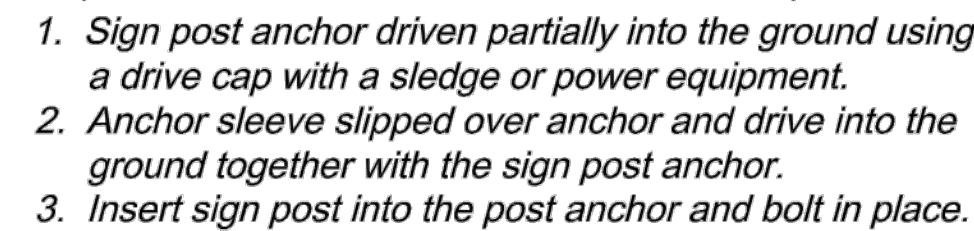


1. Splice shall be positioned entirely between finished grade line and 18" above finished grade line. Only one splice will be allowed per post.
2. U-Steel post shall be 3 lb./ft., galvanized according to ASTM A123.
3. U-Steel post can be used for installation of signs with an area of less than 2.5 square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



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.

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.



1. Square steel sign posts and break-away anchor shall consist of the following materials:

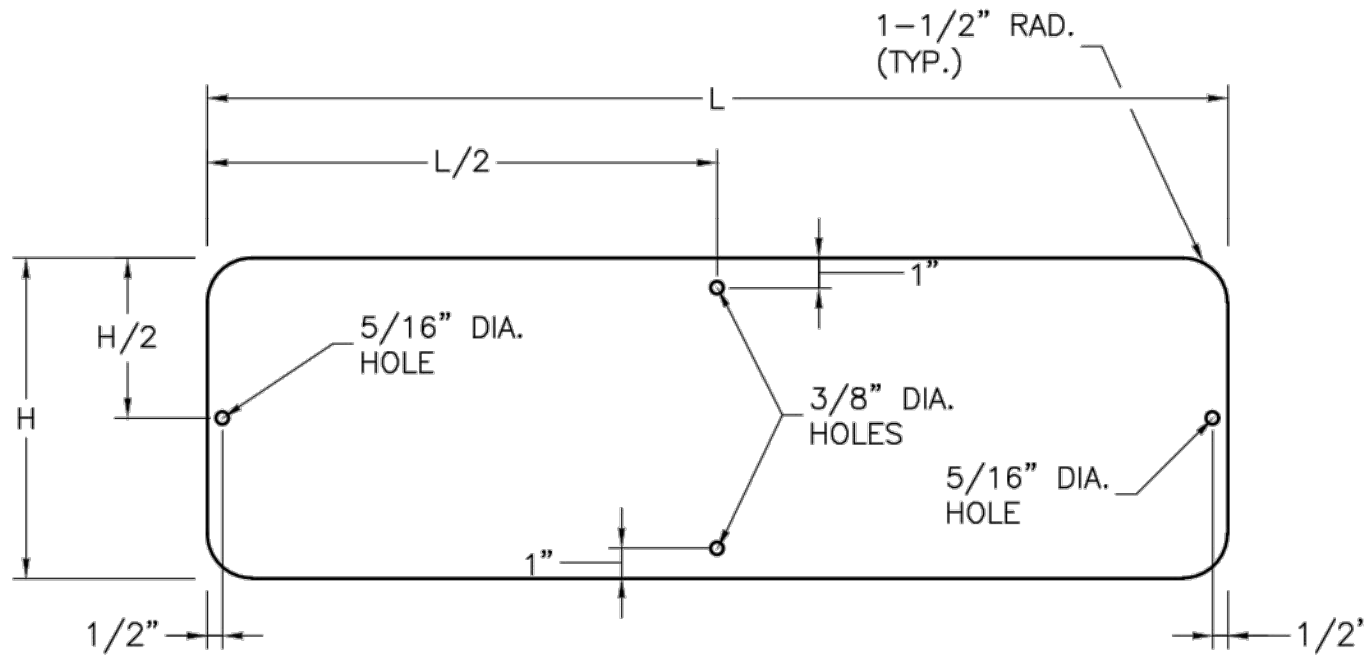
Sign Post -	14 Ga. 2" x 2" Square Steel Post
Post Anchor -	12 Ga. 2 1/4" x 2 1/4" x 36" Square Steel Post
Anchor Sleeve -	12 Ga. 2" x 2 1/2" x 18" Square Steel Post
2. 14 Gauge posts must meet a certified minimum yield strength of 60,000 psi.
3. In all installations the first hole above the finished 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.



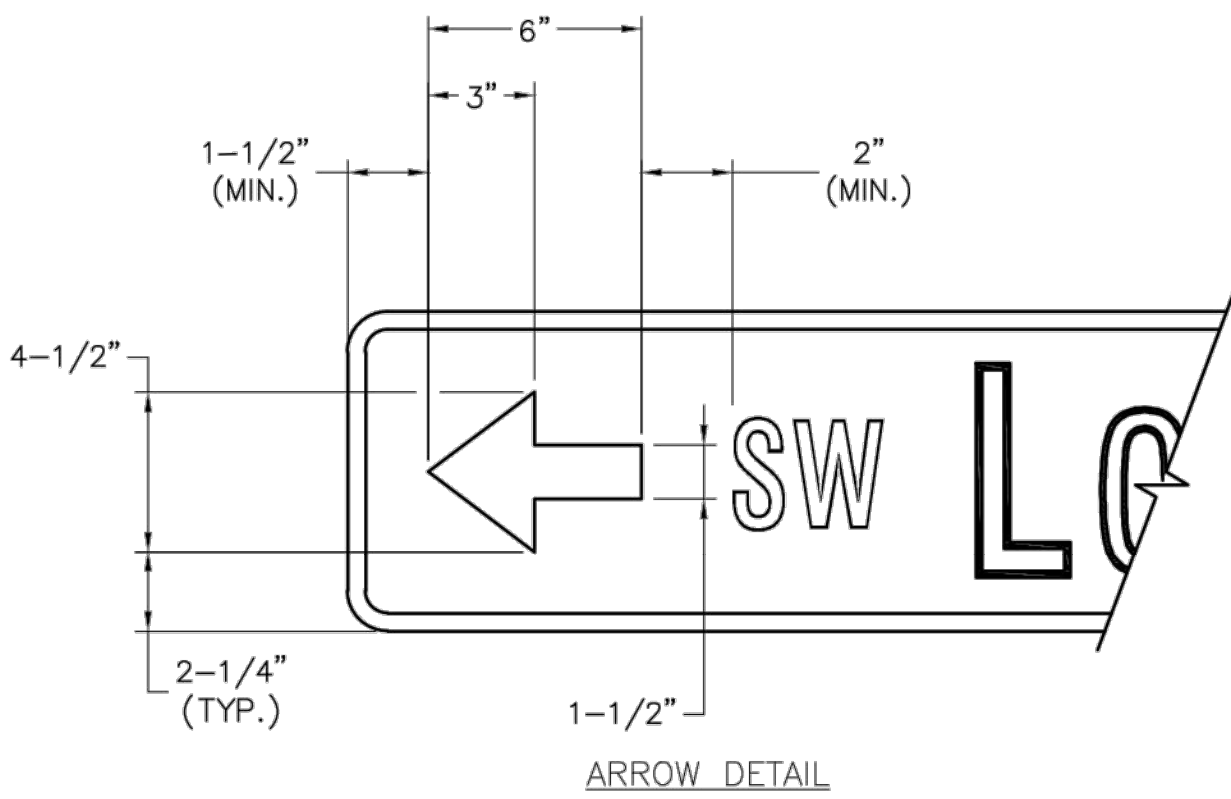
STANDARD ABBREVIATION LISTS

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

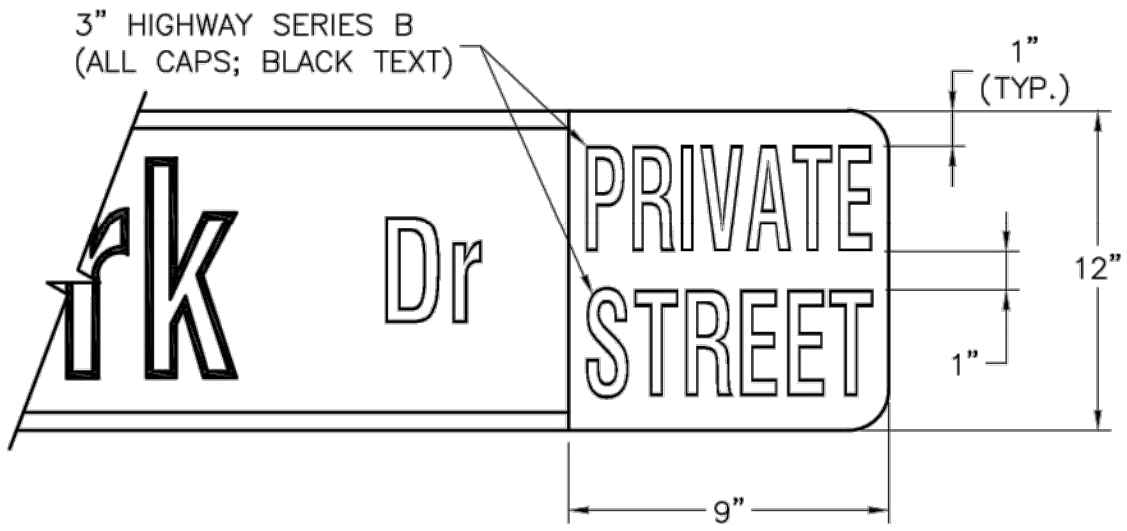
NUMBERED STREETS	
FIRST	ST
SECOND	ND
THIRD	RD
FOURTH TO TENTH	TH



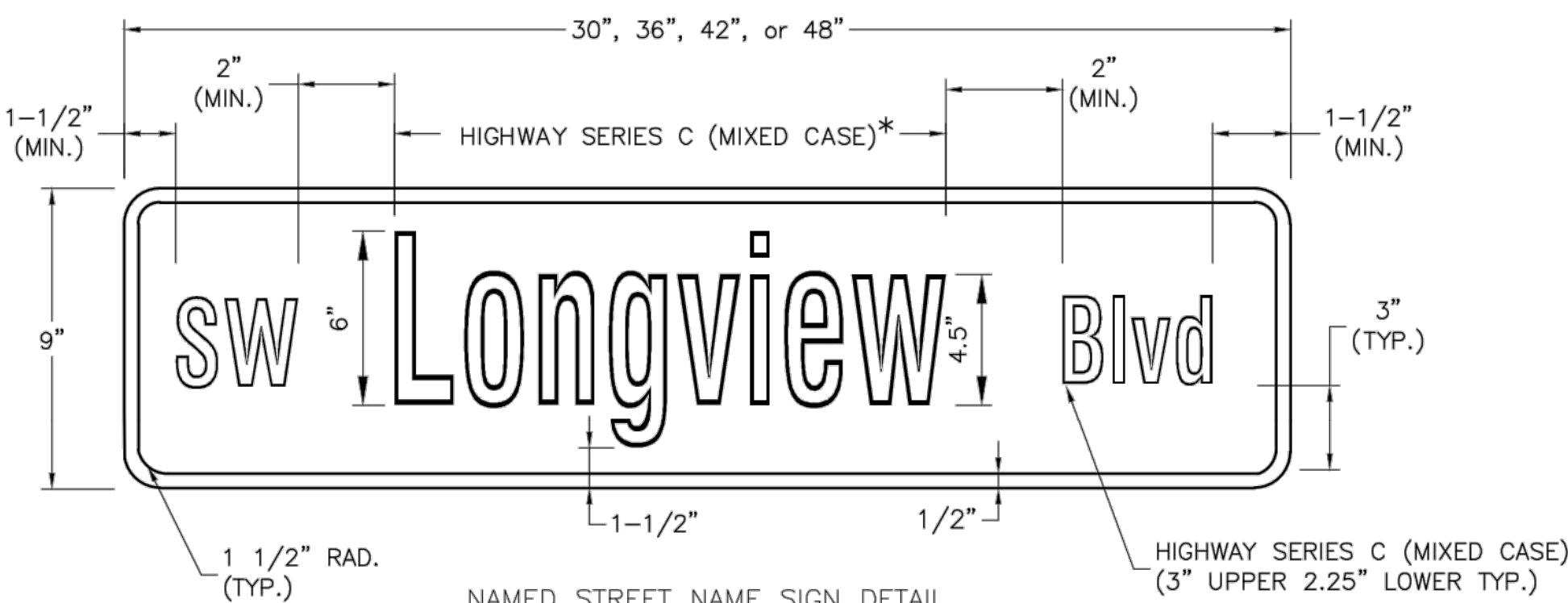
STREET NAME SIGN BLANK DETAILS
FOR MOUNTING ON SQUARE STEEL POSTS



ARROW DETAIL



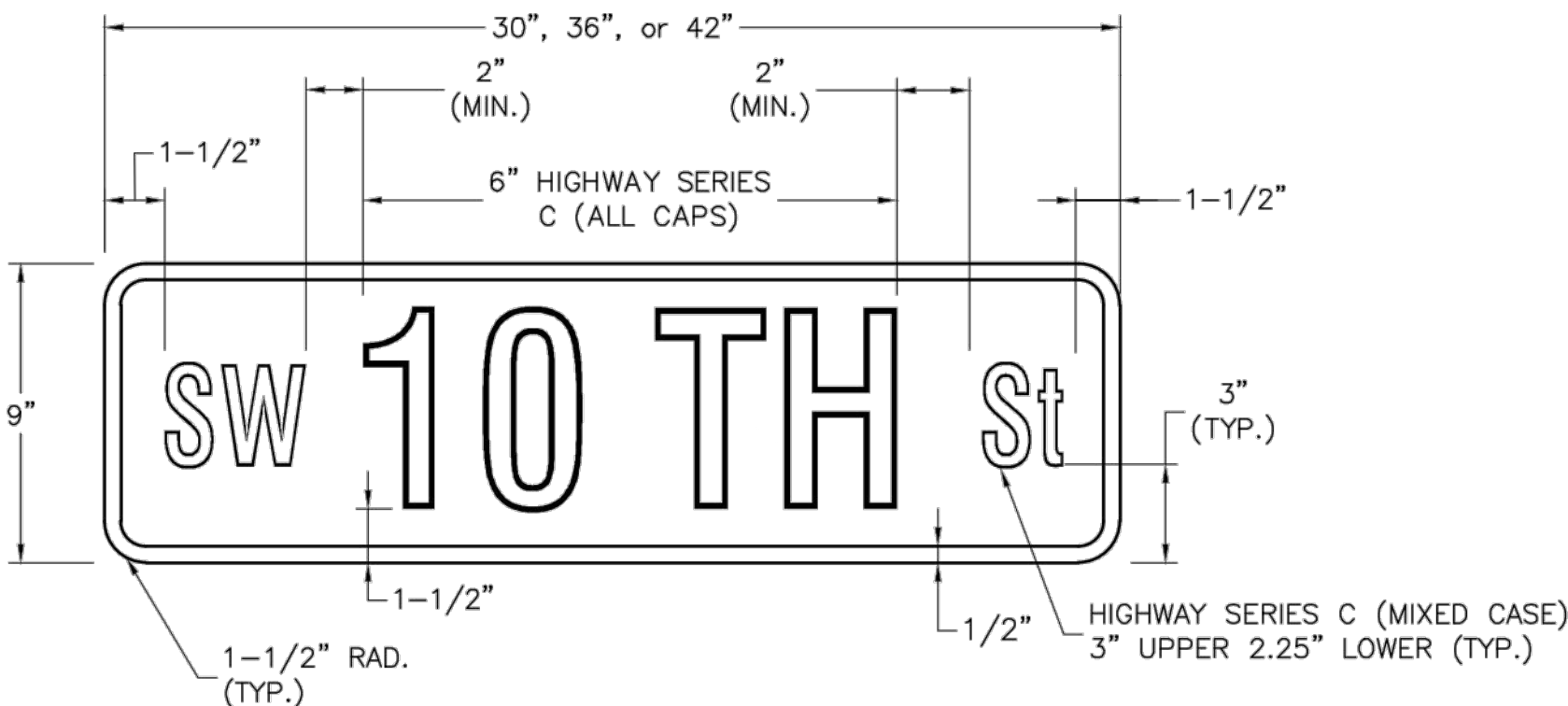
PRIVATE STREET TAG DETAIL



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

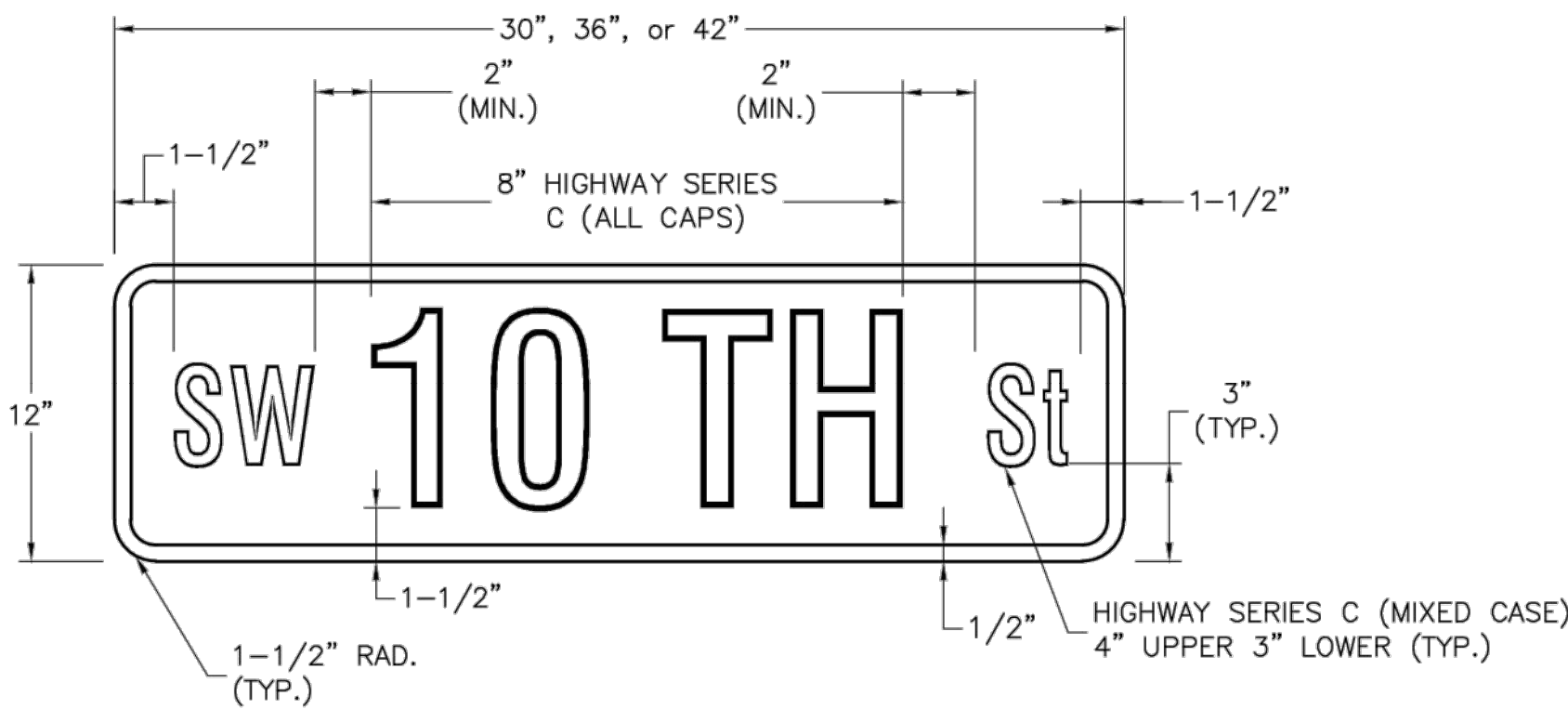
POST MOUNTED 2-LANE ALL SPEEDS AND MULTI-LANE UNDER 40 MPH



NUMBERED STREET NAME SIGN DETAIL

STREET NAME SIGN FACE DETAILS

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



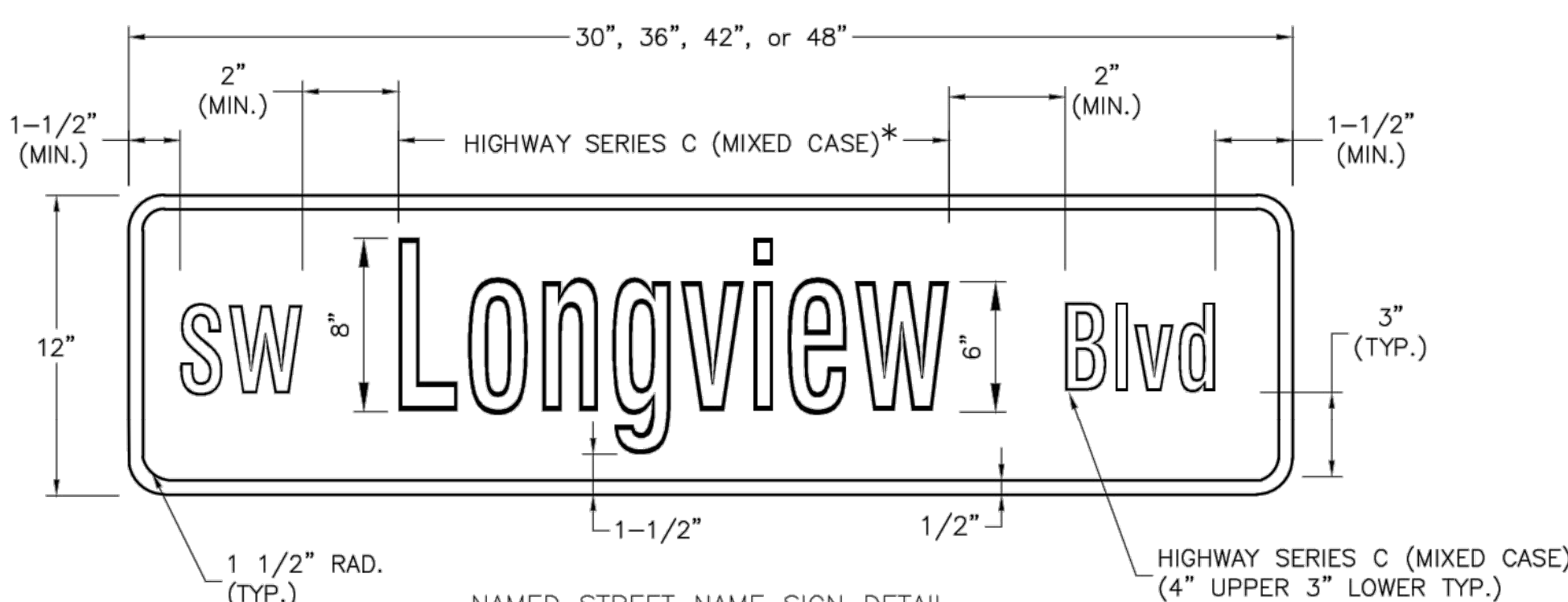
NUMBERED STREET NAME SIGN DETAIL

STREET NAME SIGN FACE DETAILS

POST MOUNTED MULTI-LANE GREATER THAN 40 MPH

NOTES:

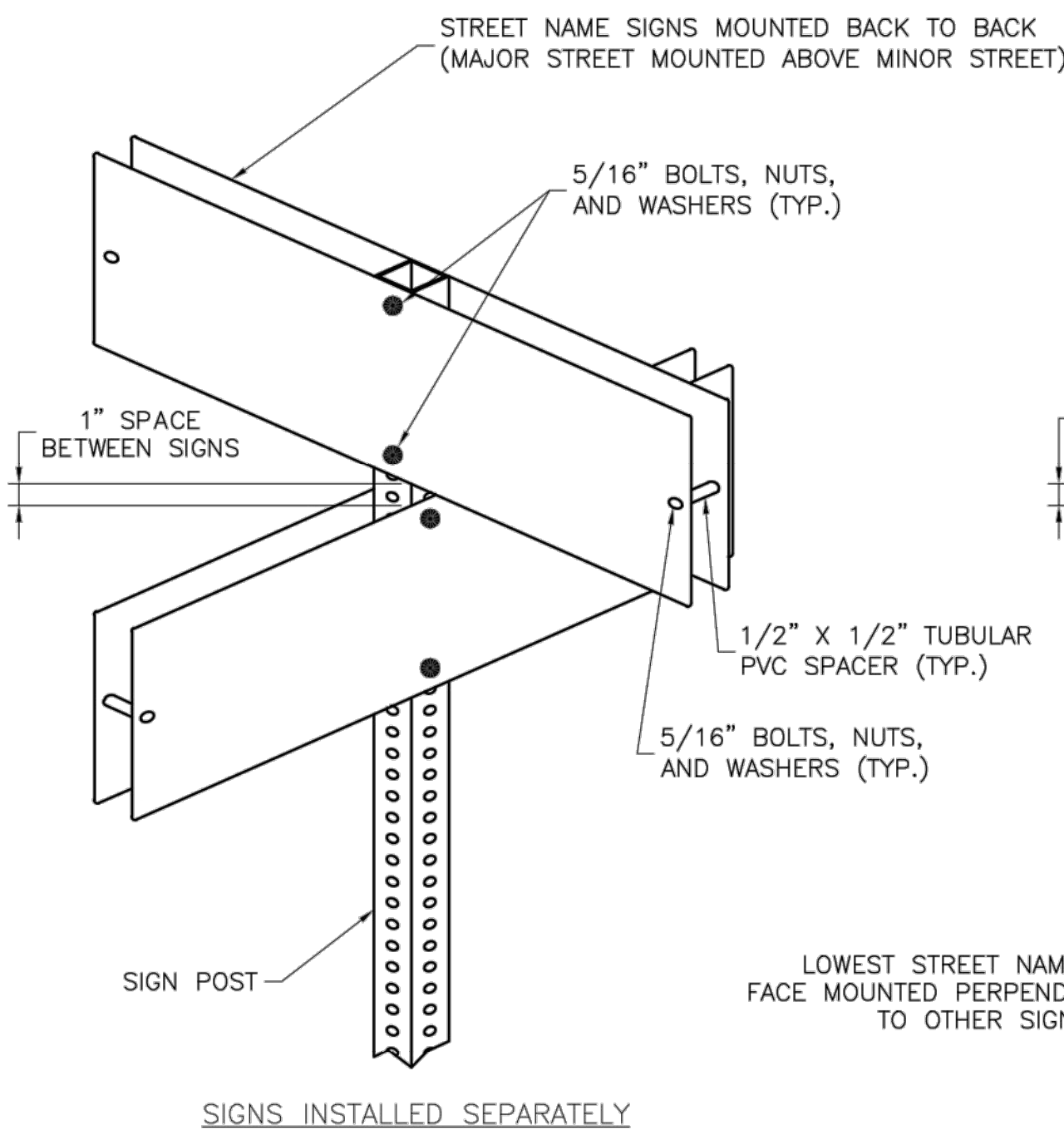
- FOR ALL STREET NAME SIGNS, THE LEGEND SHALL BE WHITE AND THE BACKGROUND SHALL BE GREEN.
- ARROWS SHALL BE ADDED TO STREET NAME SIGNS WHERE THE NAME OF A STREET CHANGES AT AN INTERSECTION. STREET NAME SIGNS WITH ARROWS ARE TO BE INSTALLED ON EACH SIDE OF THE INTERSECTION TO INDICATE THE CHANGE IN NAMES. 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.



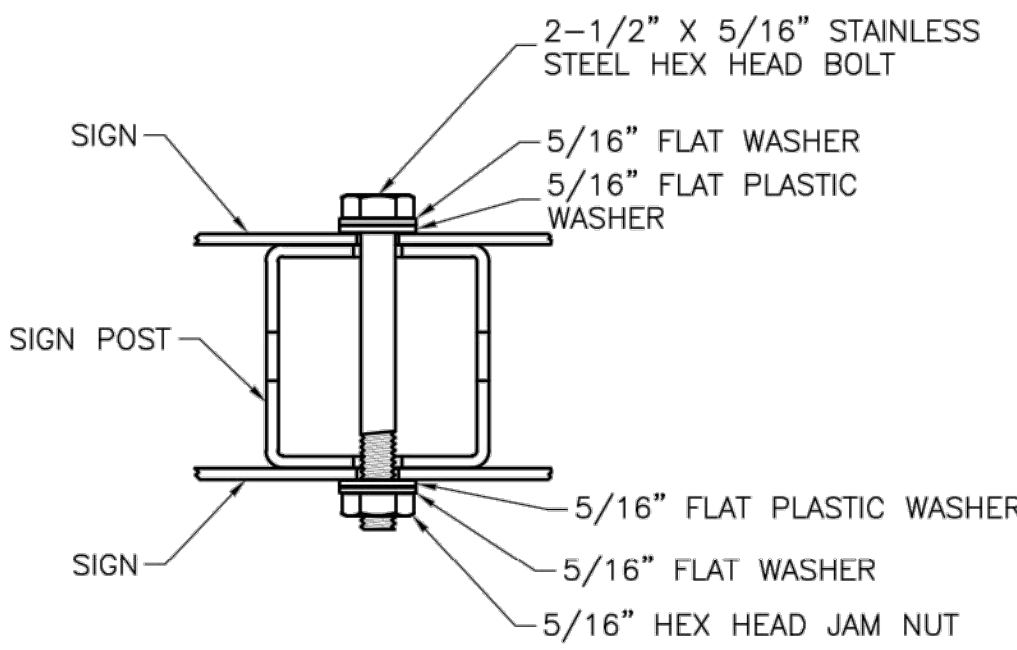
NAMED STREET NAME SIGN DETAIL
* USE HIGHWAY SERIES B (MIXED CASE) IN LIEU OF SERIES C IF NECESSARY TO FIT TEXT ON A 36" SIGN BLANK.

STREET NAME SIGN FACE DETAILS

POST MOUNTED MULTI-LANE GREATER THAN 40 MPH

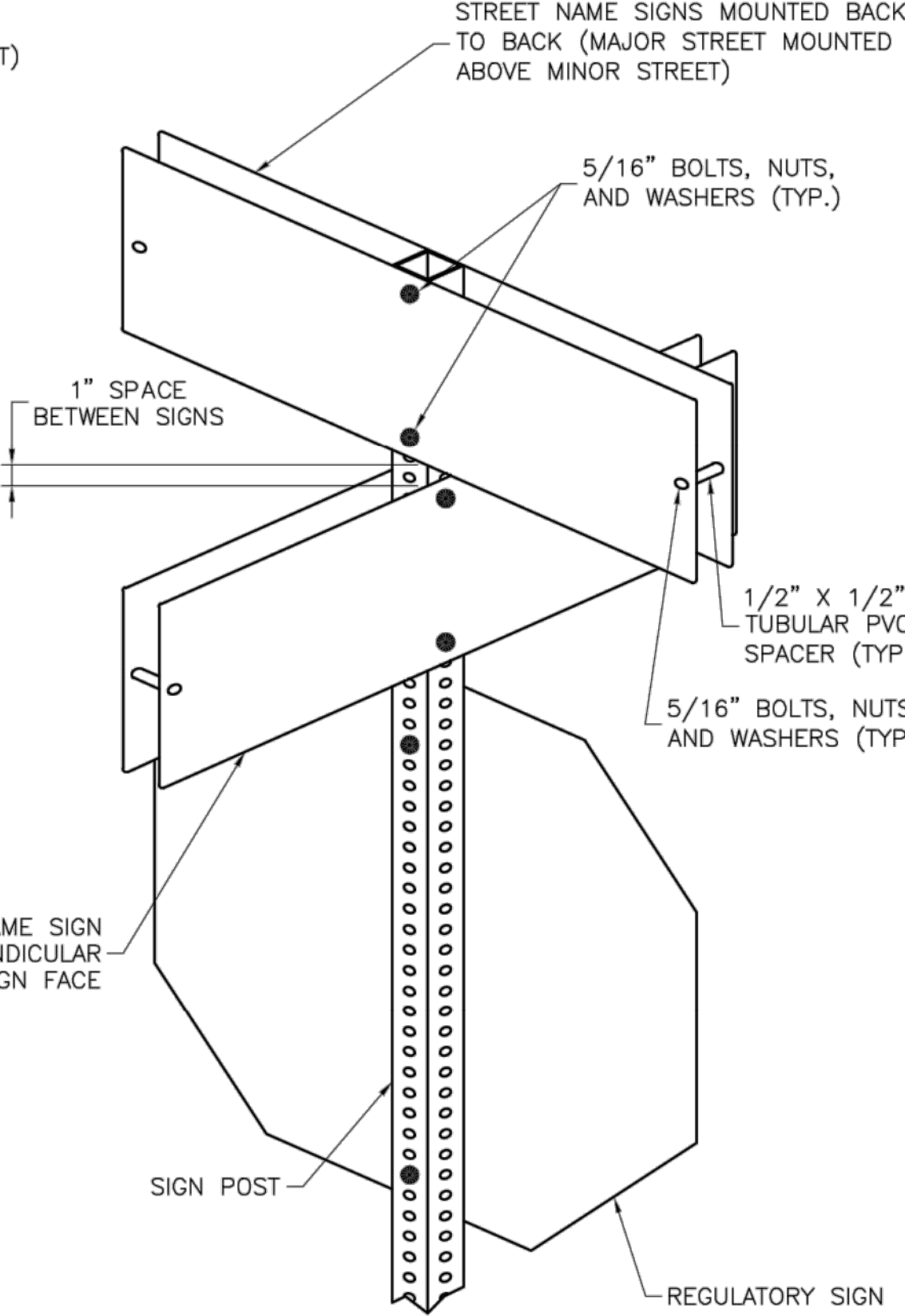


SIGNS INSTALLED SEPARATELY

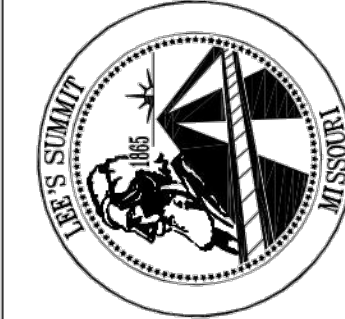


PLAN VIEW

SQUARE STEEL POST MOUNTING DETAILS



SIGNS INSTALLED WITH OTHER SIGNS



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

STREET NAME SIGN DETAILS

Sheet Name: STANDARD DRAWING SN-3

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

3 OF 3

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DATE: Jul 14, 2023 10:59am XREFS: F:\PTBLK_D20104643 C_PBASE_D2104643 T_PBASE_D20104643 F_SASBASE_D2104643 C_FROAD_D2104643



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.

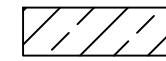
DOUGLAS STREET – DOUGLAS STREET TO REMAIN OPEN DURING PHASE 1 CONSTRUCTION. THE SOUTHBOUND THROUGH LANE IS TO BE TEMPORARILY CLOSED. THE TWO-WAY LEFT-TURN LANE IS TO BE UTILIZED FOR SOUTHBOUND THROUGH TRAFFIC.

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.

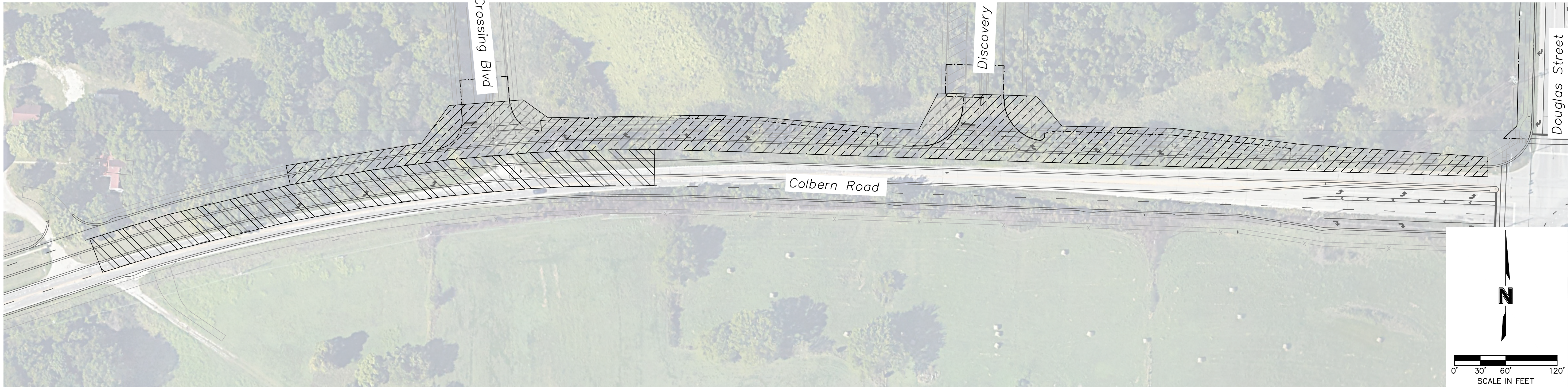
DOUGLAS STREET – DOUGLAS STREET TO REMAIN OPEN DURING PHASE 2 CONSTRUCTION IN BOTH DIRECTIONS WITH TEMPORARY TRAFFIC CONTROL IN PLACE FOR STRIPING OPERATIONS.

PHASING LEGEND

-  PHASE 1 WORK AREA
 PHASE 2 WORK AREA

GENERAL NOTES:

- 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.
- 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.
- CONTRACTOR TO MAINTAIN MINIMUM 11’ LANES WITHIN THE WORK ZONE AREA THROUGHOUT CONSTRUCTION.
- 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.



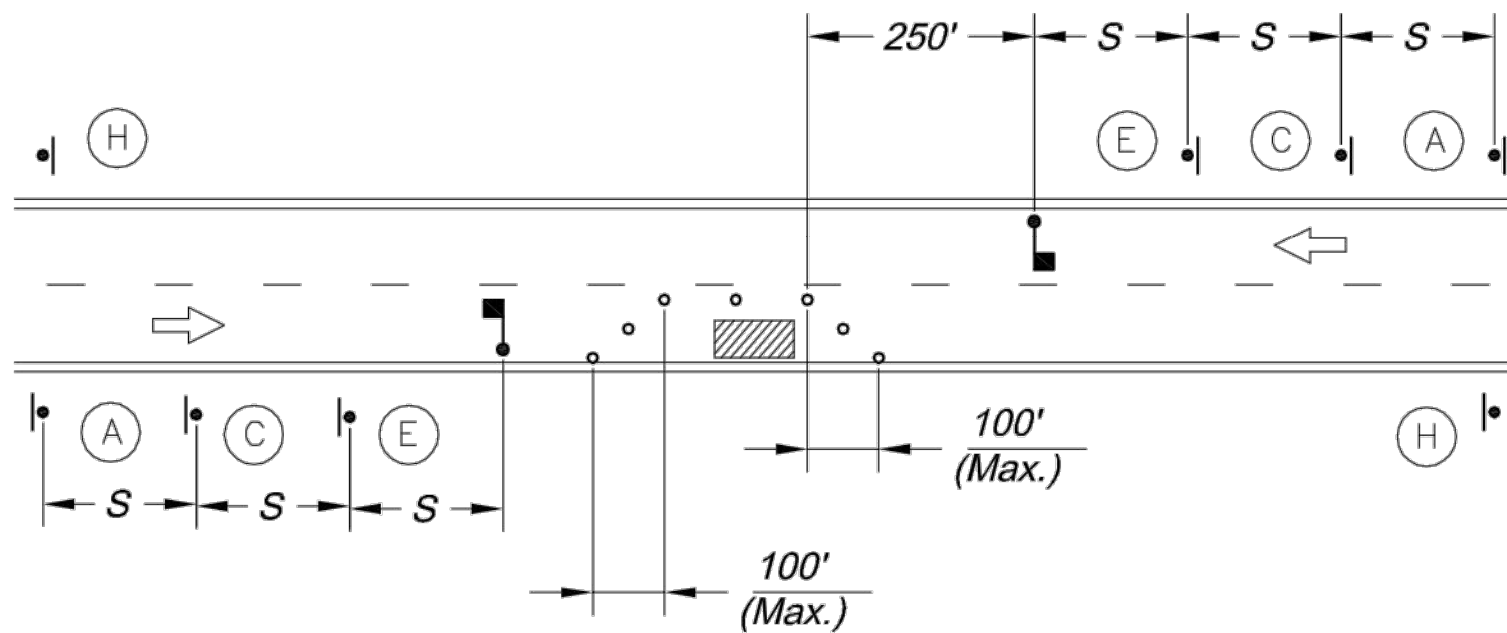
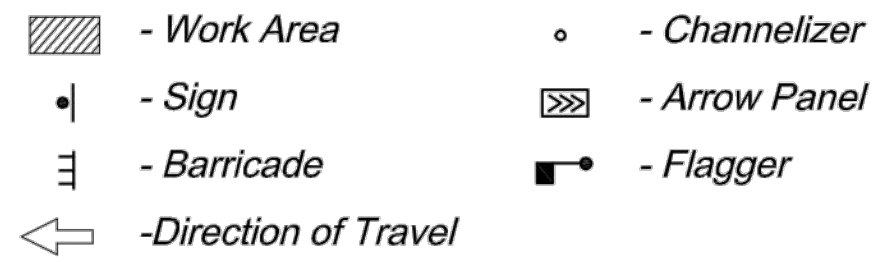
TRAFFIC CONTROL PLAN

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

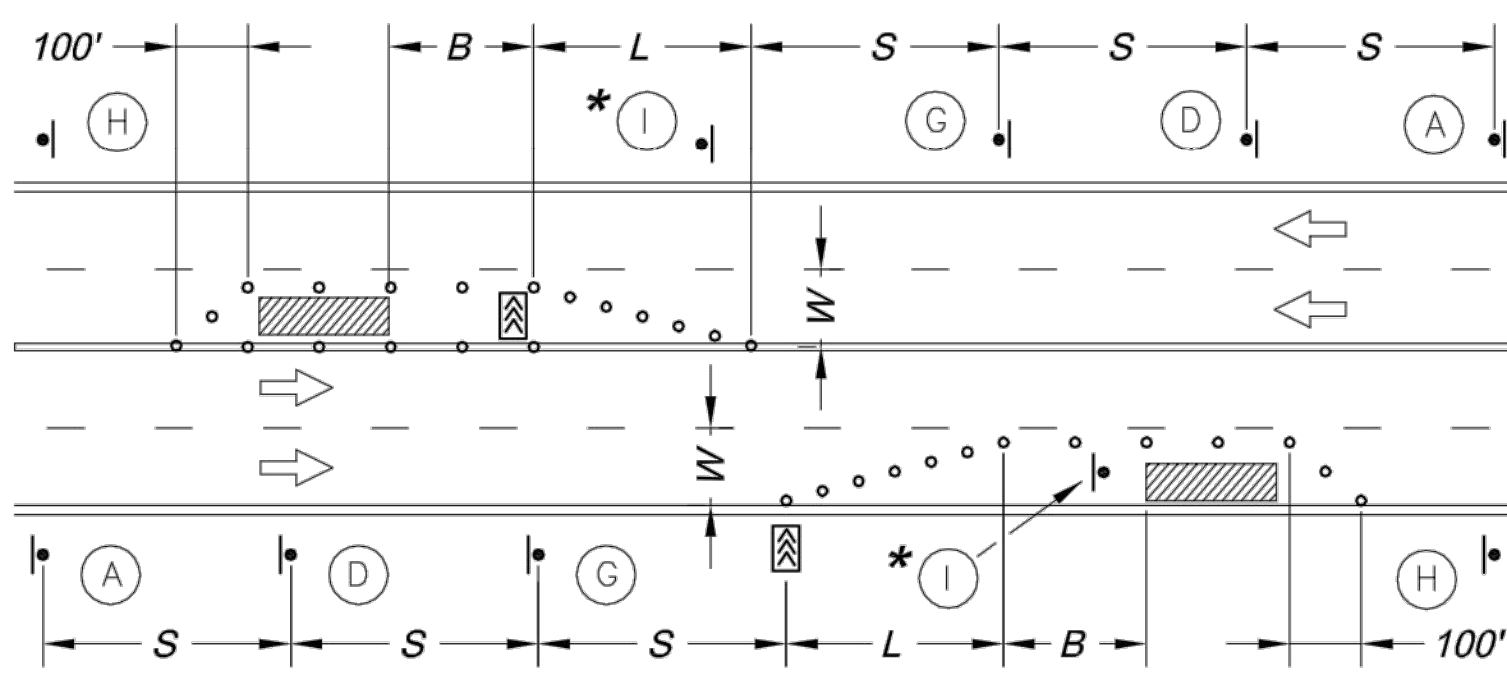
drawn by: SRH
checked by: JSC
approved by: JSS
QA/QC by: SLI
project no.: 021-04643
drawing no.: 1 OF 2084006
date: 7/14/2023

REV. NO.	DATE	REVISIONS DESCRIPTION
		PRELIMINARY PLANS
		NOT FOR CONSTRUCTION
REVISIONS		
	2023	

SYMBOL LEGEND

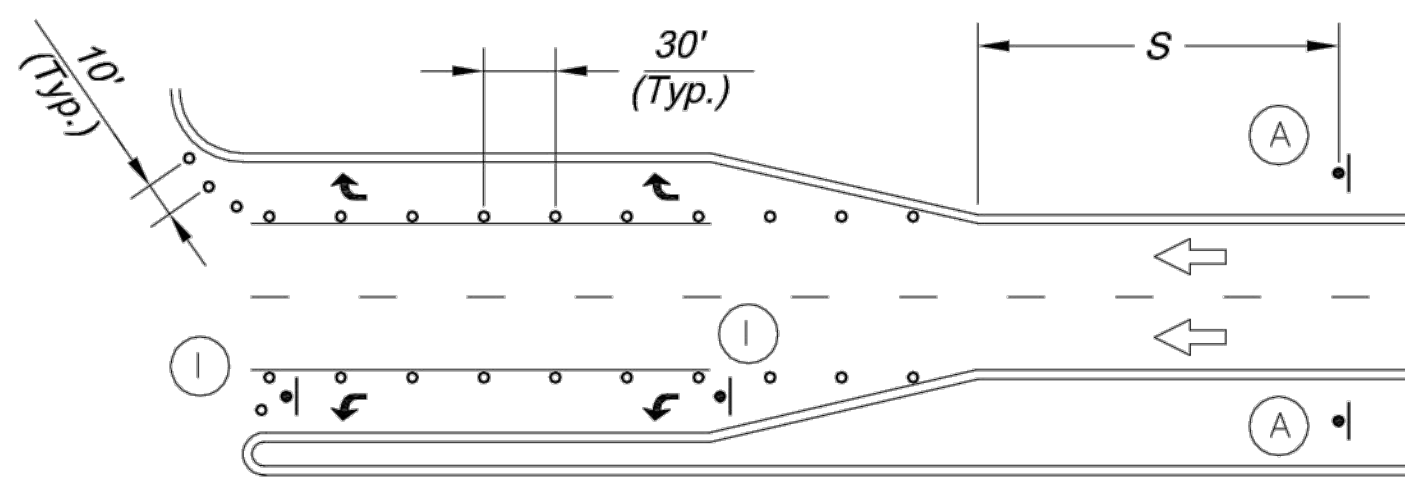


LANE CLOSURE - TWO LANE STREET



LANE CLOSURE - FOUR LANE STREET

* Install Signs Every 200 Feet Throughout the Closed Lane or As Needed



TURN LANE CLOSURE

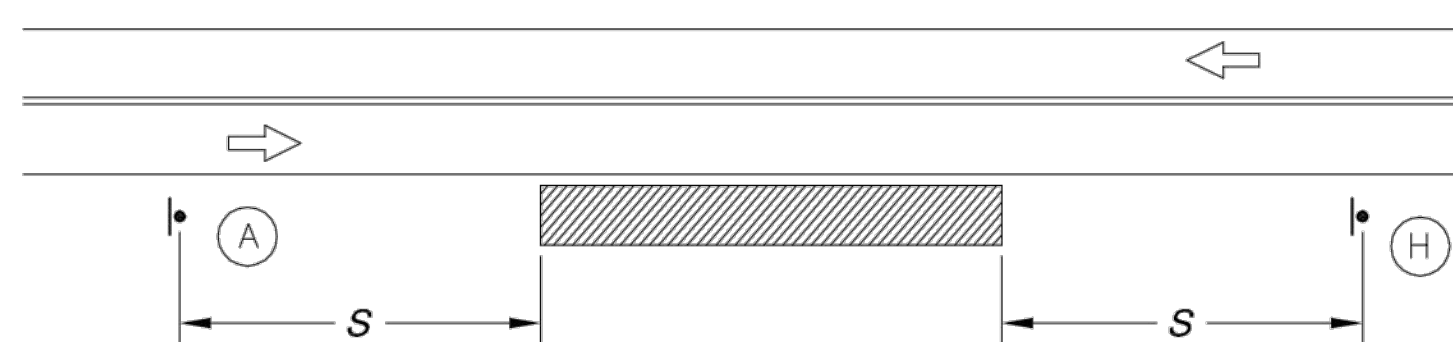
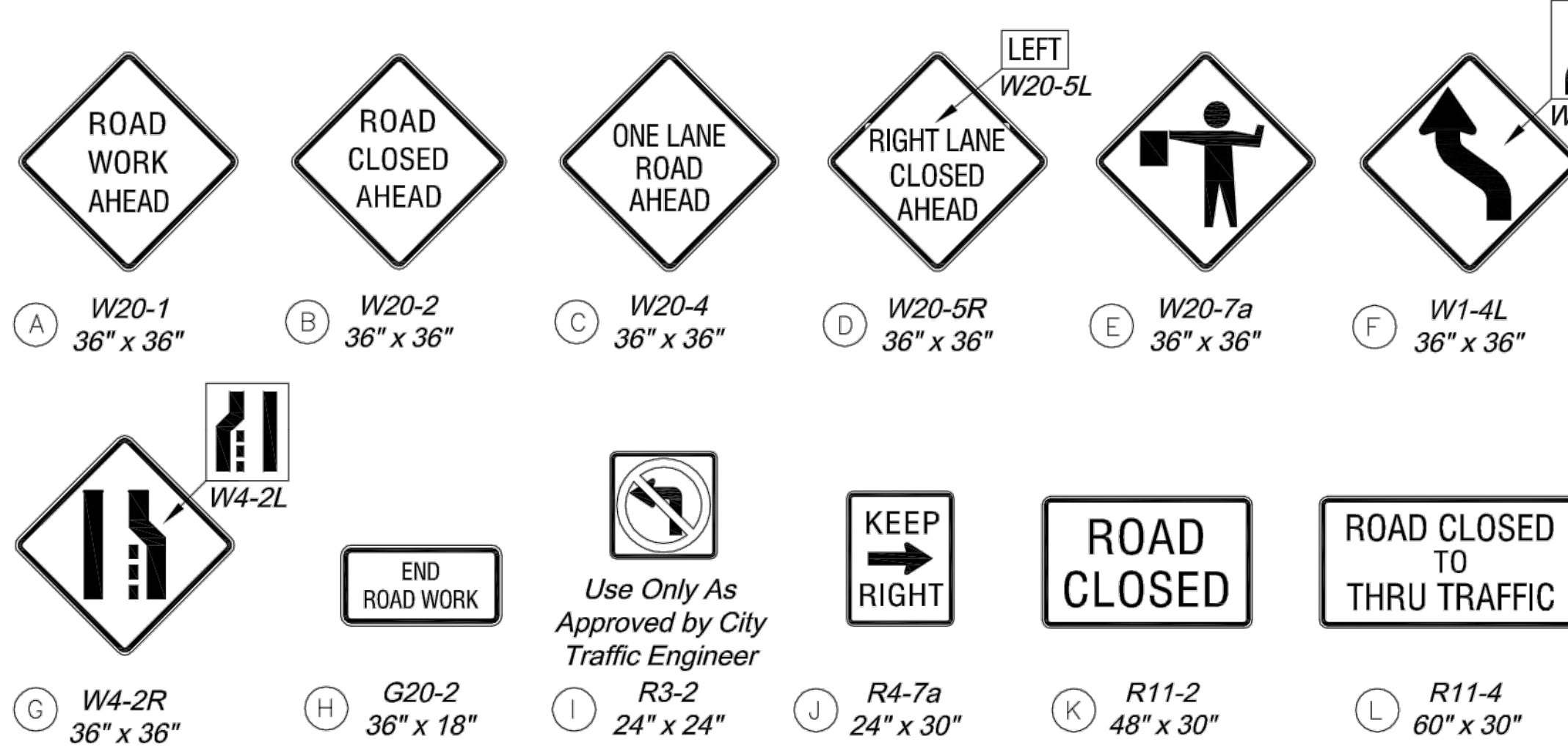
Sign Spacing "S"	
Speed Limit (mph)	Spacing (Feet)
25	100
30 - 35	250
≥ 40	350

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

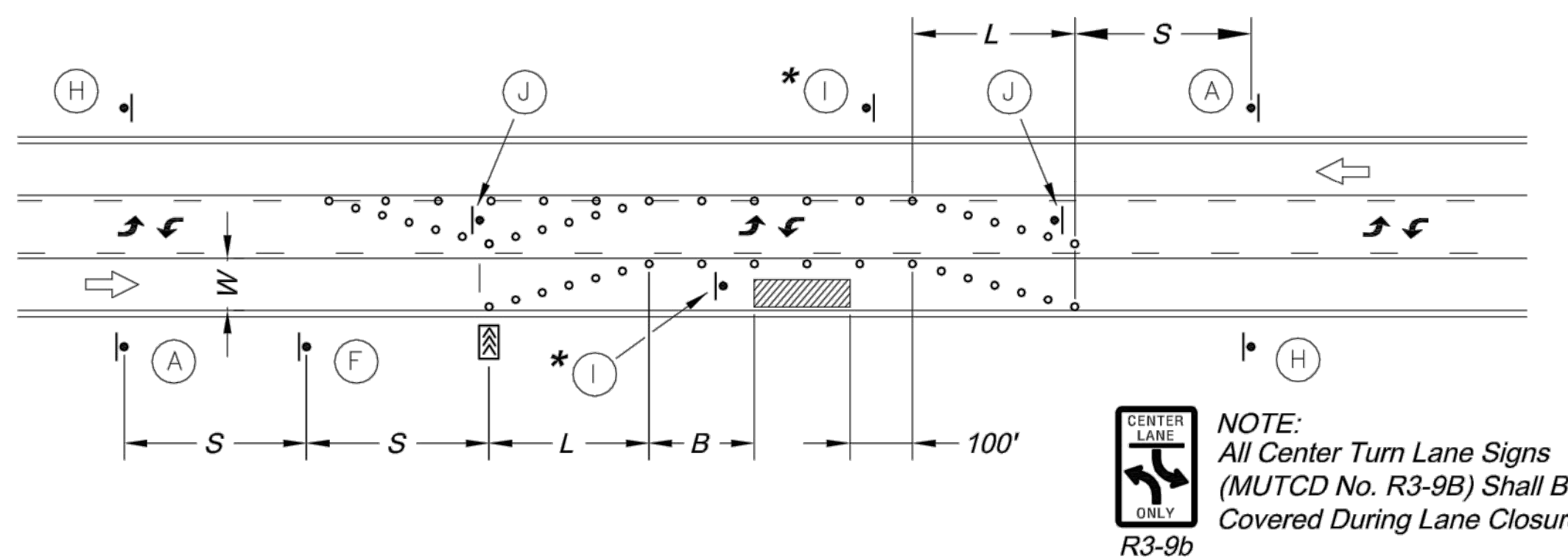
Guidelines for Length of Longitudinal Buffer Space "B"	
Speed Limit (mph)	Length (Feet)
25	35
30	55
35	85
40	120
45	170

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

SIGN LEGEND

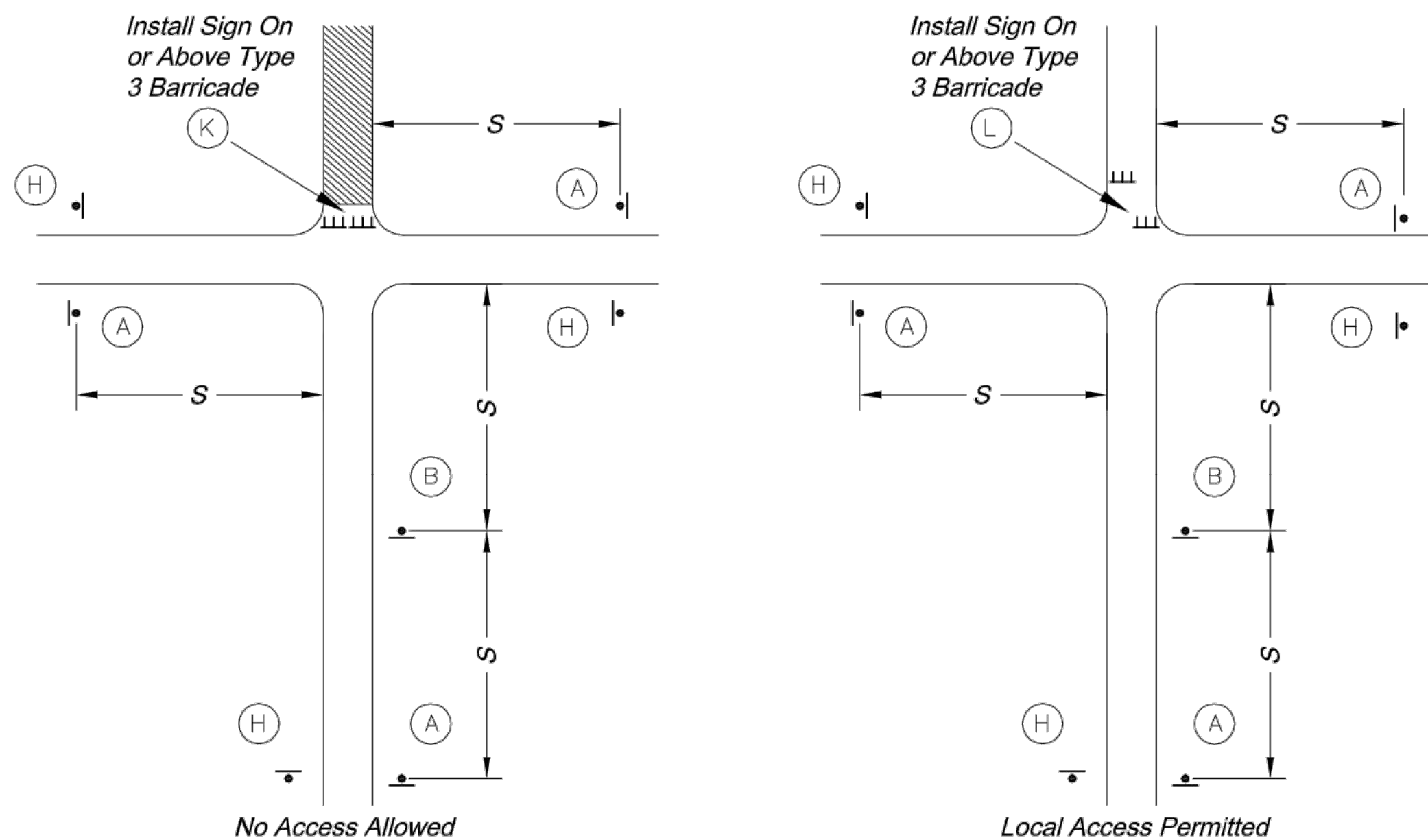


TYPICAL SIGNING FOR WORK ADJACENT TO THE STREET



LANE CLOSURE - THREE LANE STREET

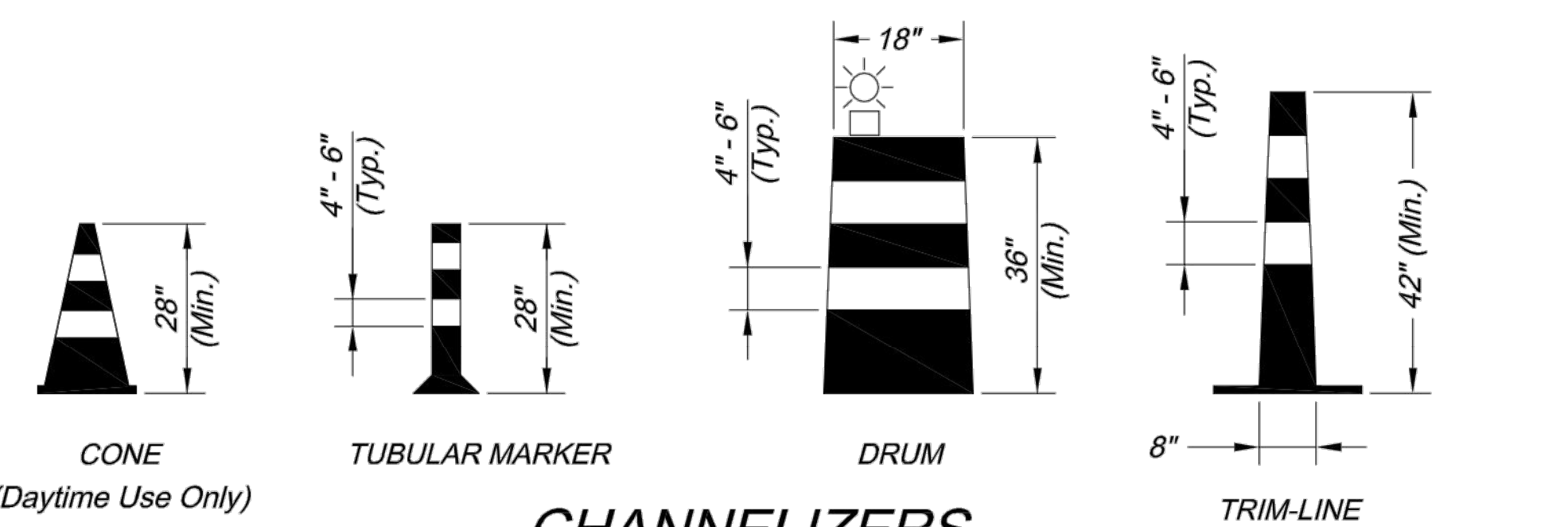
* Install Signs Every 200 Feet Throughout the Closed Lane or As Needed



TYPICAL STREET CLOSURE

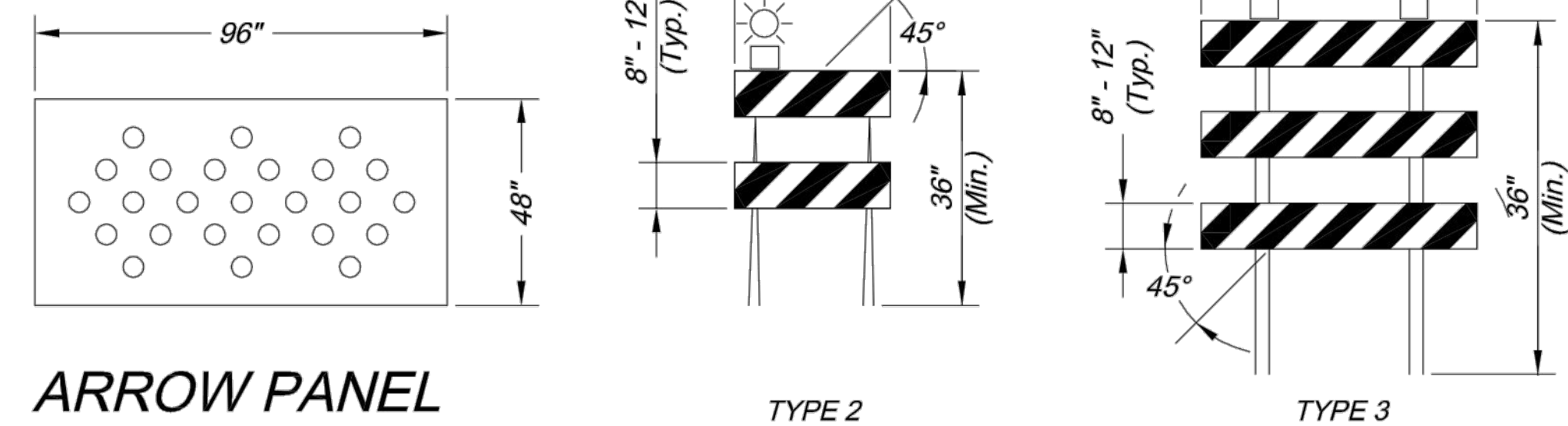
GENERAL NOTES:

- 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.
- 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.



CHANNELIZERS

NOTE: White Bands On Barricades and Channelizers Shall Be Made From High Intensity Sheeting Material.



ARROW PANEL

BARRICADES

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



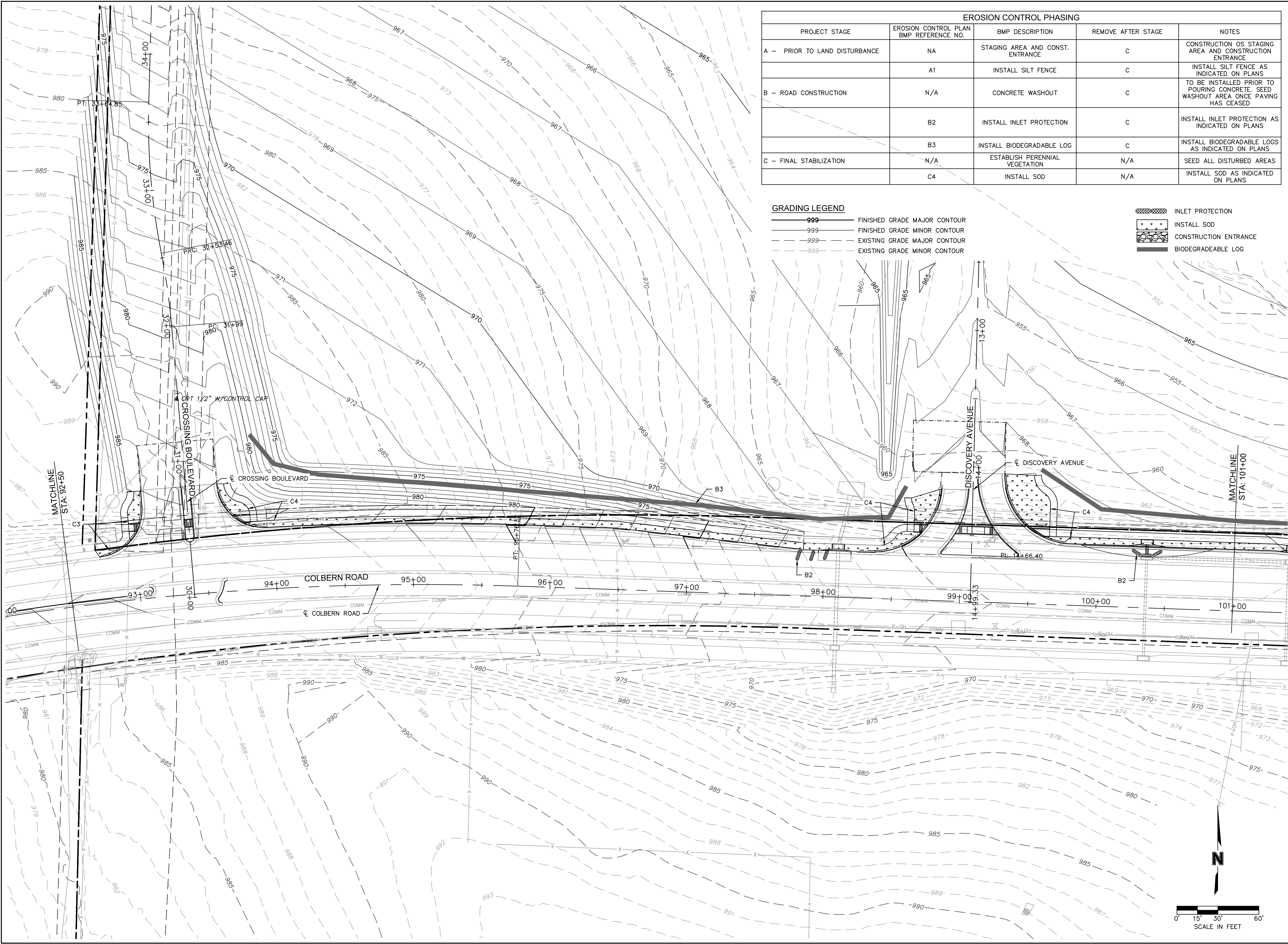
Project: COLBURN ROAD AND DOUGLAS STREET

TRAFFIC CONTROL DETAILS

Sheet Name: STANDARD DRAWING TC-1

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

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USER: kwilliams2

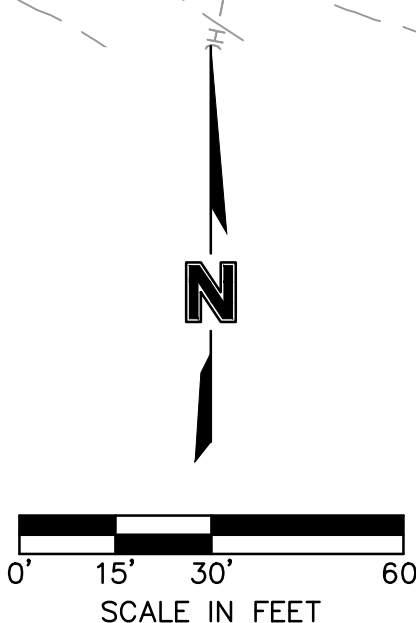


EROSION CONTROL PHASING				
PROJECT STAGE	EROSION CONTROL PLAN BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES
A - PRIOR TO LAND DISTURBANCE	NA	STAGING AREA AND CONST. ENTRANCE	C	CONSTRUCTION OS STAGING AREA AND CONSTRUCTION ENTRANCE
	A1	INSTALL SILT FENCE	C	INSTALL SILT FENCE AS INDICATED ON PLANS
				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

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

- INLET PROTECTION
- INSTALL SOD
- CONSTRUCTION ENTRANCE
- BIODEGRADABLE LOG



erosion control plans

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.: ERC01_D02104643
date: 7/14/2023

SHEET
60 OF 85

STATE OF MISSOURI
JAMES PATRICK GALLAGHER
NUMBER PE-2018010499
7/14/2023
PROFESSIONAL ENGINEER

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
		PRELIMINARY PLANS
		NOT FOR CONSTRUCTION

2023

REVISIONS

olsson

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

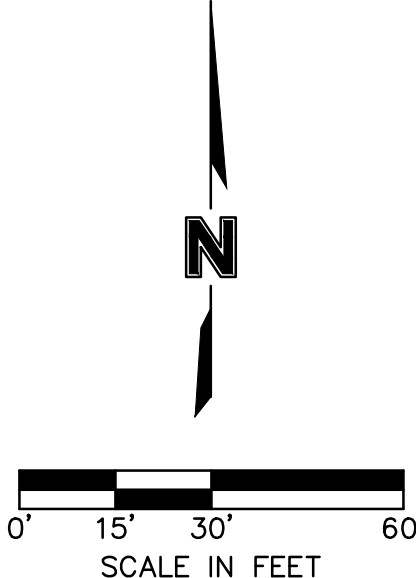
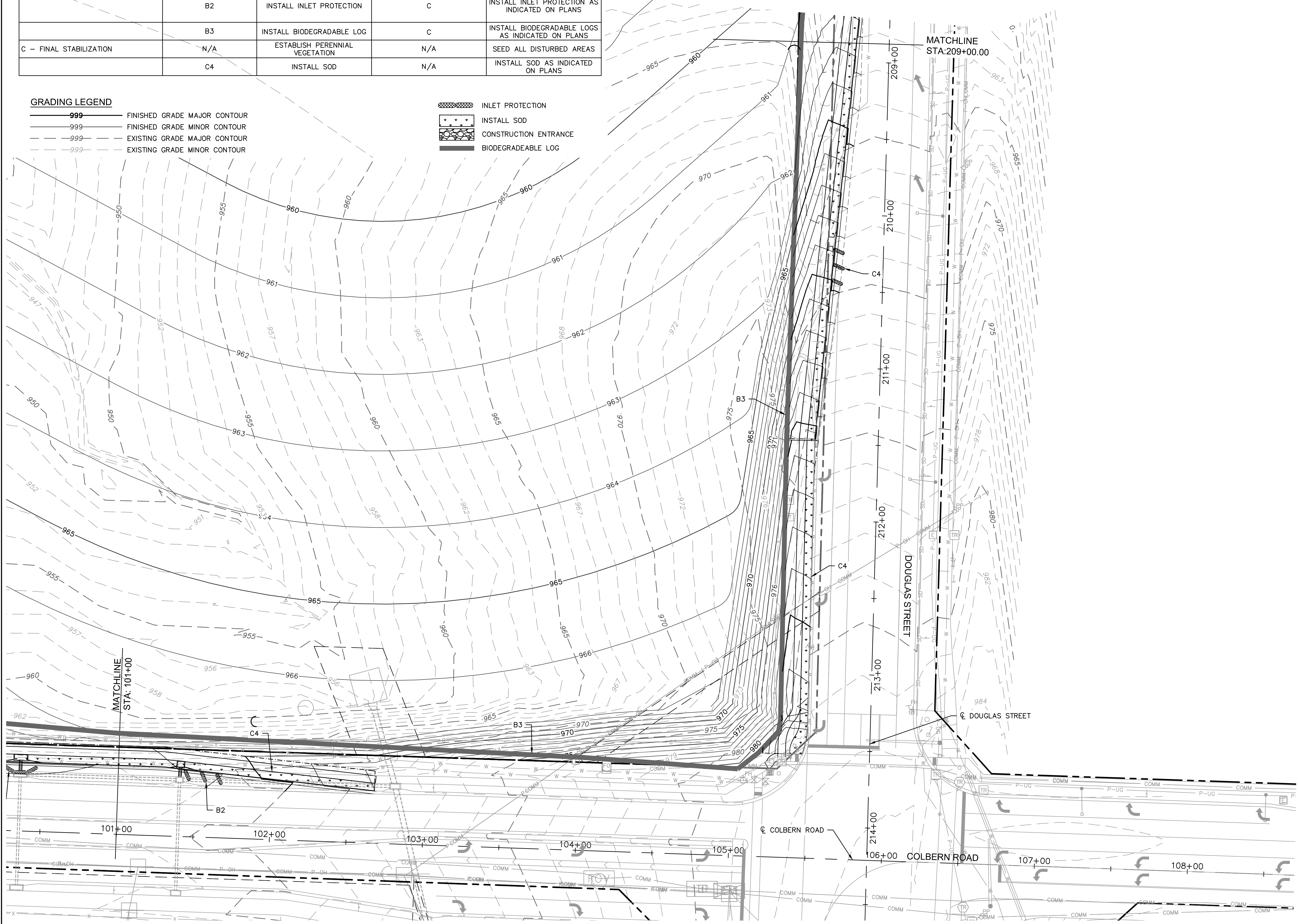
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EROSION CONTROL PHASING				
PROJECT STAGE	EROSION CONTROL PLAN BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES
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	B2	INSTALL INLET PROTECTION	C	INSTALL INLET PROTECTION AS INDICATED ON PLANS
	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

- INLET PROTECTION
INSTALL SOD
CONSTRUCTION ENTRANCE
BIODEGRADEABLE LOG



erosion control plans

the village at discovery park
colbern road and douglas street public road improvements

lee's summit, missouri

2023

revisions

rev. no.	date	revisions description
		PRELIMINARY PLANS
		NOT FOR CONSTRUCTION

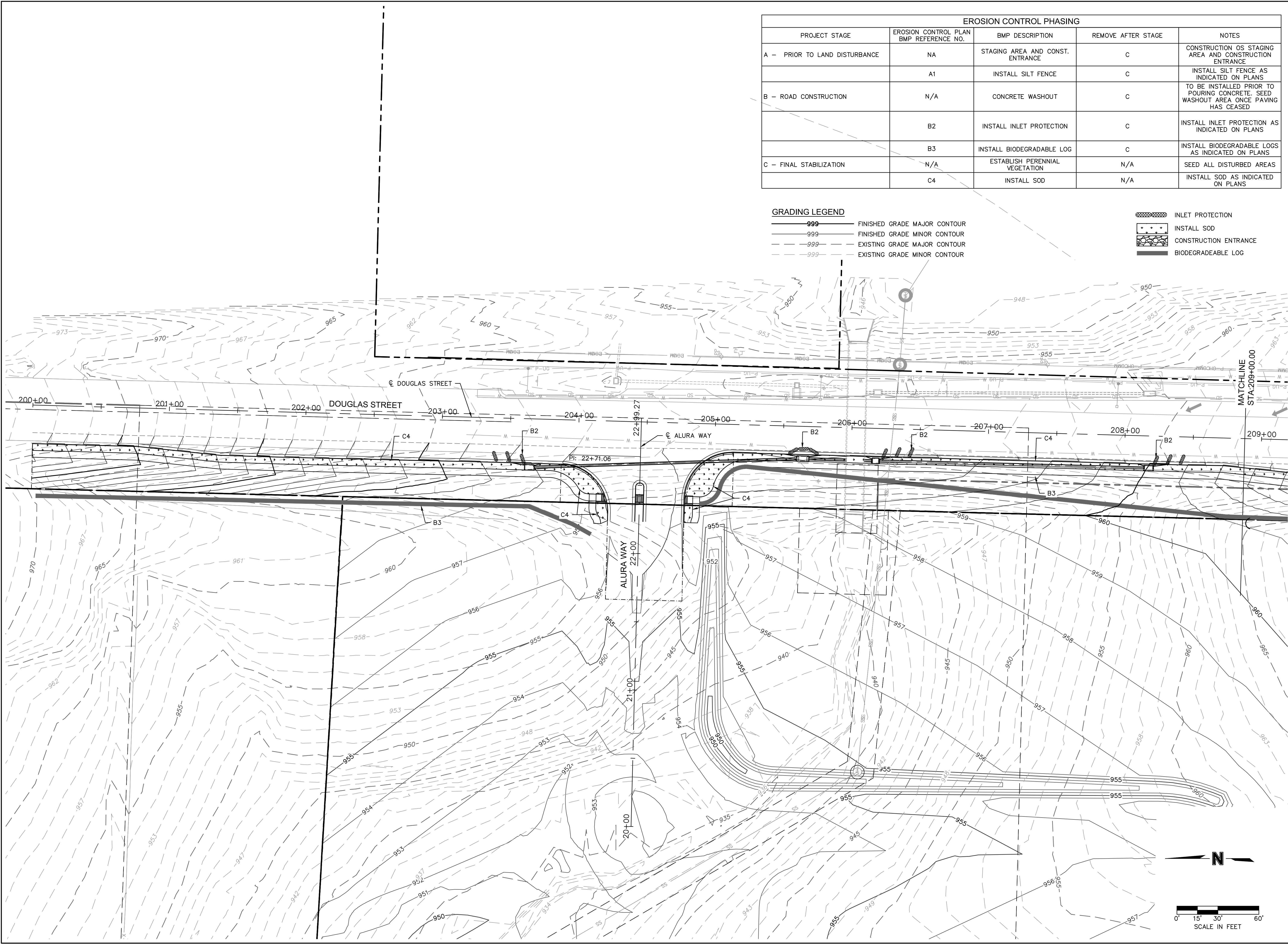
sheet 61 OF 85

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

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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	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

- INLET PROTECTION
- INSTALL SOD
- CONSTRUCTION ENTRANCE
- BIODEGRADABLE LOG

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STATE OF MISSOURI
JAMES PATRICK GALLAGHER
NUMBER PE-2018010499
7/14/2023
PROFESSIONAL ENGINEER

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			PRELIMINARY PLANS
			NOT FOR CONSTRUCTION

EROSION CONTROL PLANS

THE VILLAGE AT DISCOVERY PARK

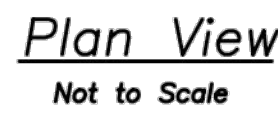
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2023

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

SHEET
62 OF 85



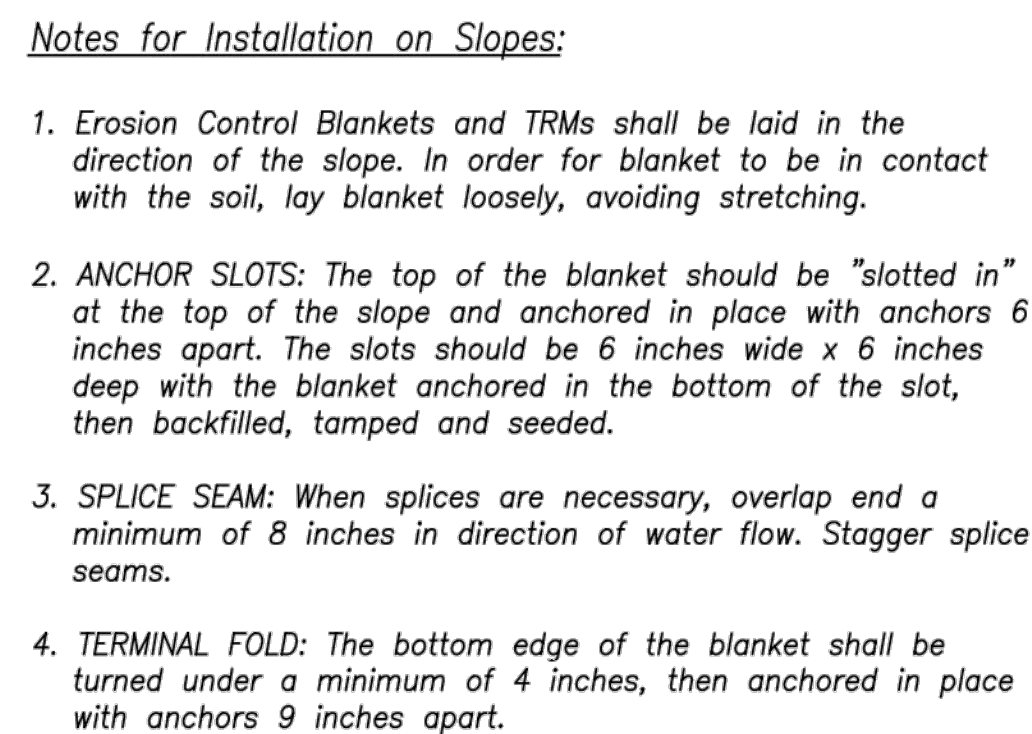
Side Elevation
Not to Scale

Section A-A
Not to Scale

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

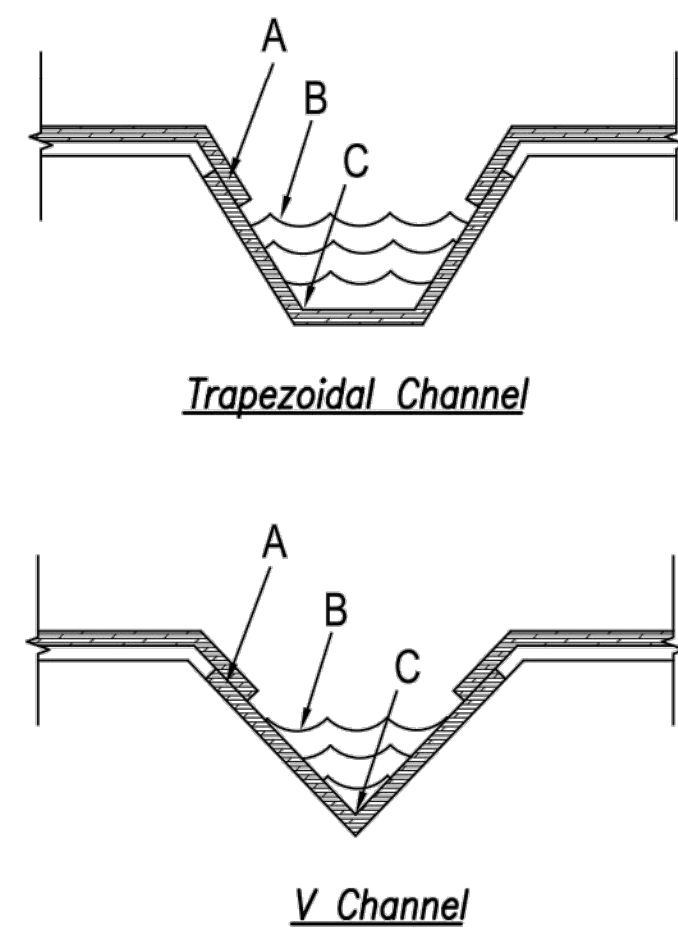
Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

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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.

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.



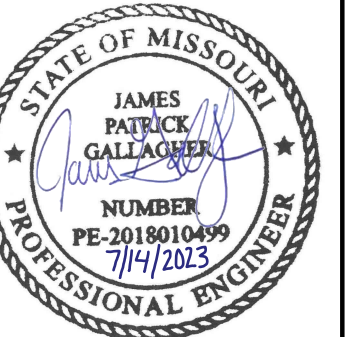
1. **Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.**
2. **ANCHOR FOLD:** The top of the mat should be folded 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.

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

AMERICAN PUBLIC WORKS ASSOCIATION Kansas City Metro Chapter  		KANSAS CITY METRO CHAPTER
EROSION CONTROL BLANKETS AND TURF REINFORMENT MATS	STANDARD DRAWING NUMBER ESC-02 ADOPTED: 10/24/2016	

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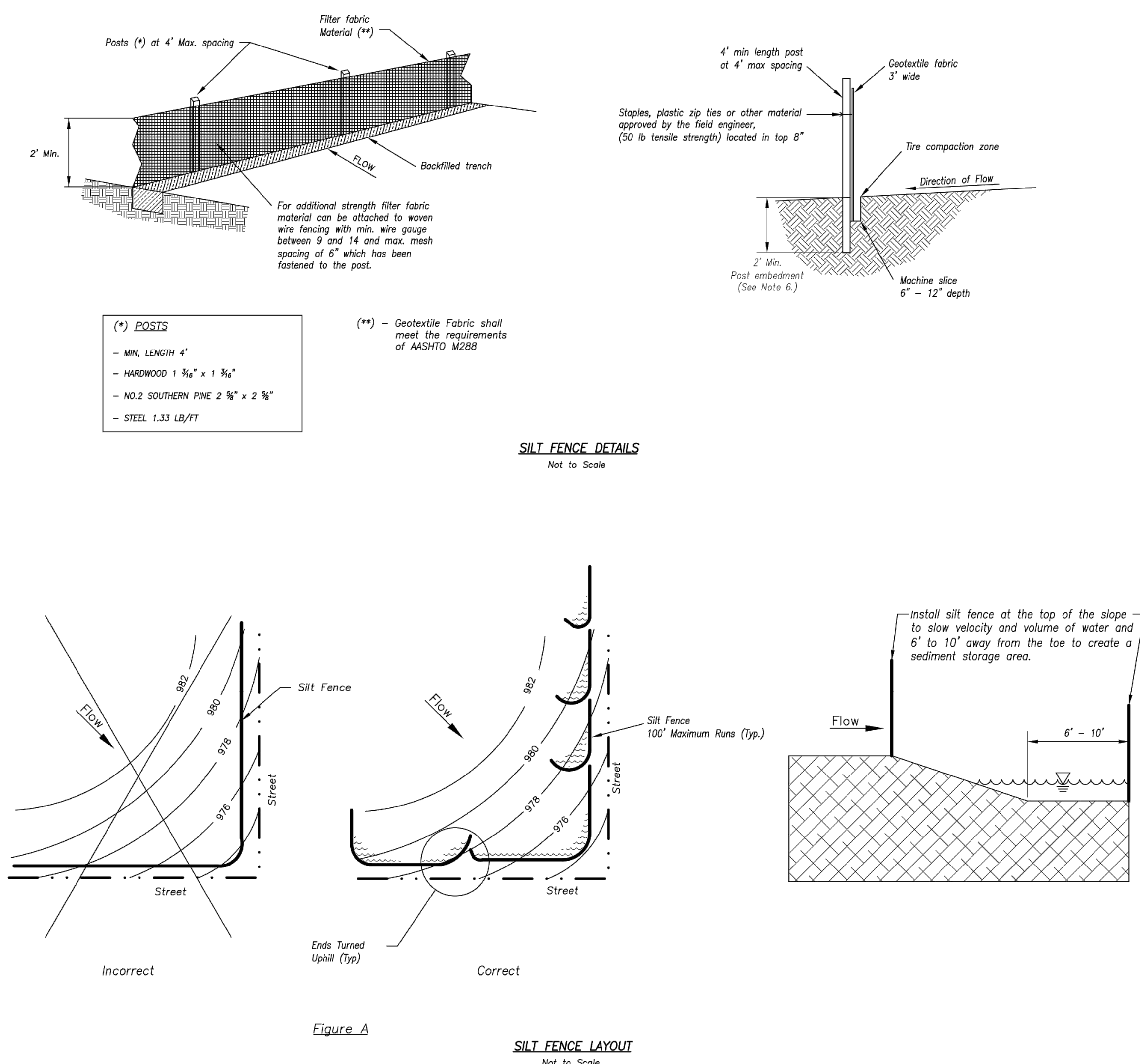


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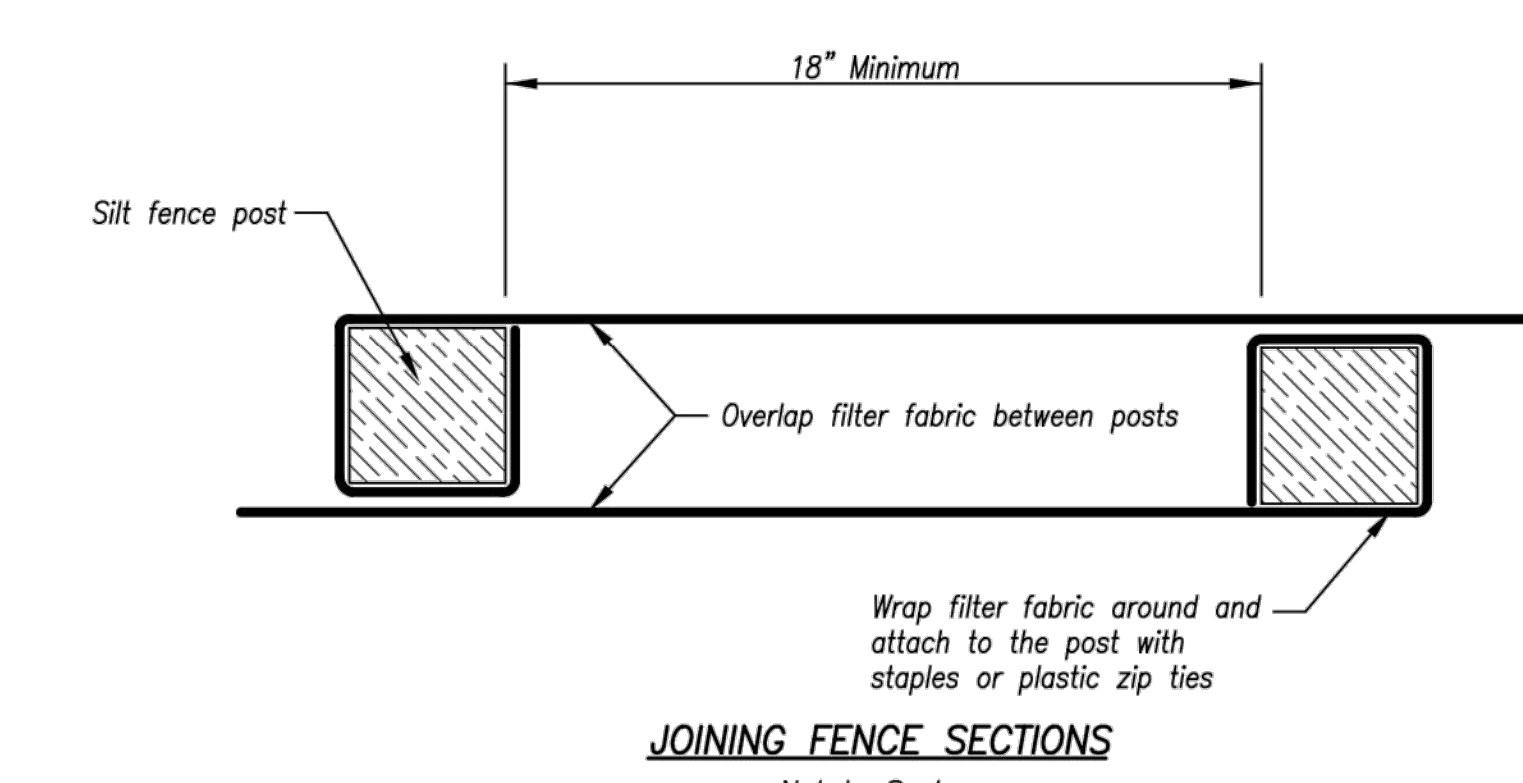
EROSION CONTROL DETAILS	
THE VILLAGE AT DISCOVERY PARK COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	
LEE'S SUMMIT, MISSOURI	2023

Drawn by: B JW
 Checked by: K LW
 Approved by: J P G
 A/QC by: J J W
 Project no.: 021-04643
 Drawing no.: ERCD01 D02104643
 Date: 7/14/2023

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- Notes:
1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
 2. 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).
 3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
 4. Attach fabric to upstream side of post.
 5. Install posts a minimum of 2' into the ground.
 6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.
- Maintenance:
1. Remove and dispose of sediment deposits when the deposit approaches 1/2 the height of silt fence.
 2. Repair as necessary to maintain function and structure.



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Kansas City Metro Chapter



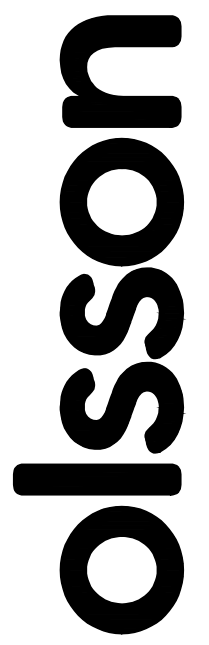
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KANSAS CITY METRO CHAPTER

STANDARD DRAWING
NUMBER ESC-03
ADOPTED:
10/24/2016

SILT FENCE

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



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EROSION CONTROL DETAILS

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

LEE'S SUMMIT, MISSOURI

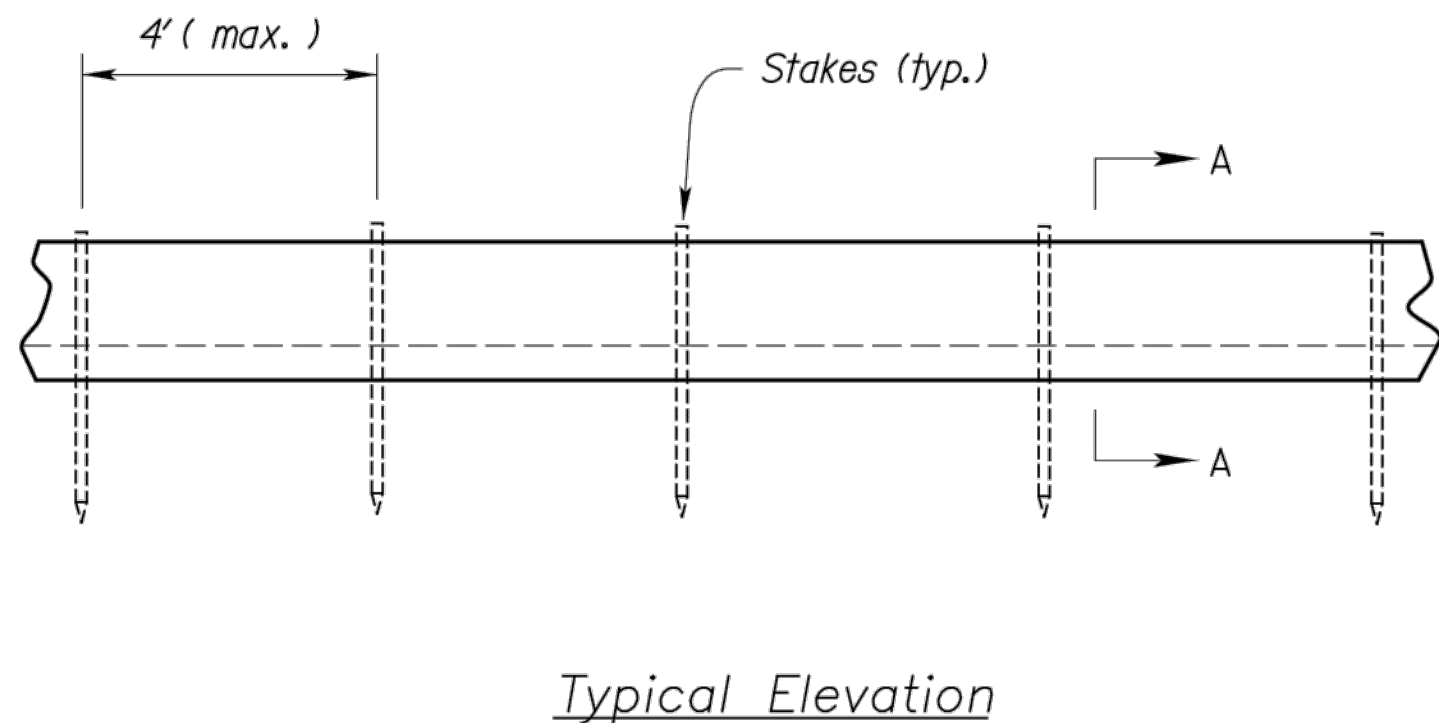
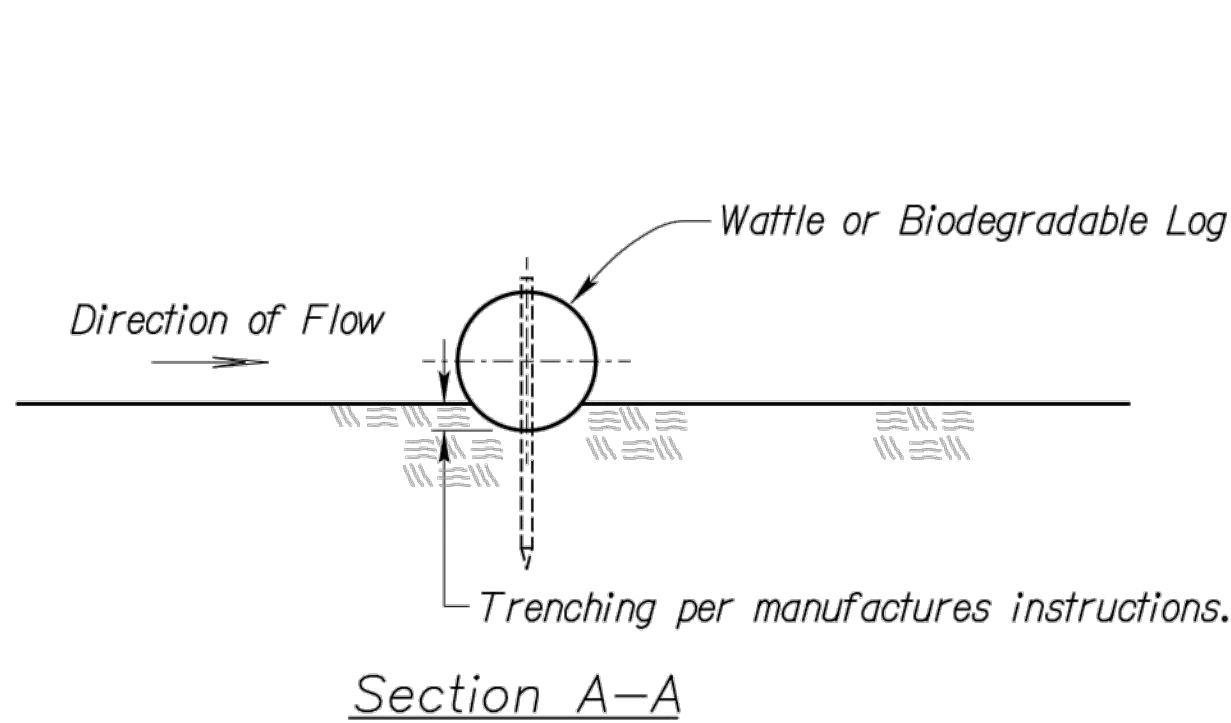
2023

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approved by: JFG
QA/QC by: JJW
project no.: 021-04843
drawing no.: ERCD01_D02104843
date: 7/14/2023

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WATTLES AND BIODEGRADABLE LOG

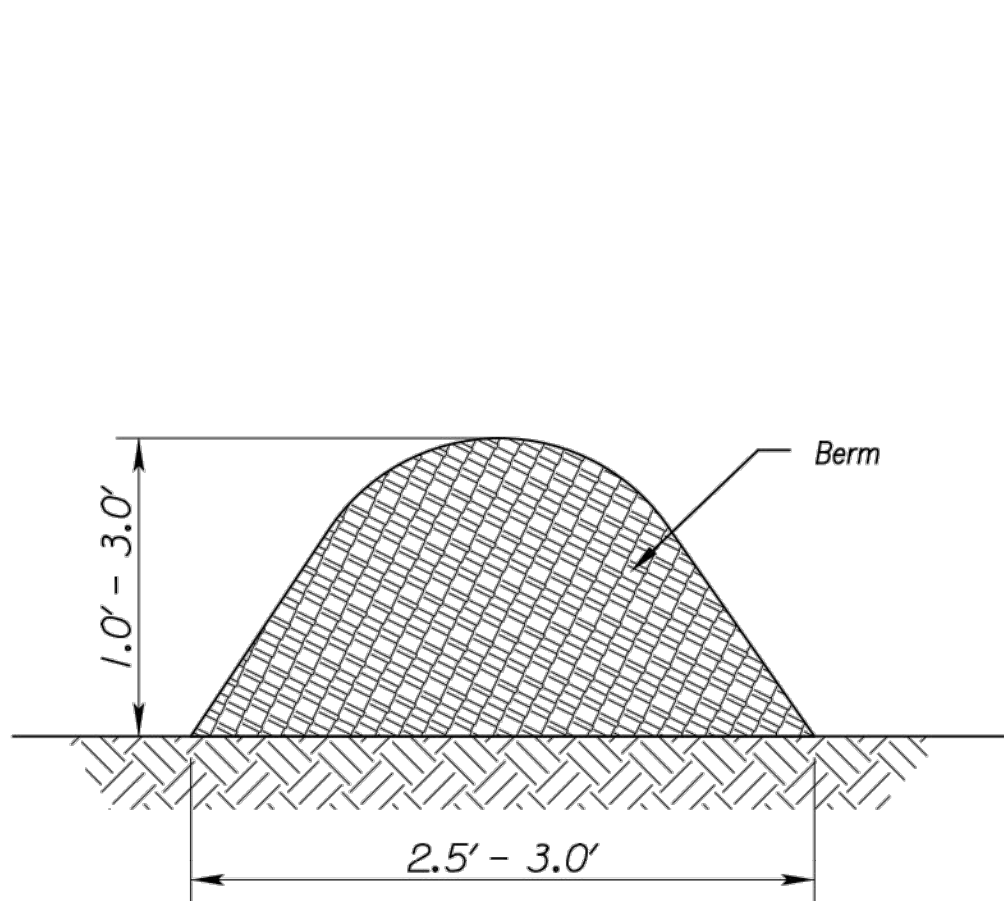


Figure 1
(Perimeter Control)

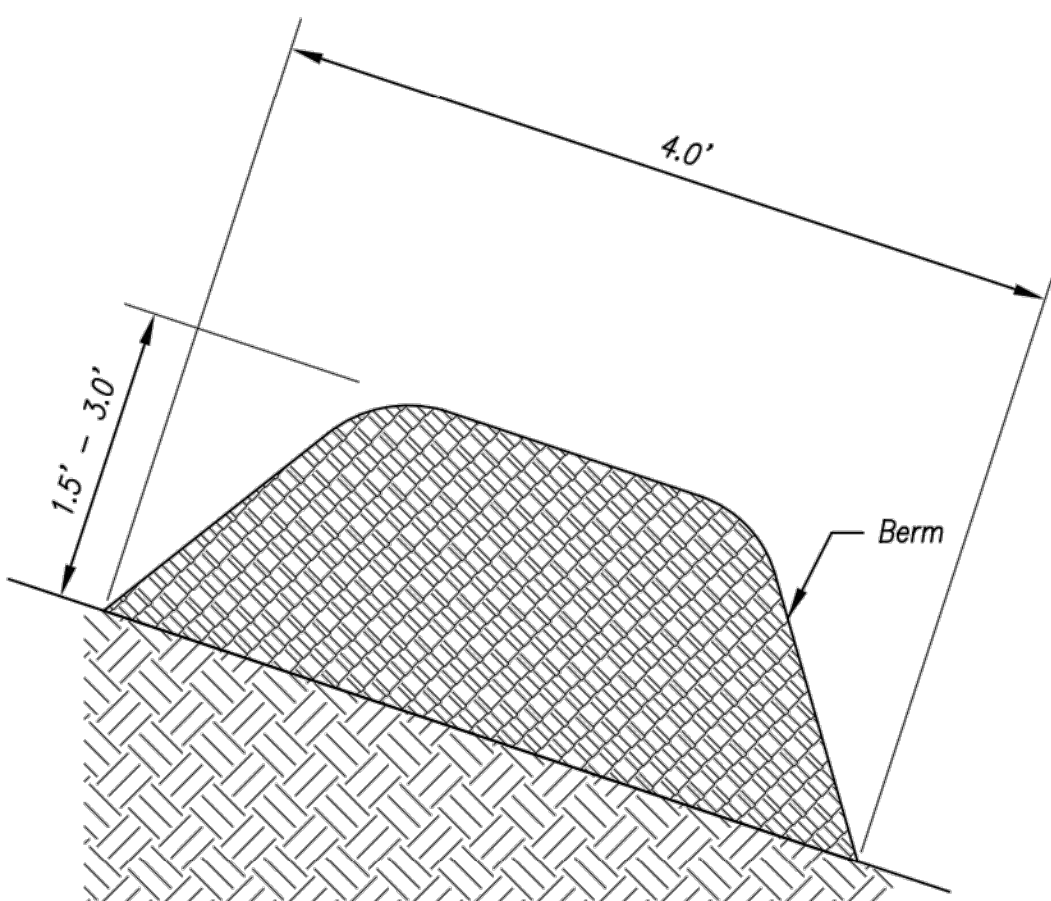


Figure 2
(Steep Slopes)

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 upgrade 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".

Notes for Mulch and Compost Filter Beam:

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 Beam:

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.

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WATTLES/Biodegradable LOG
AND
MULCH/COMPOST FILTER BERM

STANDARD DRAWING
NUMBER ESC-04
ADOPTED:
10/24/2016

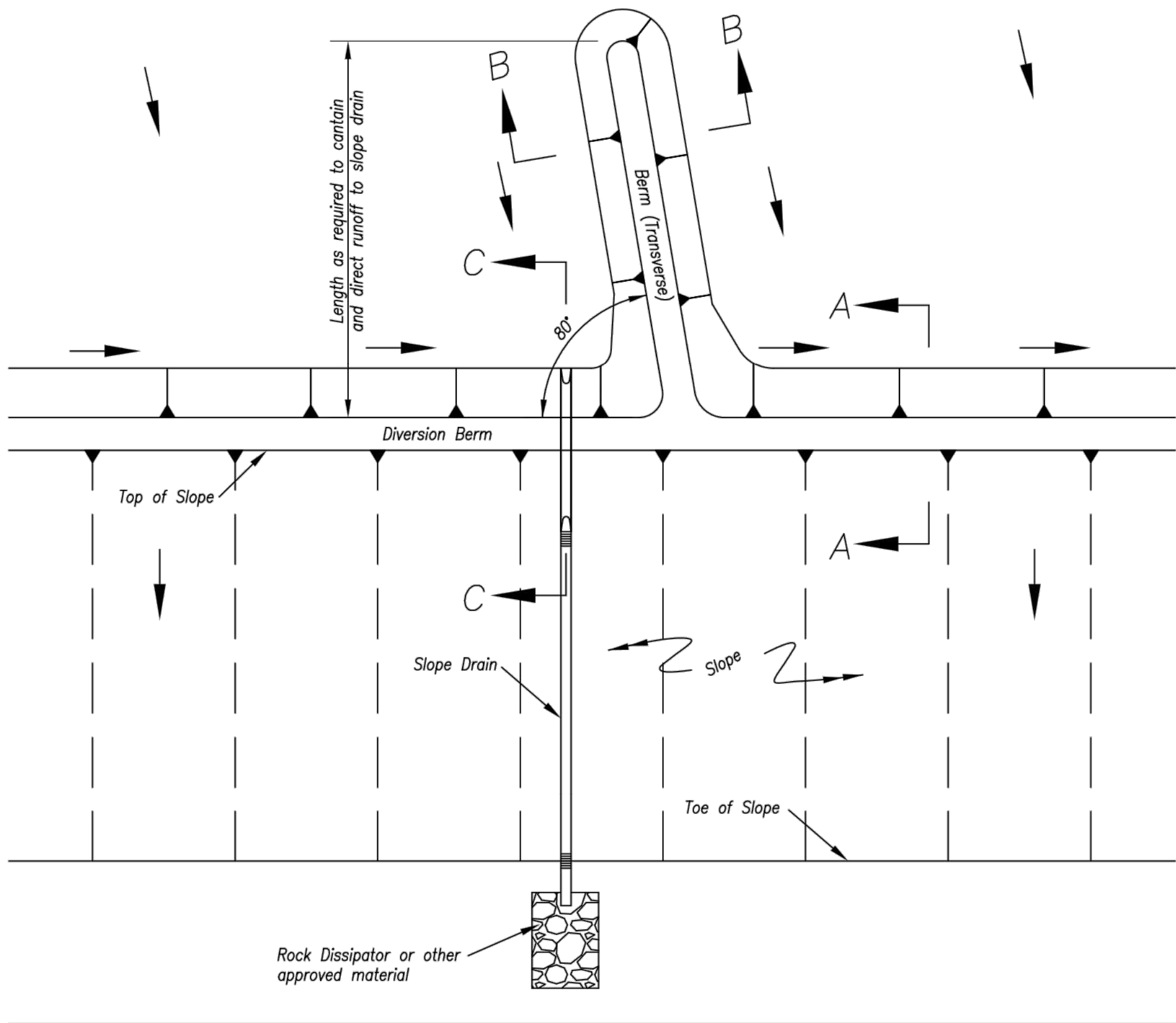


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EROSION CONTROL DETAILS	2023
THE VILLAGE AT DISCOVERY PARK COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS LEE'S SUMMIT, MISSOURI	

drawn by: BJW
checked by: KLV
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: ERCD01_D02104643
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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:

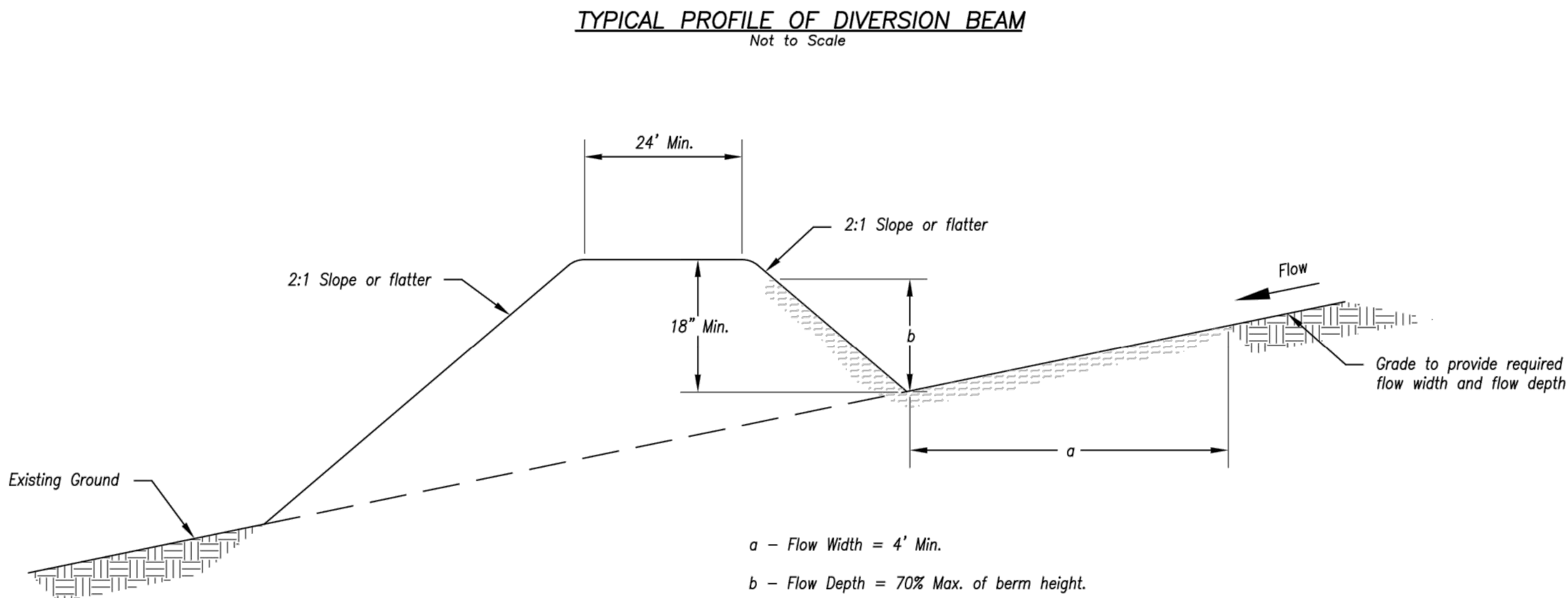
- Berm shall be reshaped, compacted, and stabilized as necessary to maintain its function.
- Breaches in the berm shall be repaired immediately.

Notes for Slope Drain:

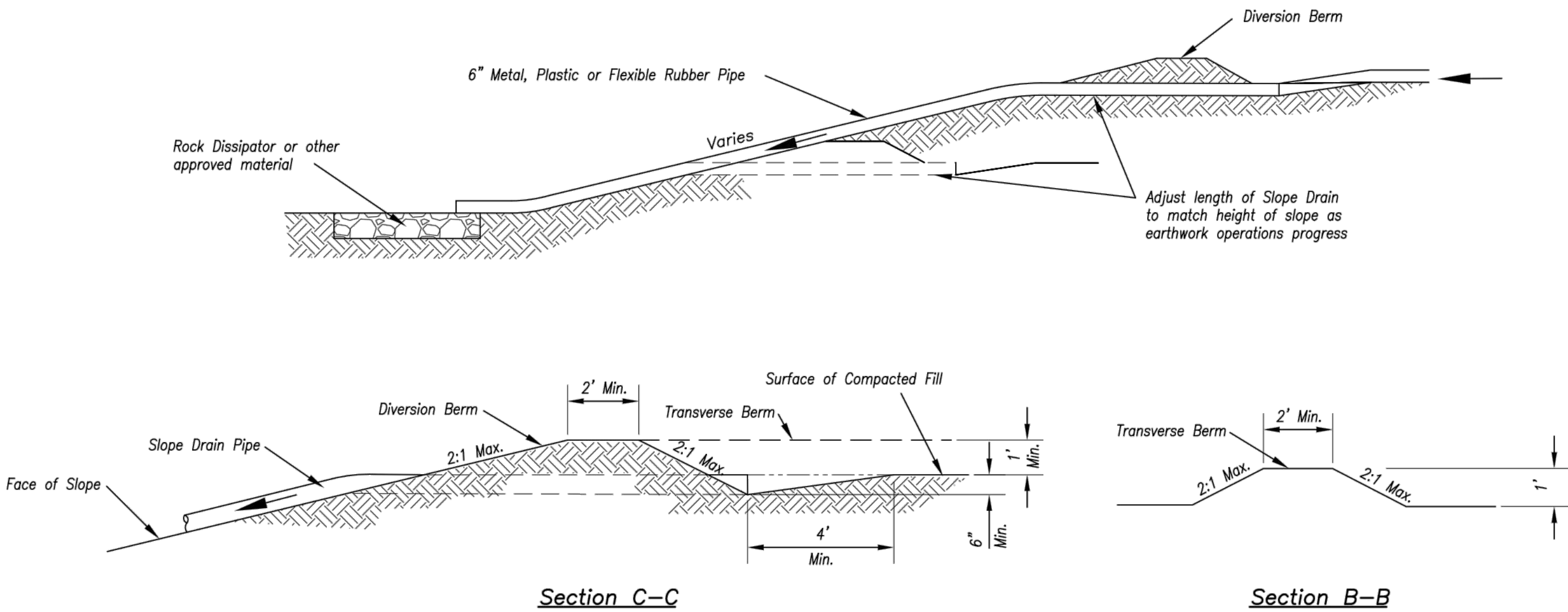
- Slope Drain and Diversion Berm may be used on either project foreslopes or project backslopes.
- Discharge of Slope Drains shall be into stabilized ditch or area, or into Sediment Basin.
- Pipe shall be secured in place as approved by Engineer.

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.



TYPICAL PROFILE OF DIVERSION BERM



Section C-C

Section B-B

TYPICAL PROFILE OF DIVERSION BERM WITH SLOPE DRAIN

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

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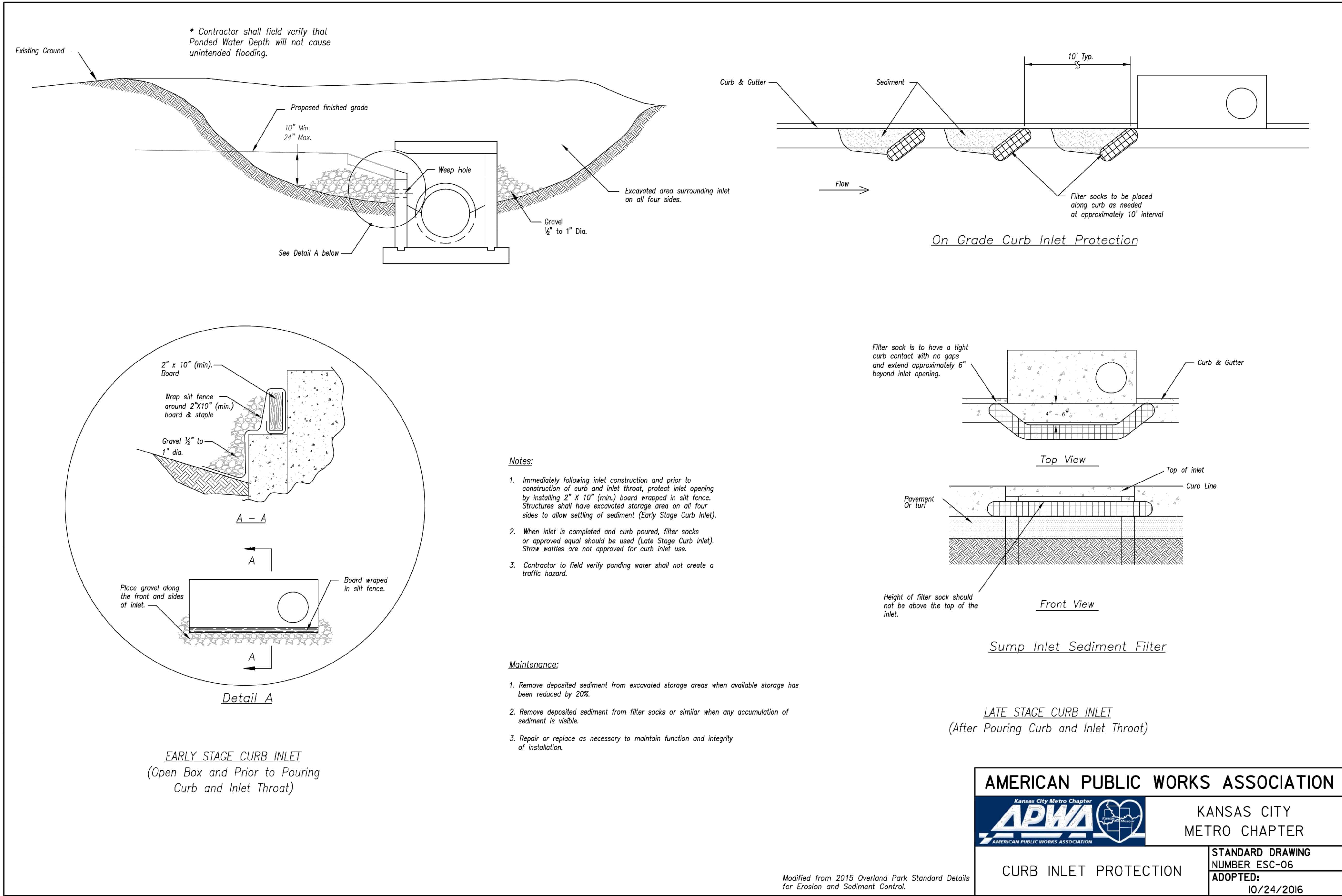


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EROSION CONTROL DETAILS	2023
THE VILLAGE AT DISCOVERY PARK	
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	
LEE'S SUMMIT, MISSOURI	

drawn by: BJW
checked by: KJW
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: ERCD01_D02104643
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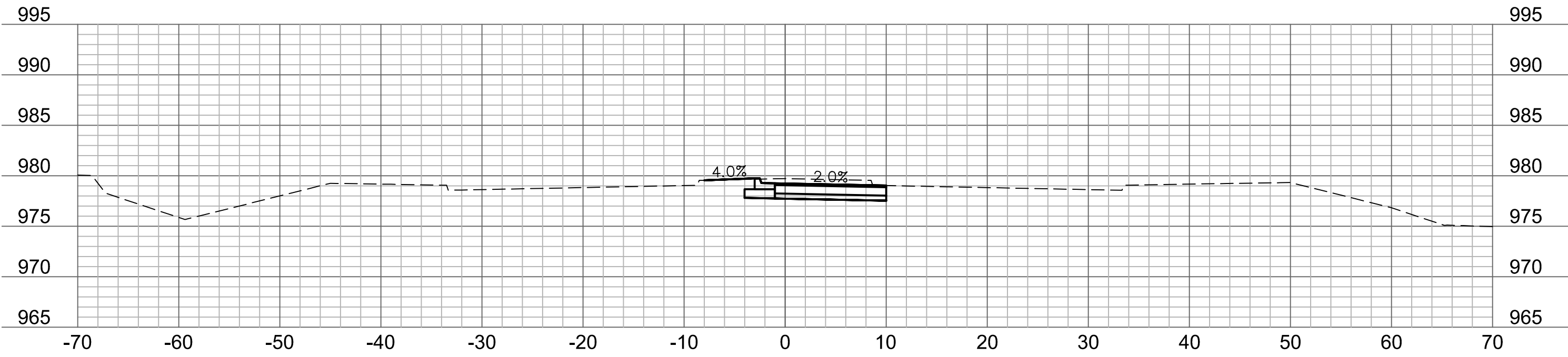
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LEE'S SUMMIT, MISSOURI

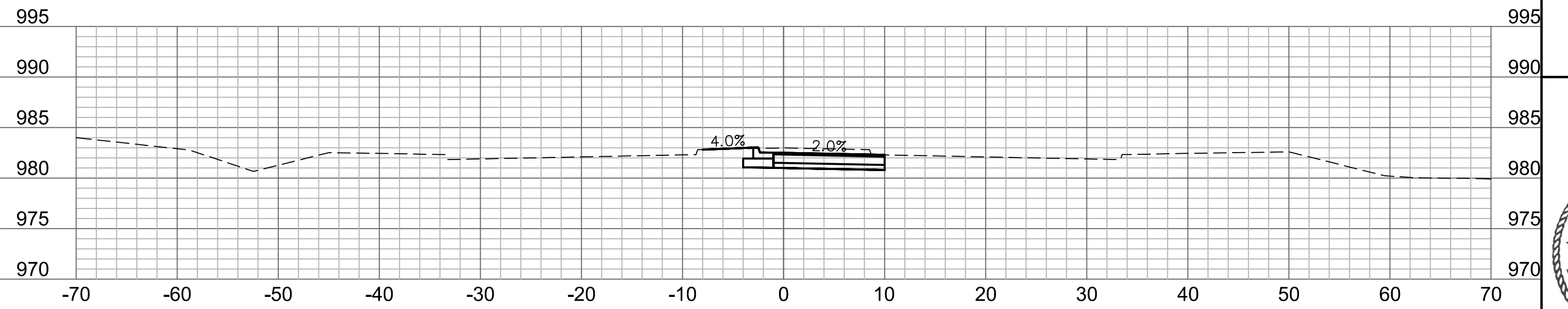
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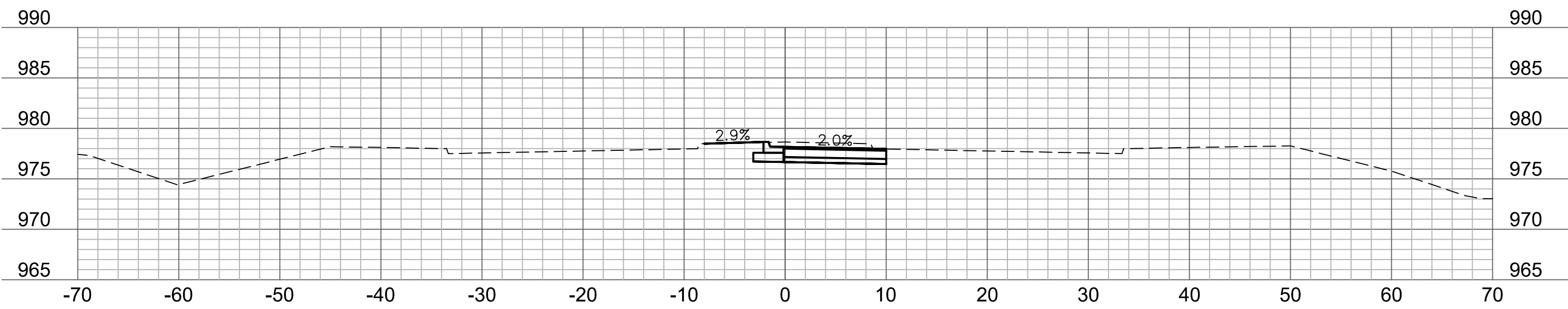
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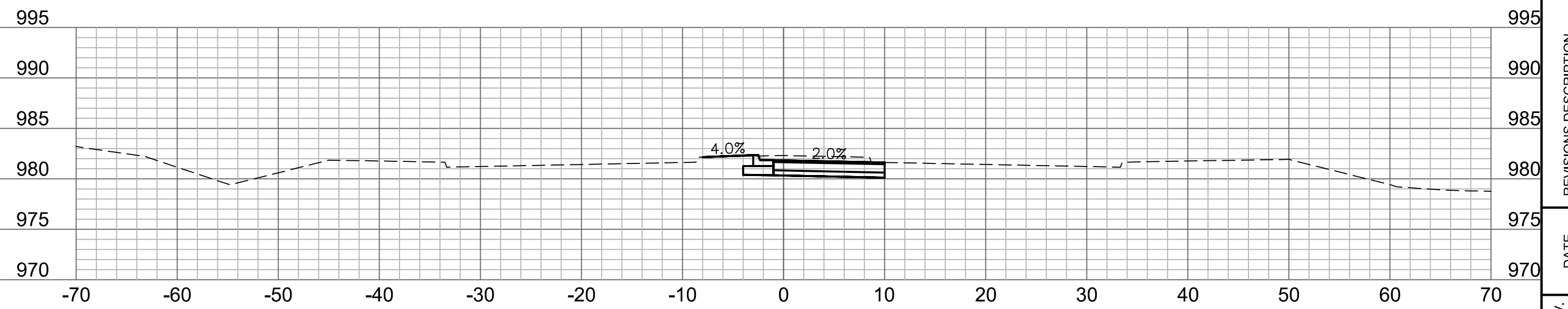
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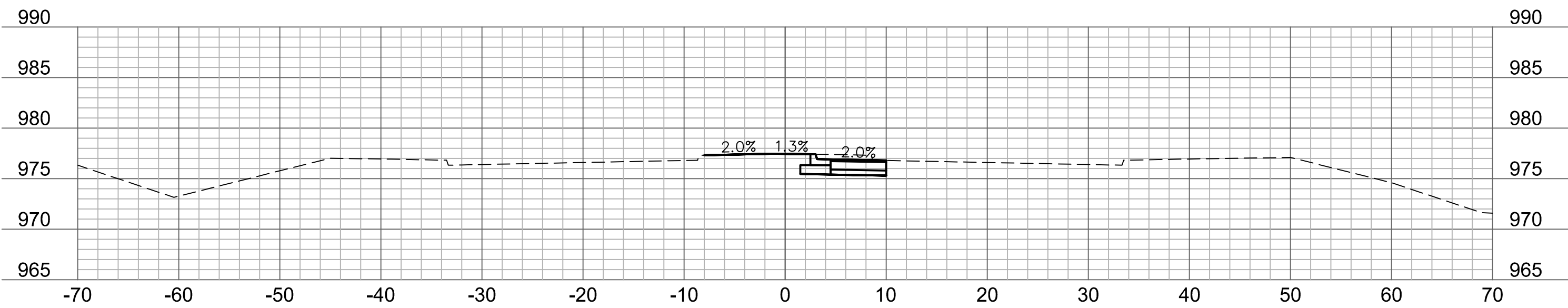
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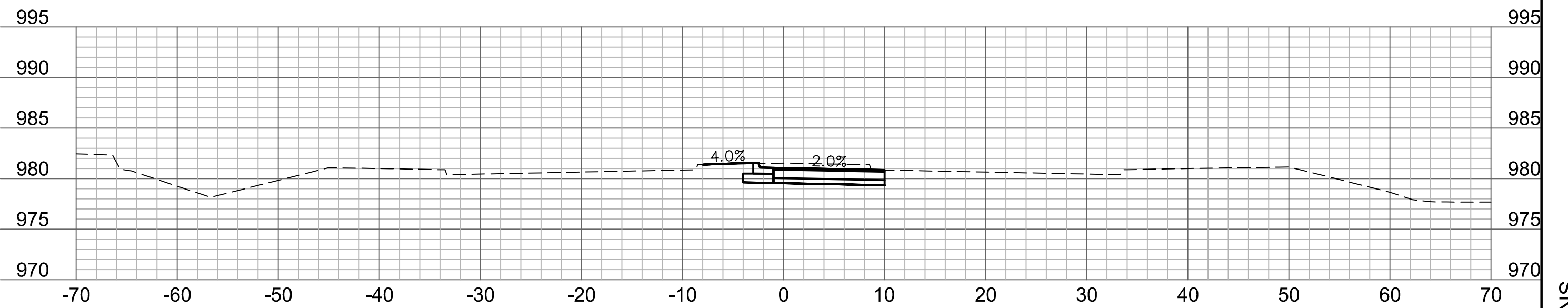
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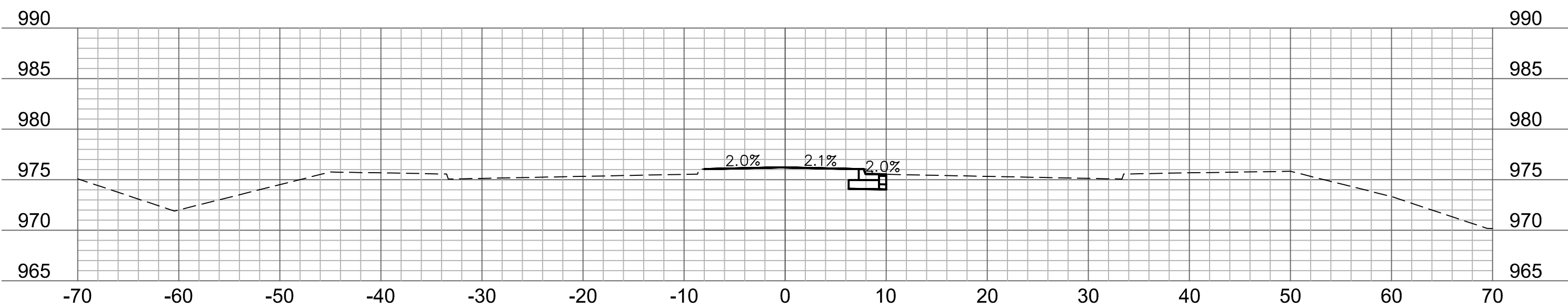
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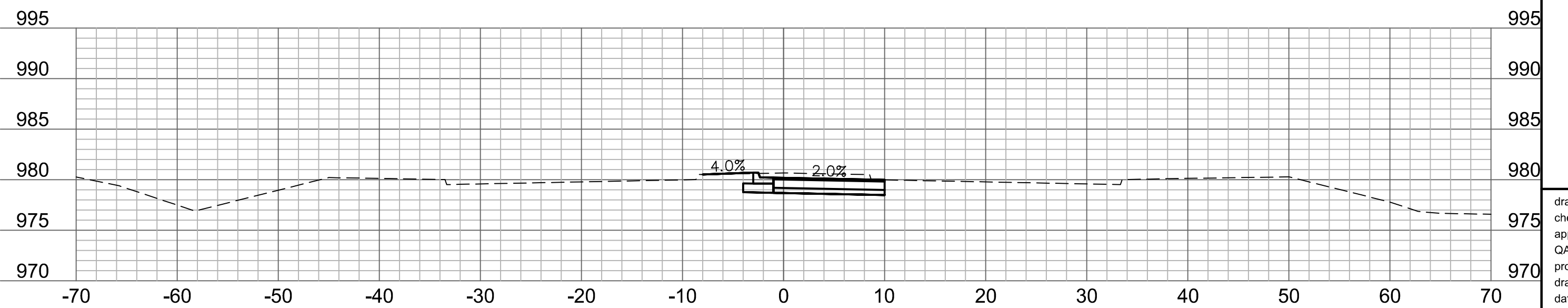
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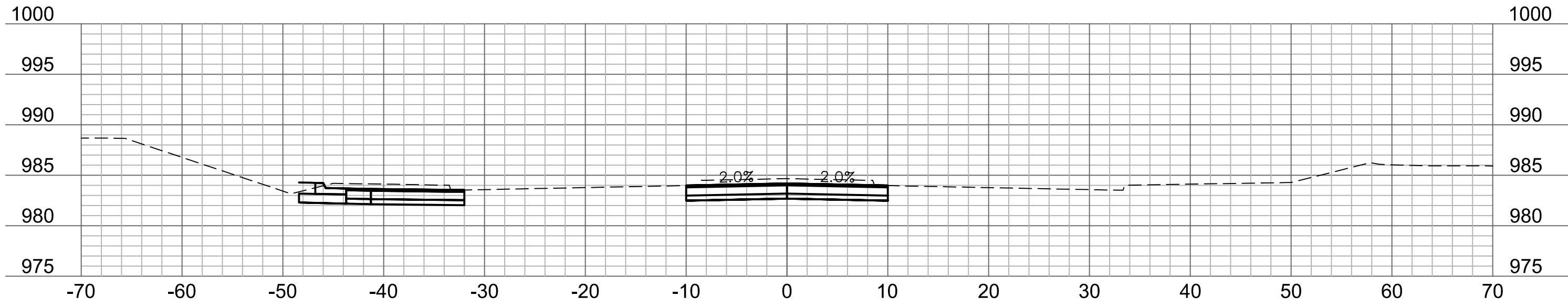
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1		PRELIMINARY PLANS
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CROSS SECTIONS	THE VILLAGE AT DISCOVERY PARK	2023
COLBURN ROAD	COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	
	LEE'S SUMMIT, MISSOURI	

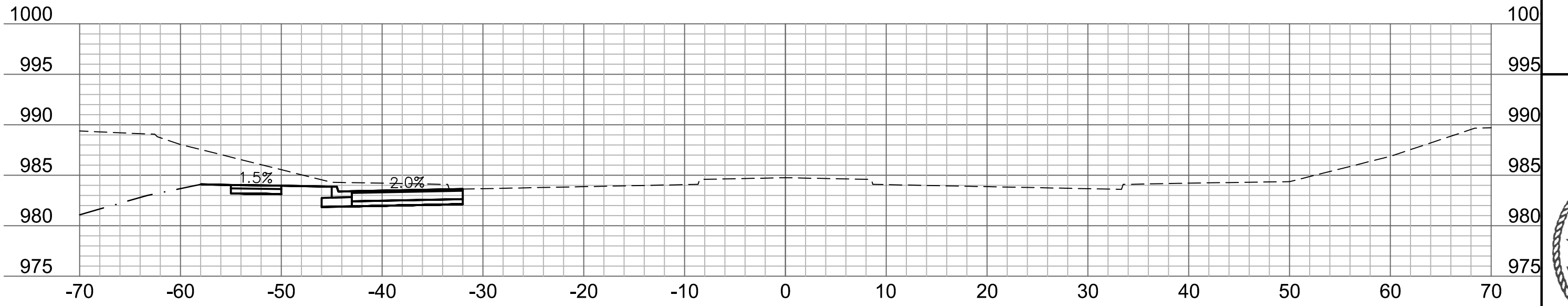
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approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: XSC01_D02104643
date: 7/14/2023

SHEET
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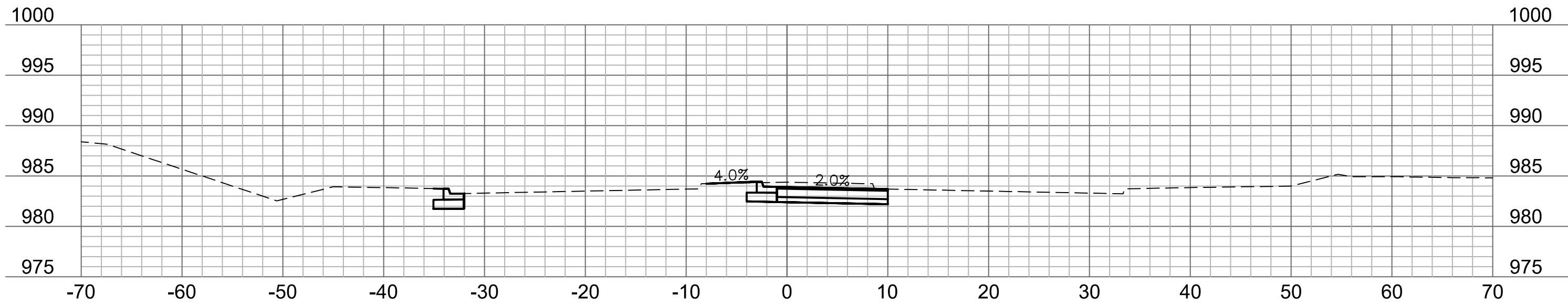
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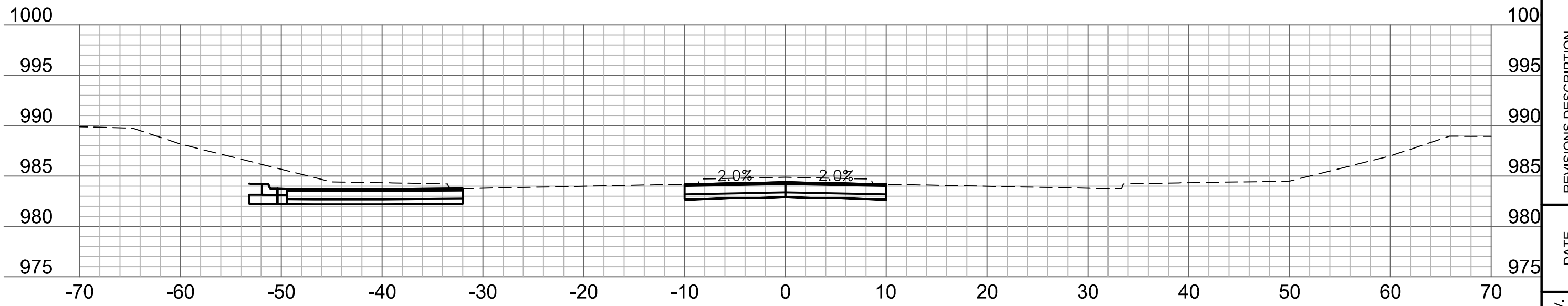
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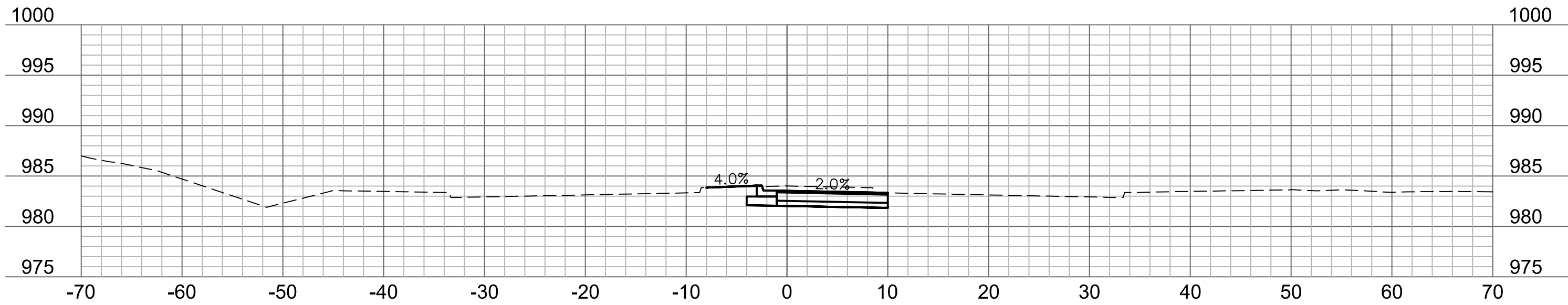
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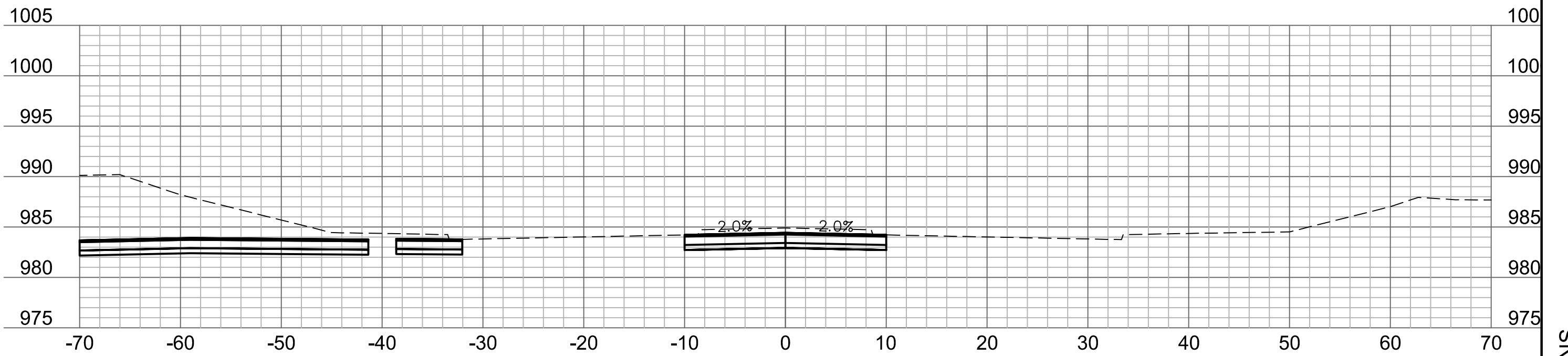
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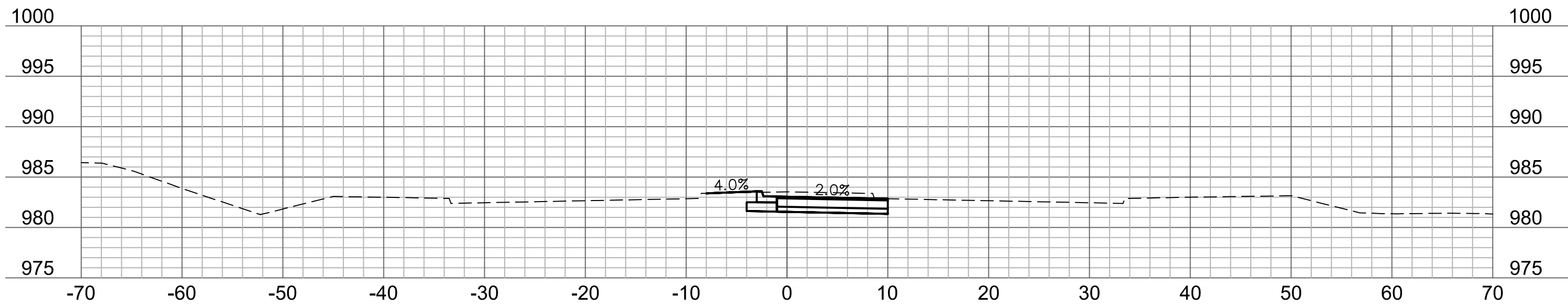
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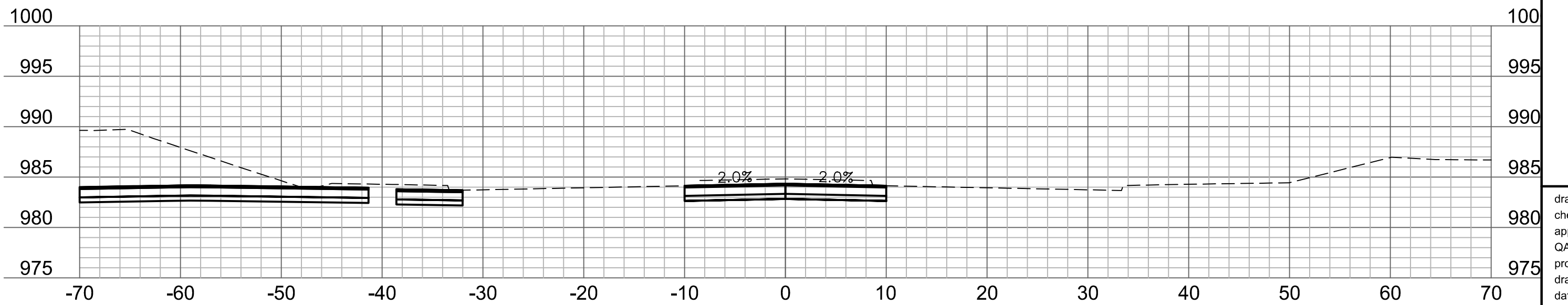
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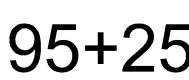
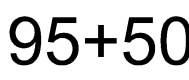
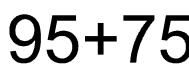
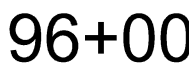
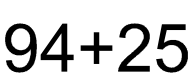
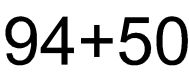
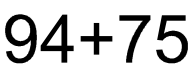
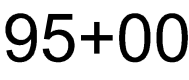
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	COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS		
	LEE'S SUMMIT, MISSOURI		

drawn by: BJW
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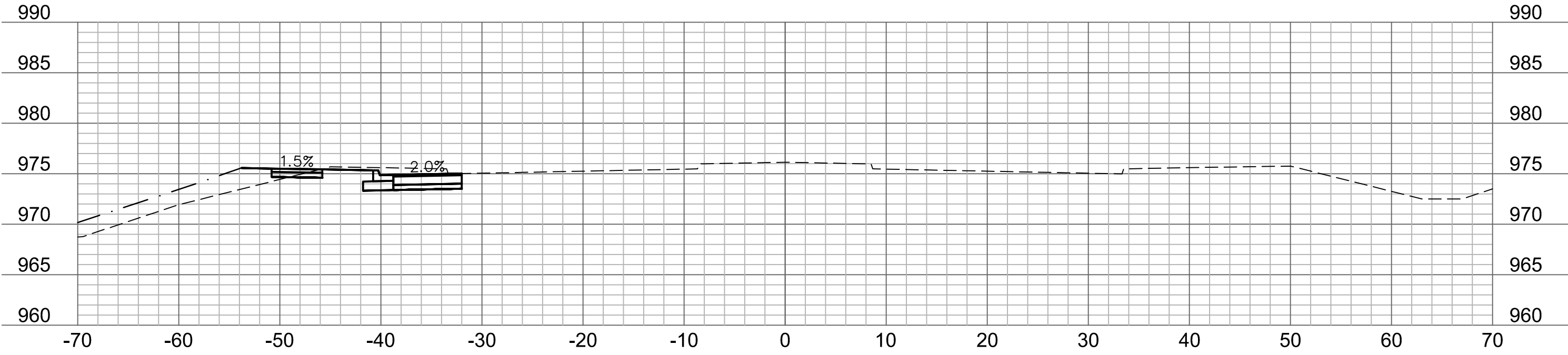
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LEE'S SUMMIT, MISSOURI	2021

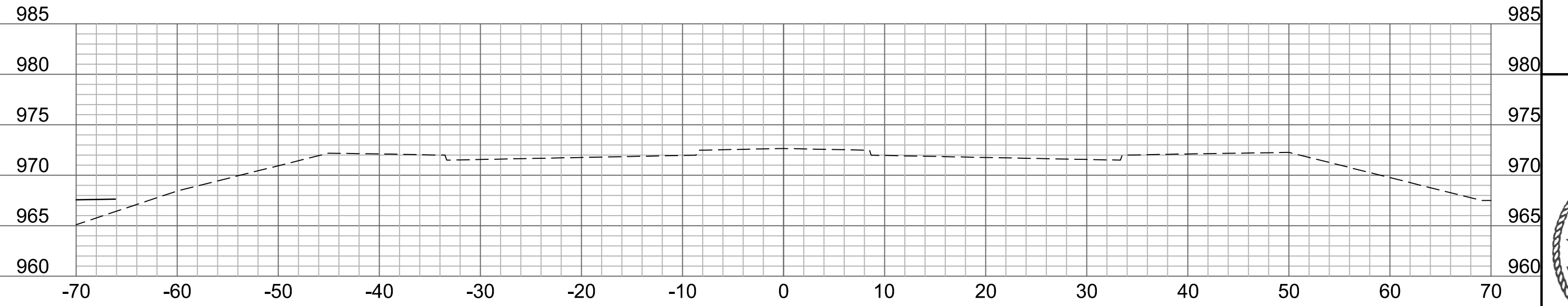
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 Date: 7/14/2023

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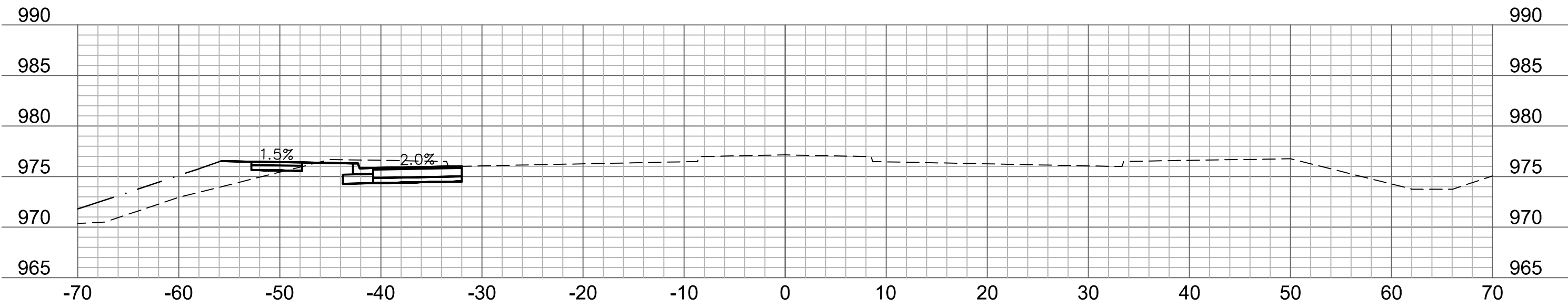
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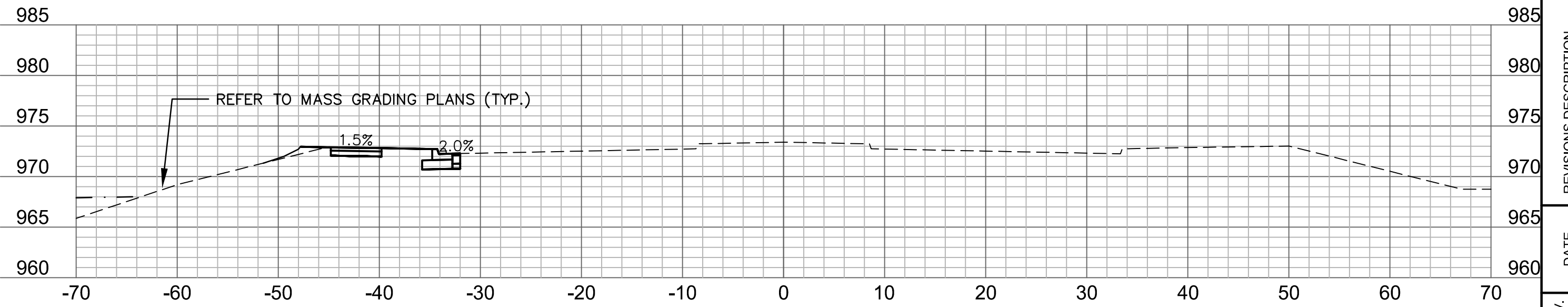
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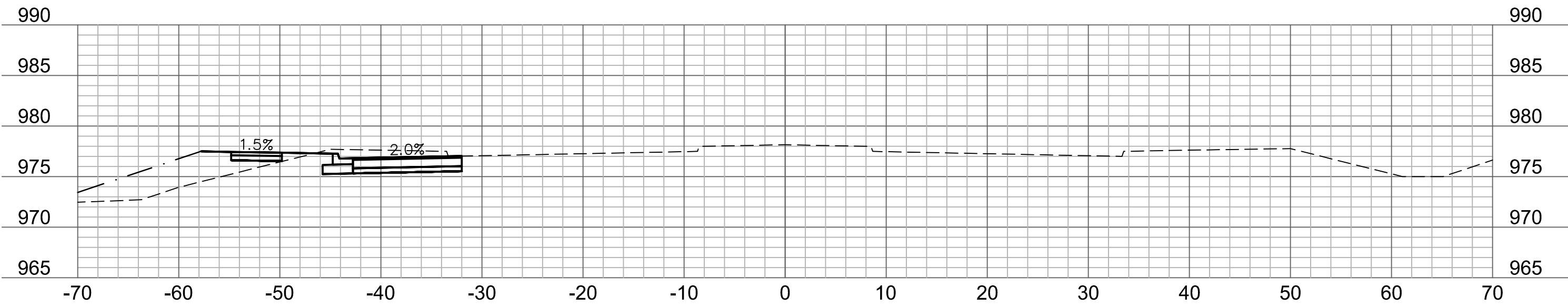
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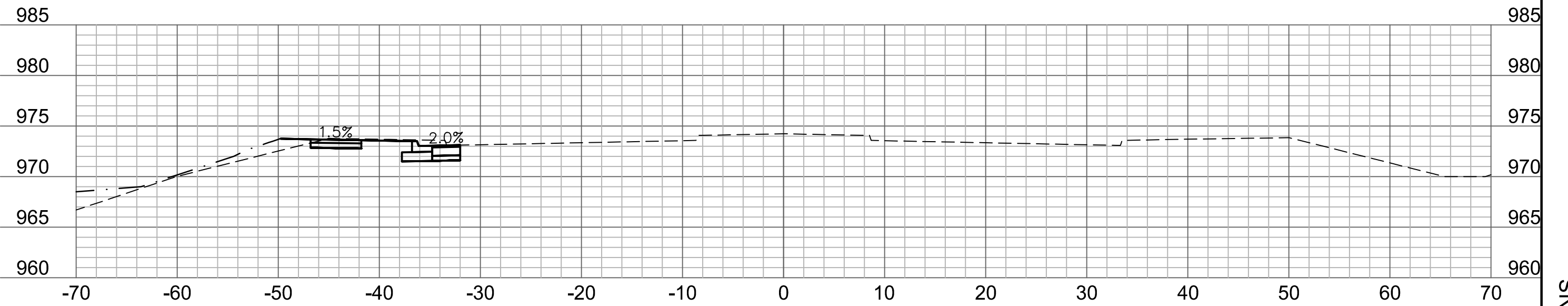
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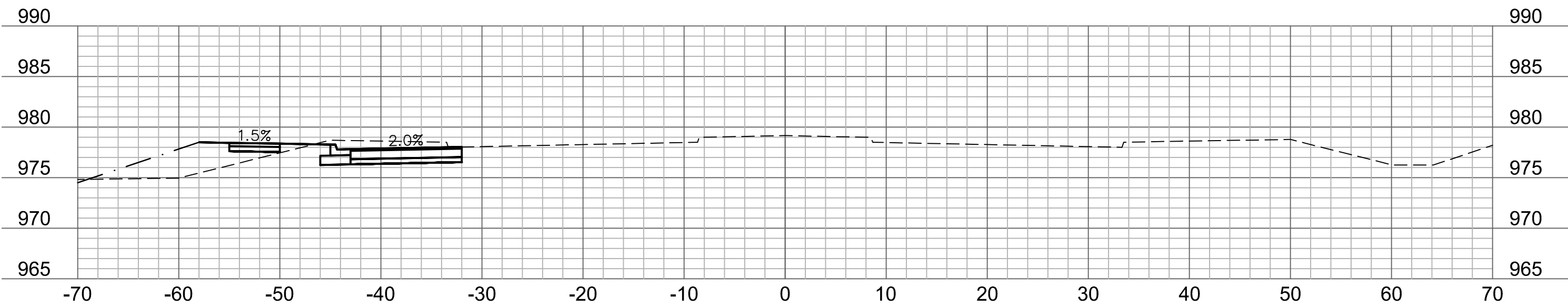
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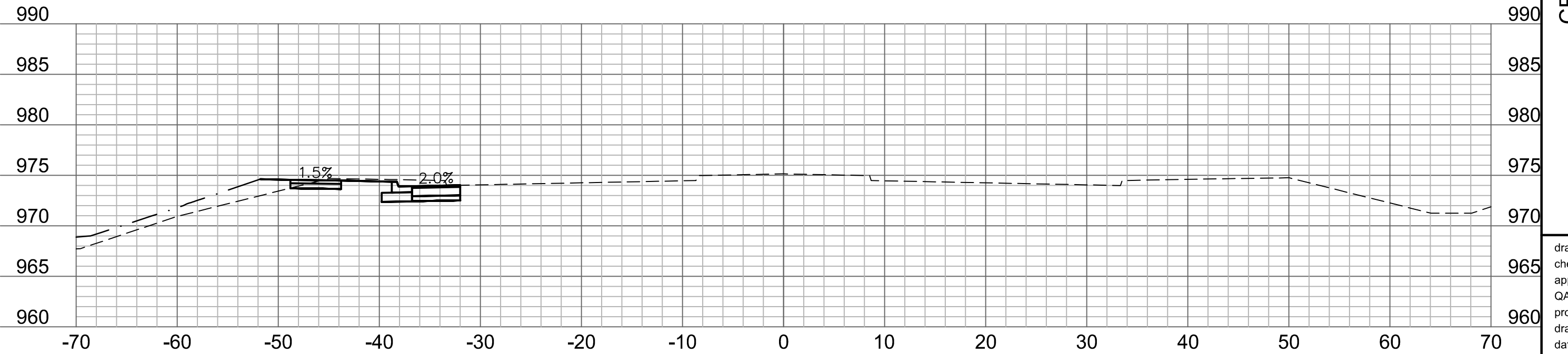
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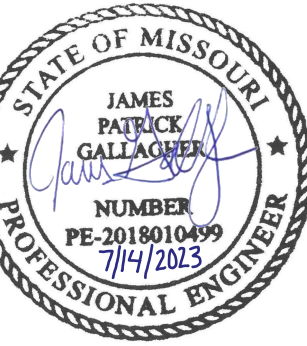
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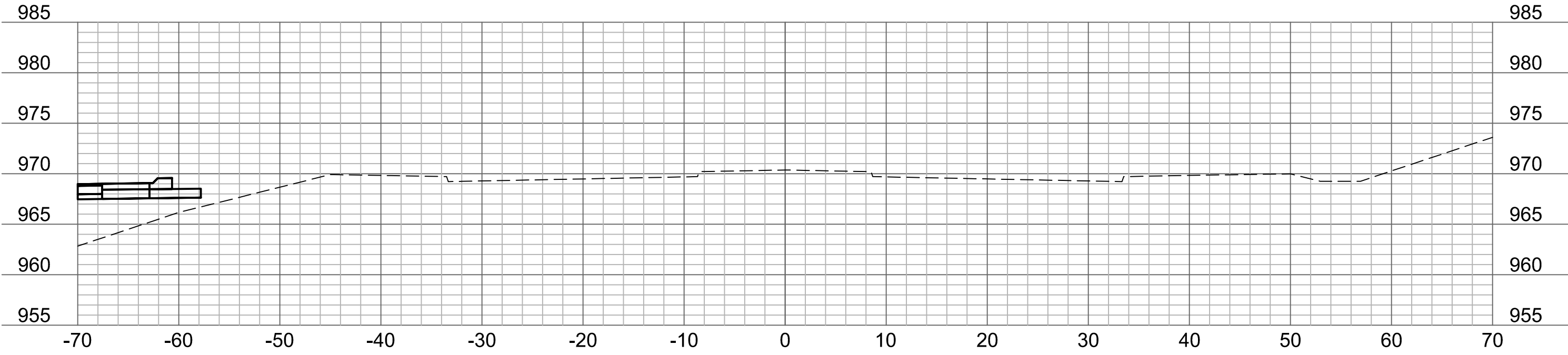
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COLBURN ROAD
THE VILLAGE AT DISCOVERY PARK
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
LEE'S SUMMIT, MISSOURI

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

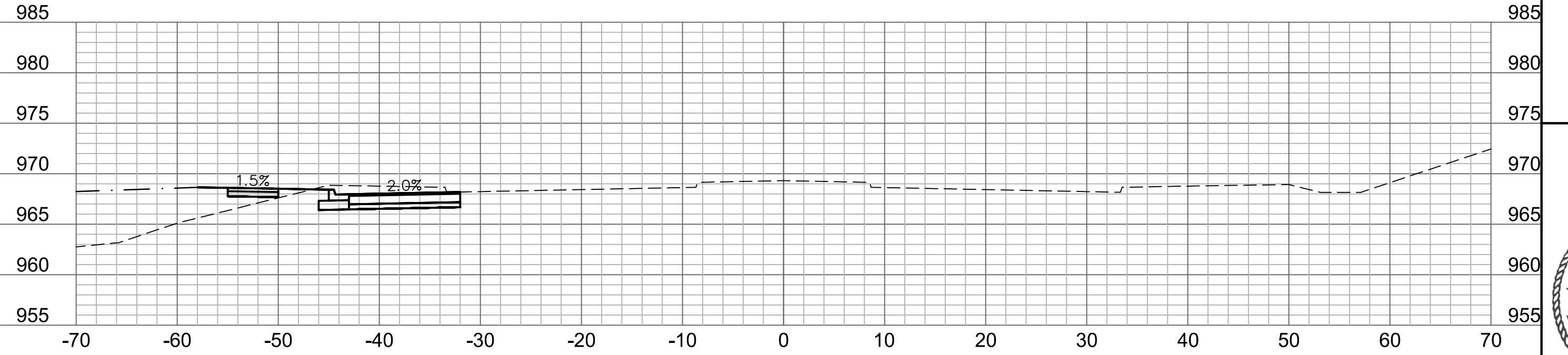
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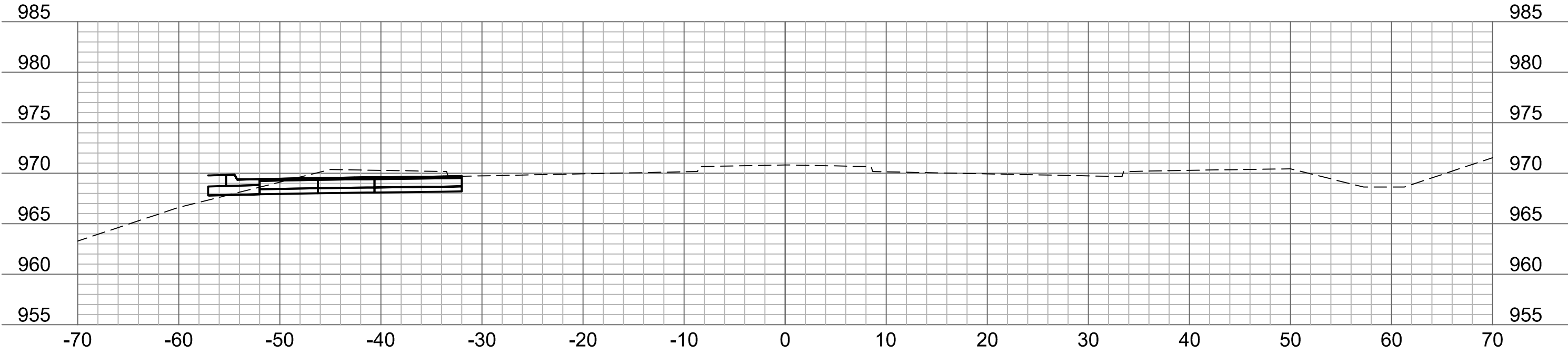
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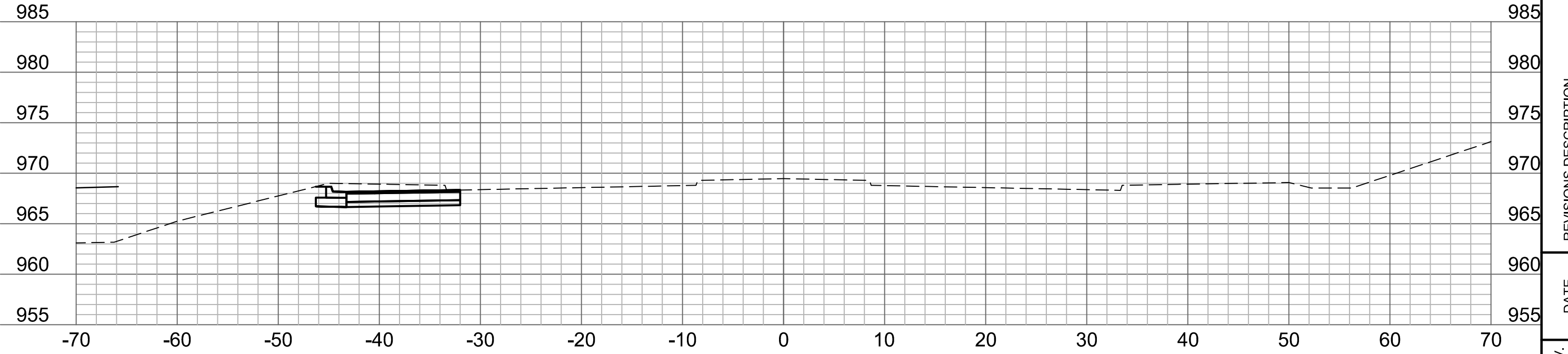
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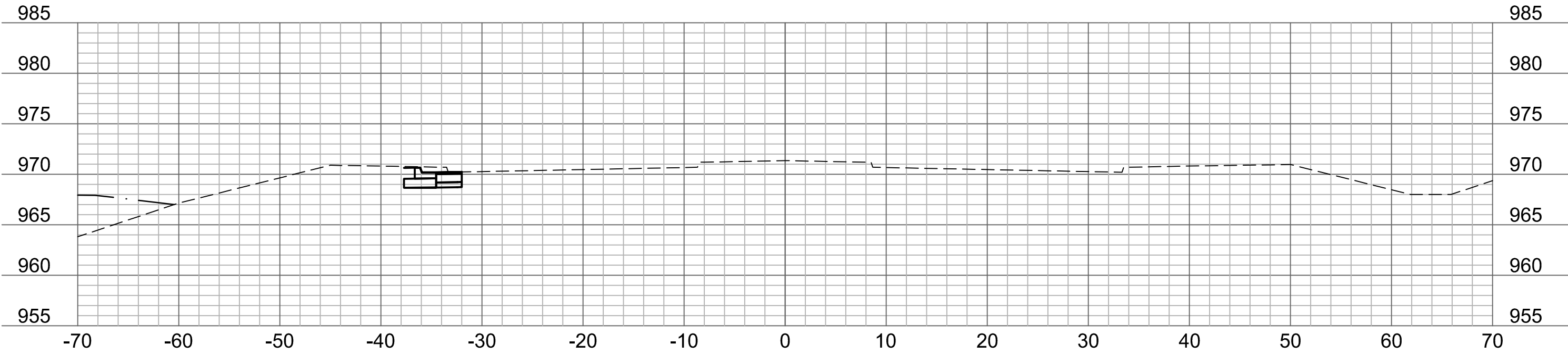
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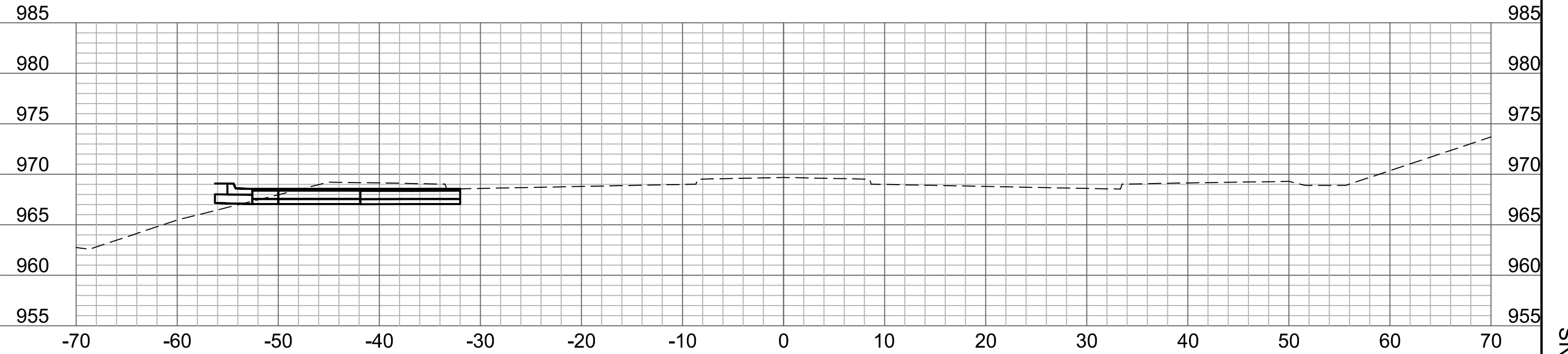
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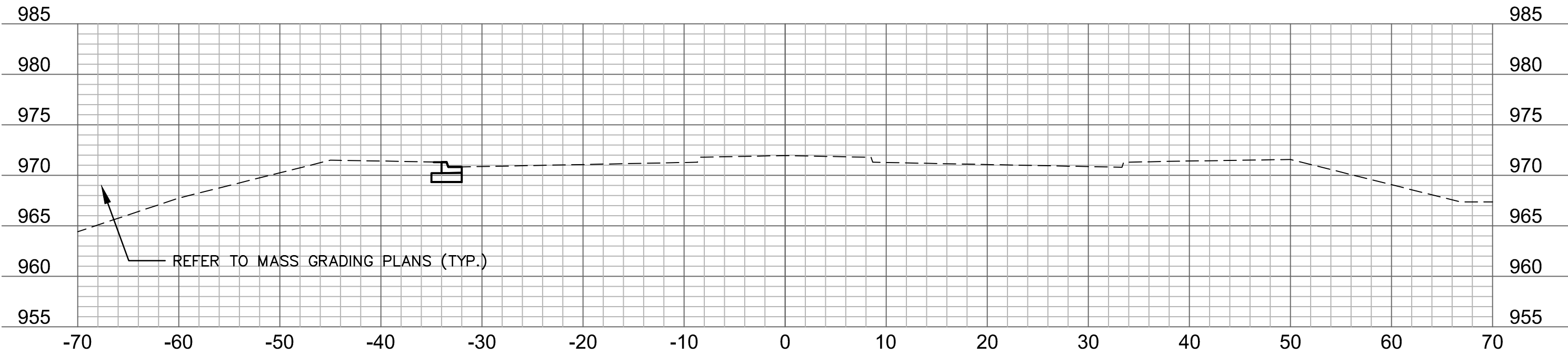
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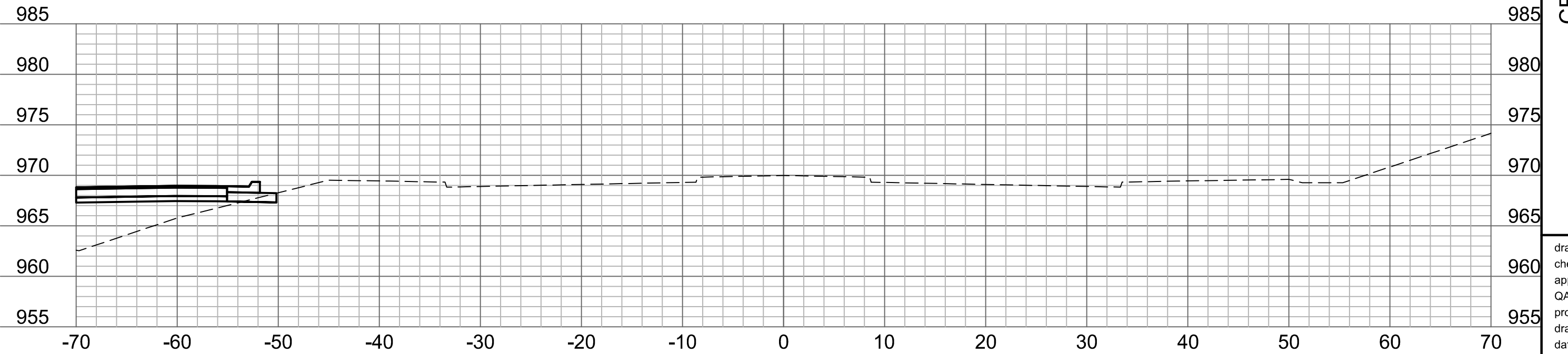
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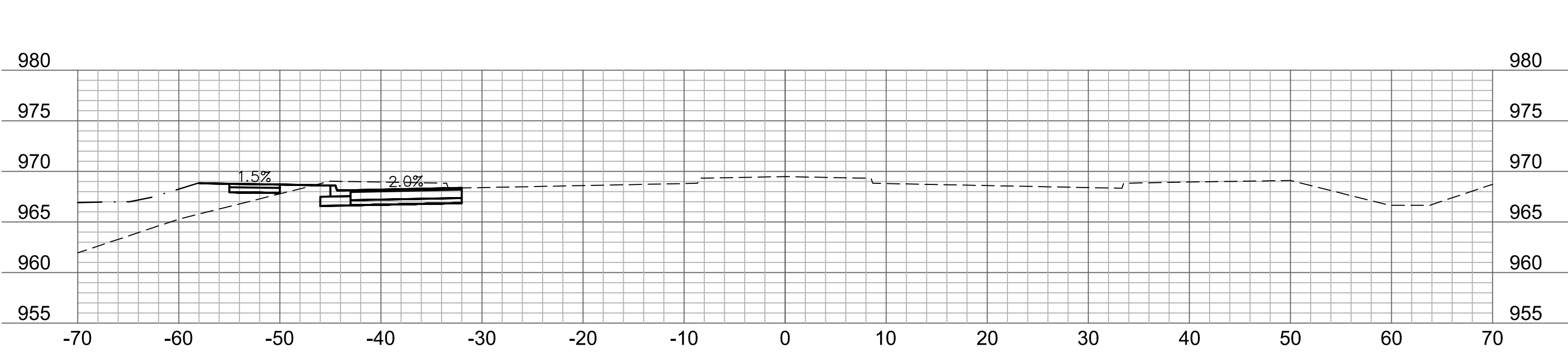
CROSS SECTIONS	COLBURN ROAD
THE VILLAGE AT DISCOVERY PARK	
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	
LEE'S SUMMIT, MISSOURI	

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

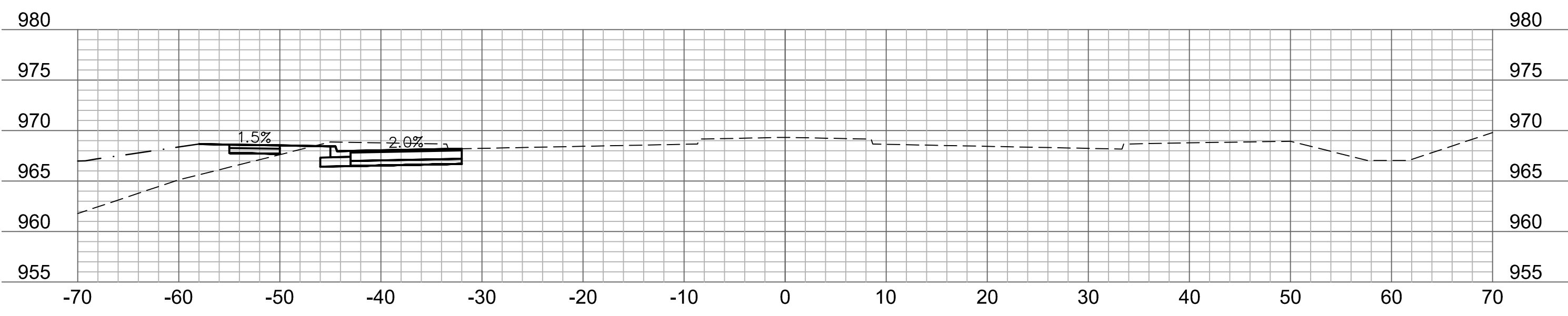
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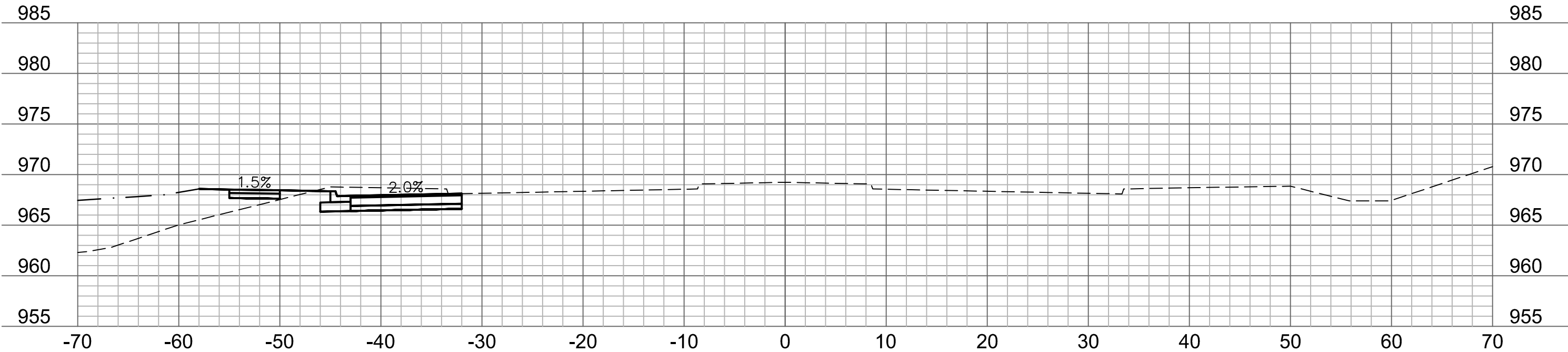
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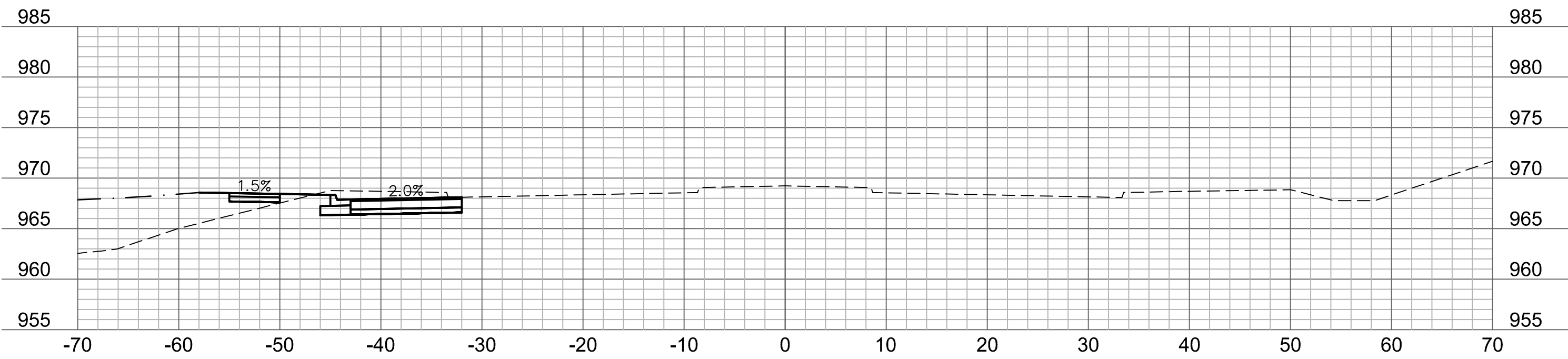
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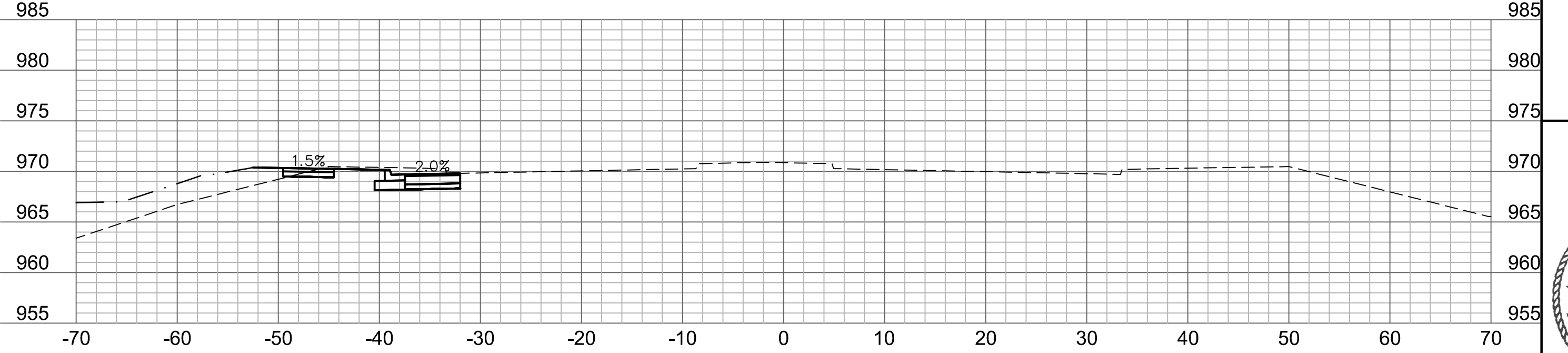
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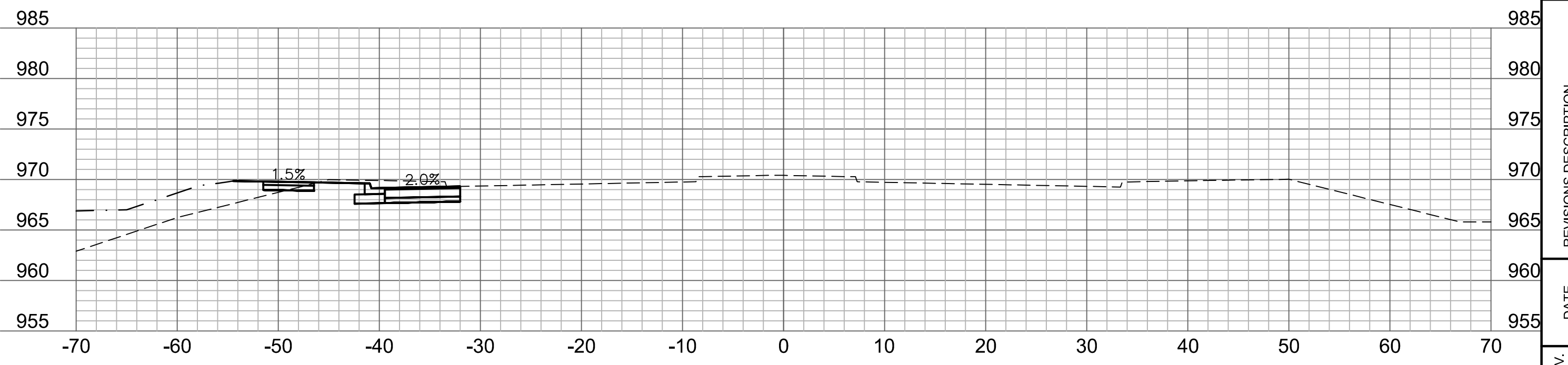
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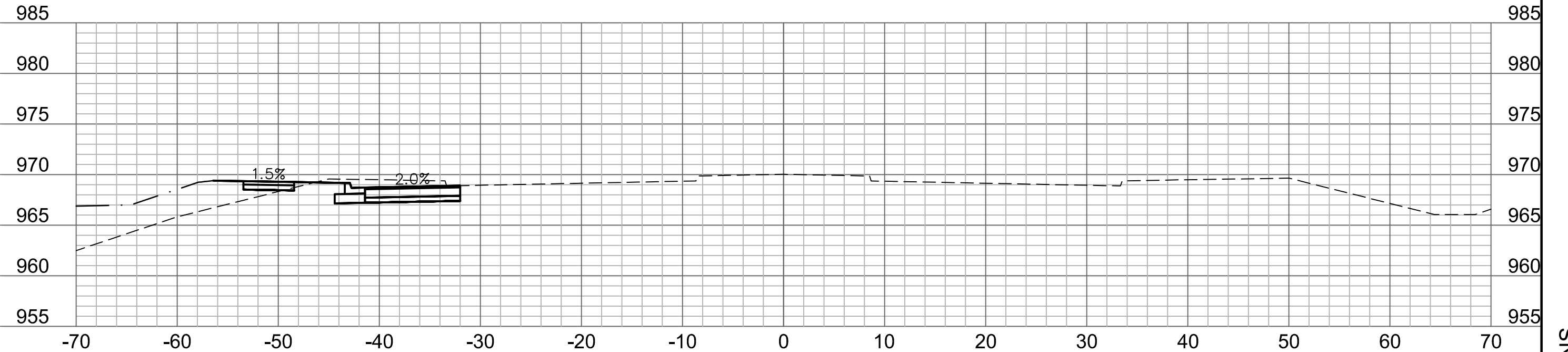
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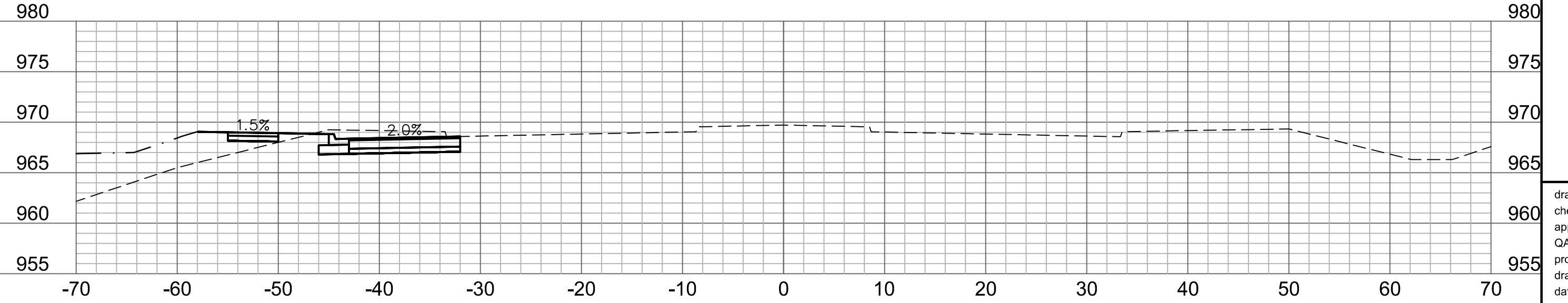
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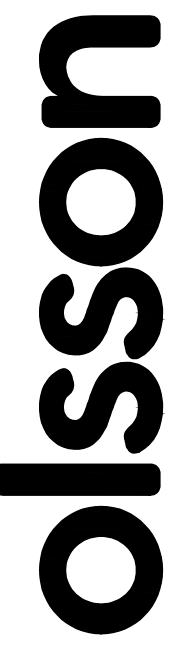
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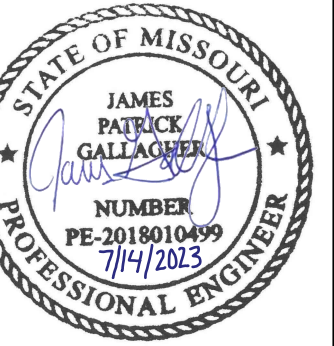
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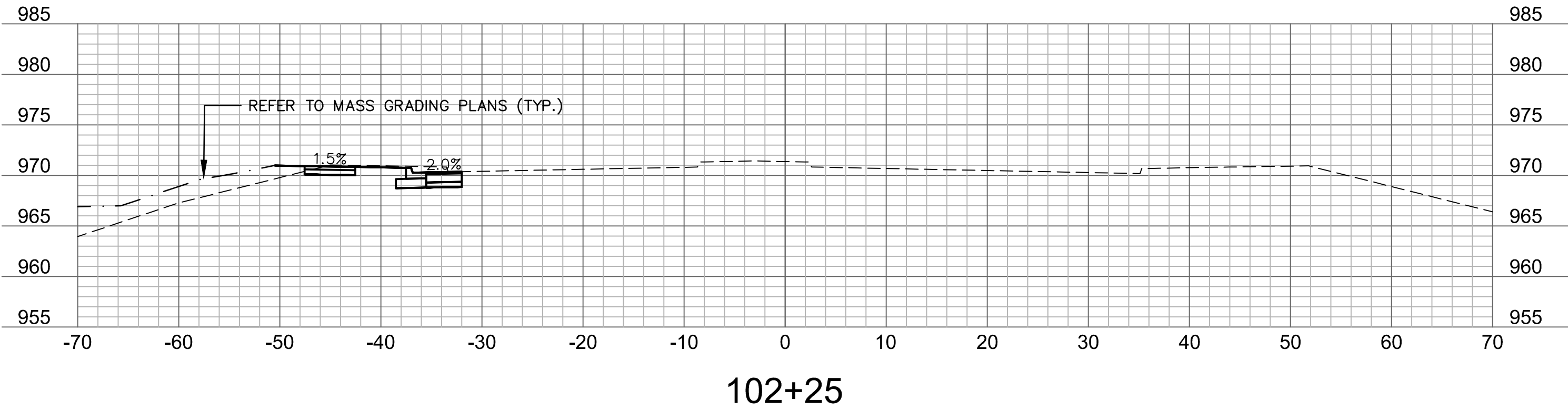
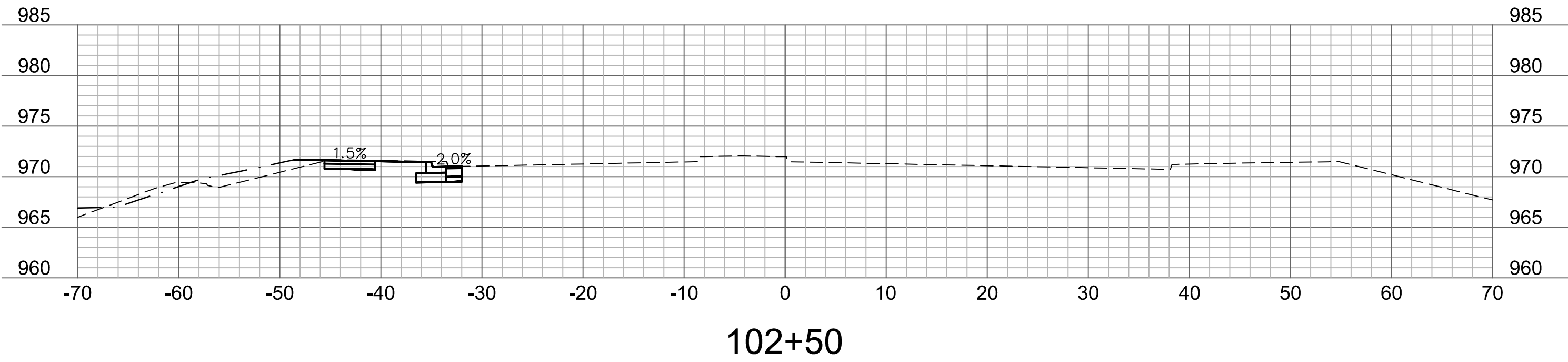
CROSS SECTIONS
COLBURN ROAD

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

LEE'S SUMMIT, MISSOURI

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

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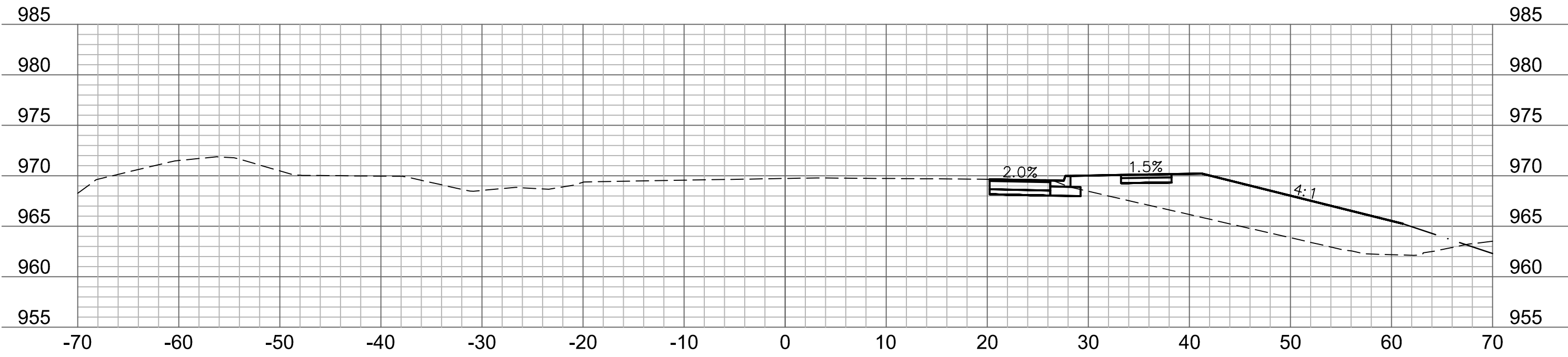
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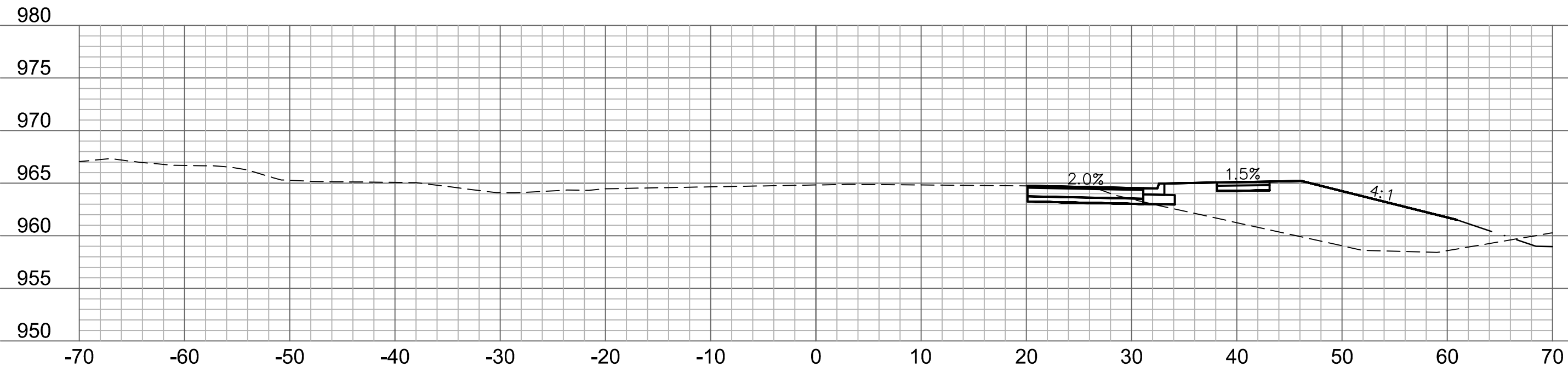
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THE VILLAGE AT DISCOVERY PARK COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS LEE'S SUMMIT, MISSOURI	

drawn by: BJW
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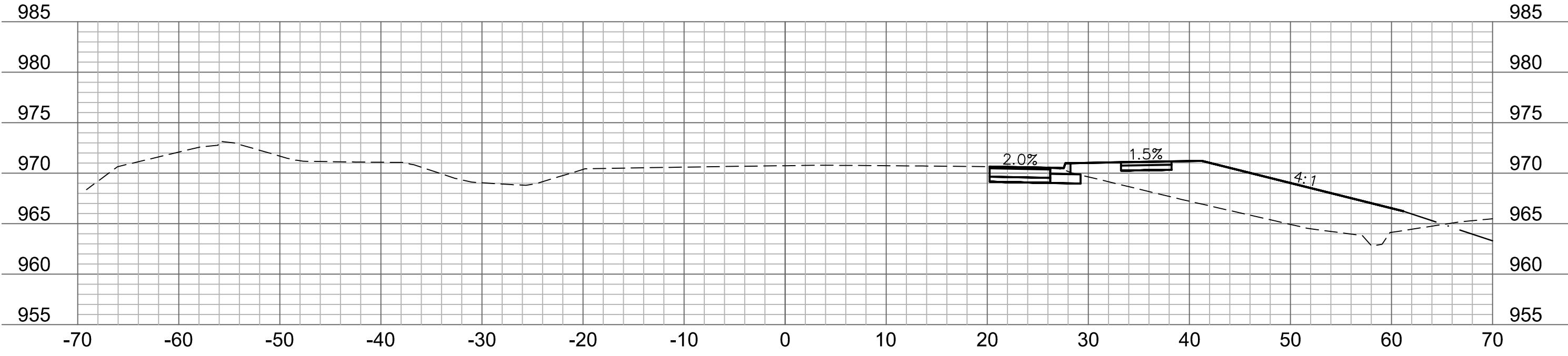
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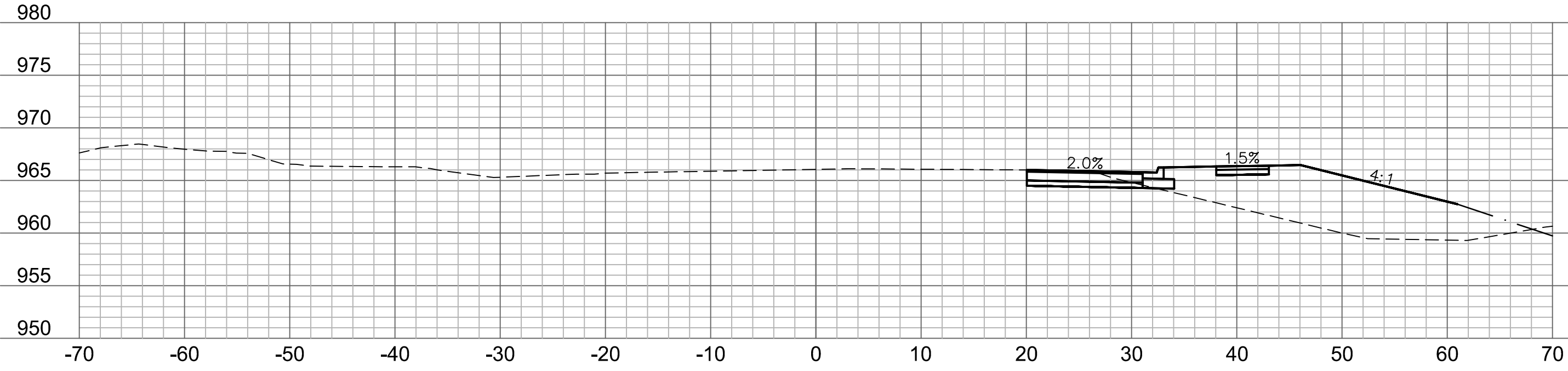
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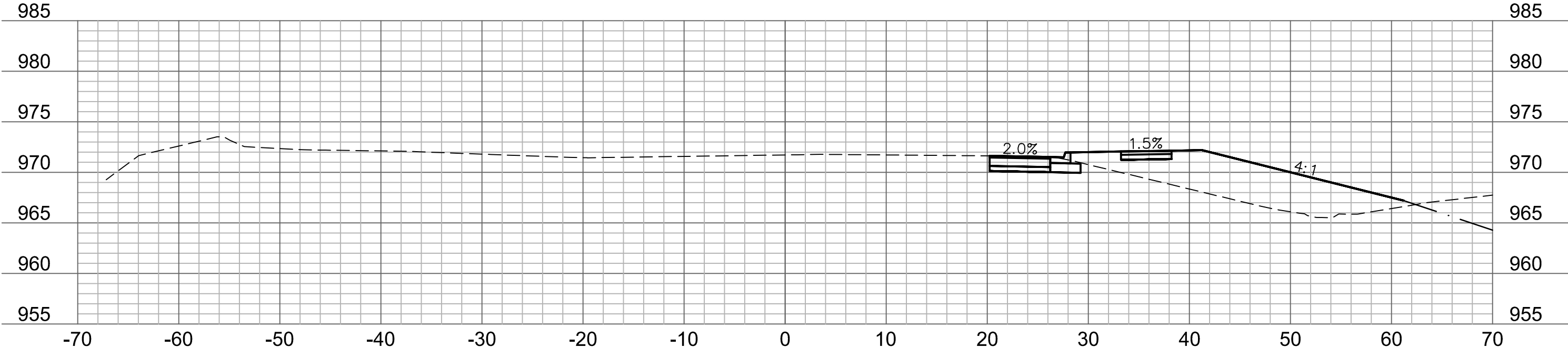
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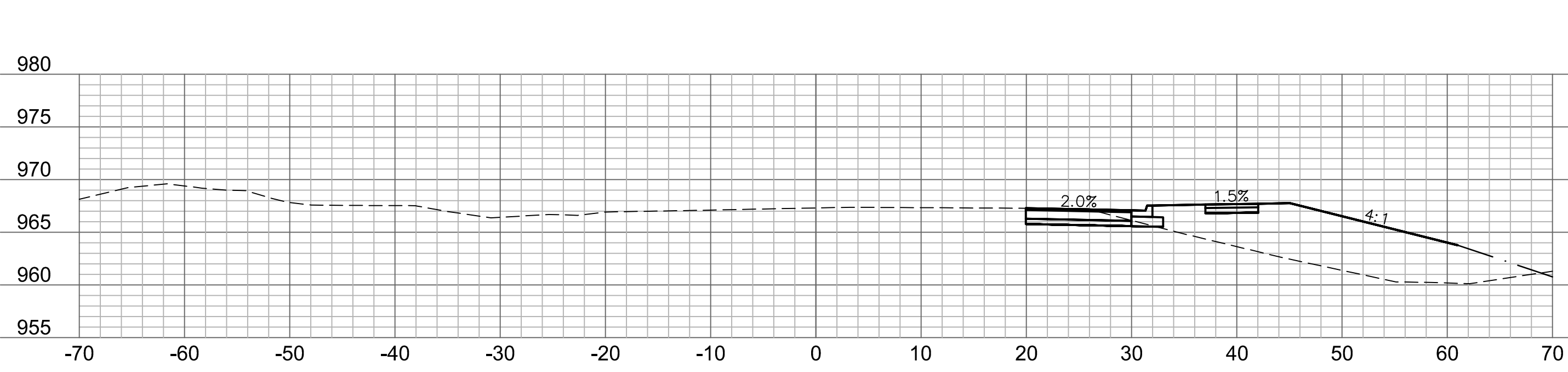
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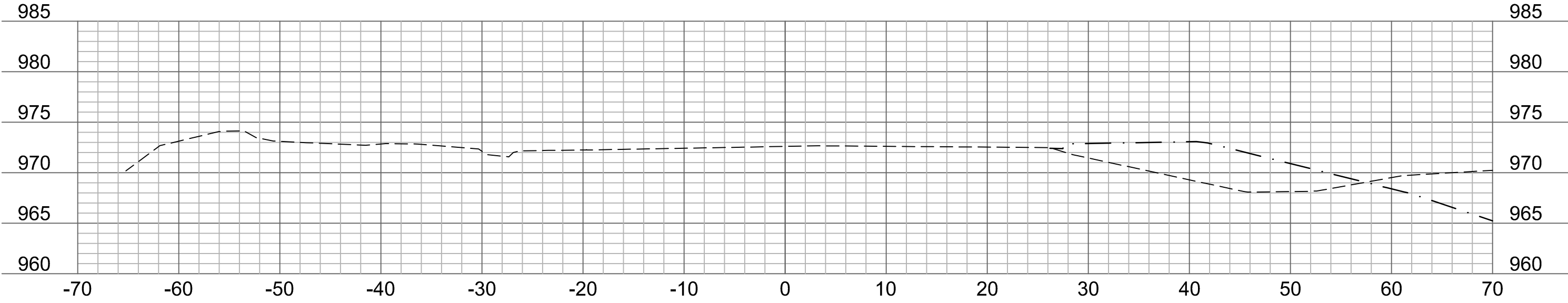
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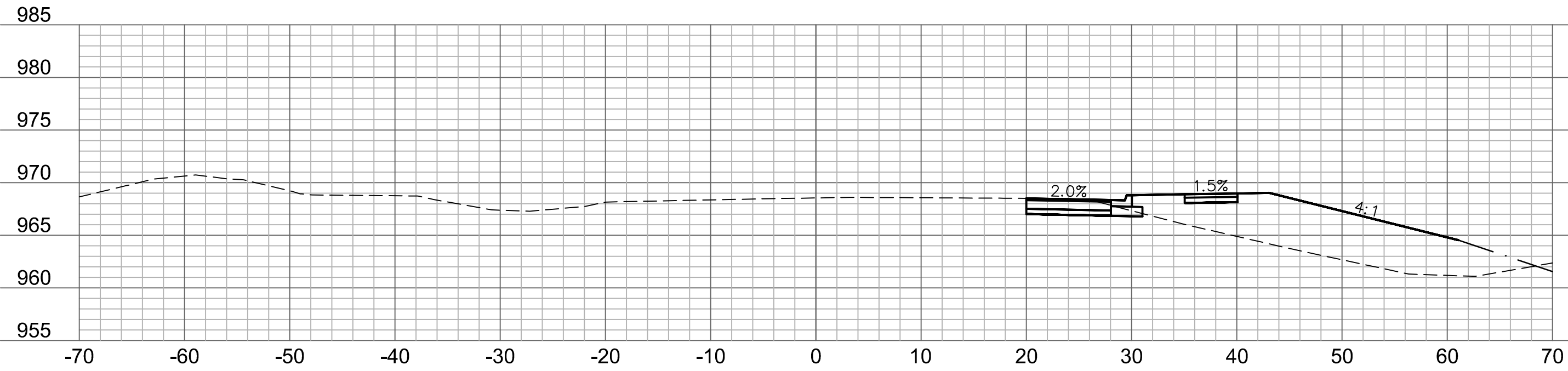
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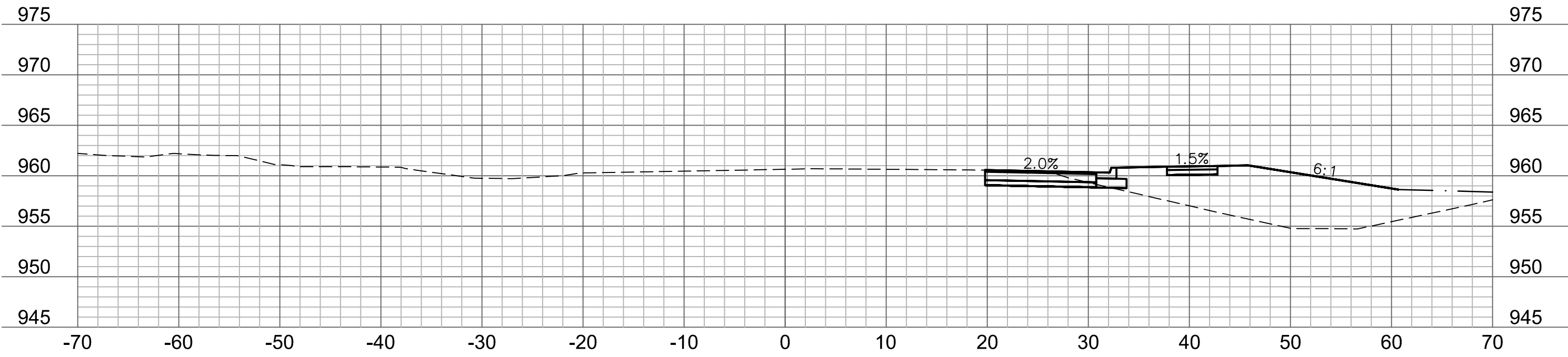
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		PRELIMINARY PLANS
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REVISIONS		

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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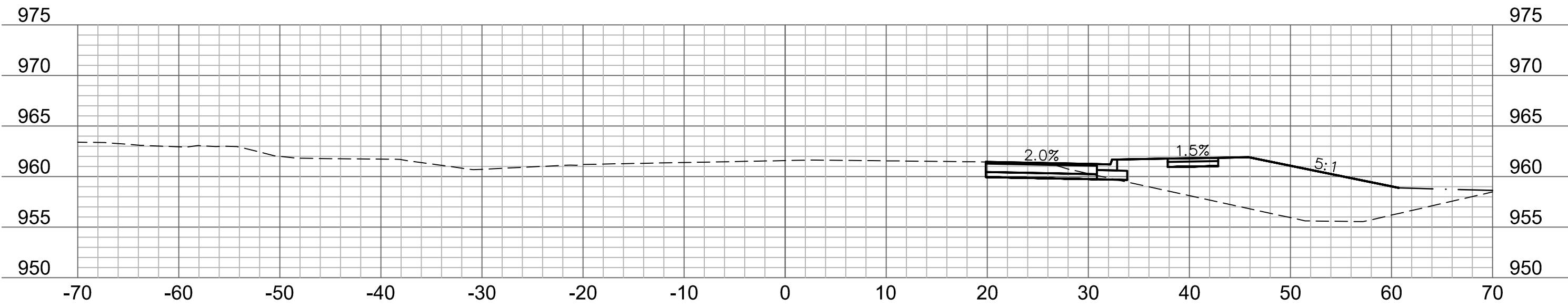
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checked by: KLIW
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project no.: 021-04643
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date: 7/14/2023

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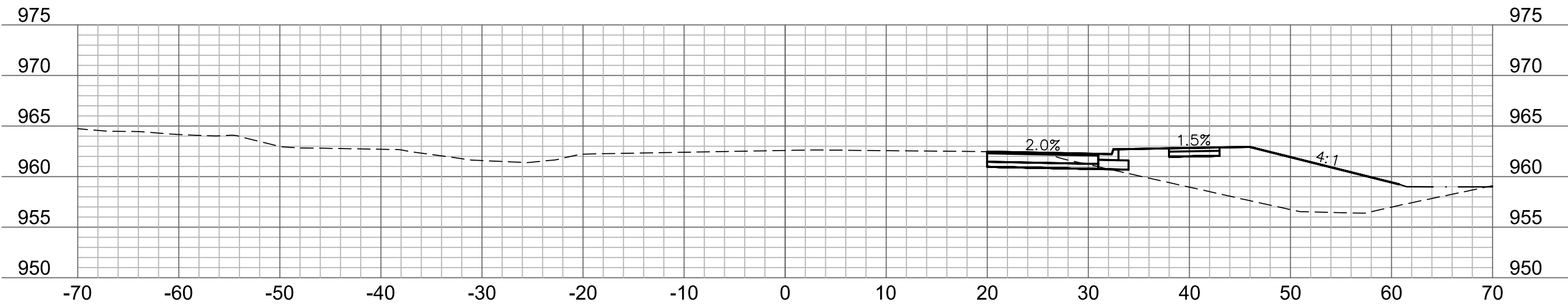
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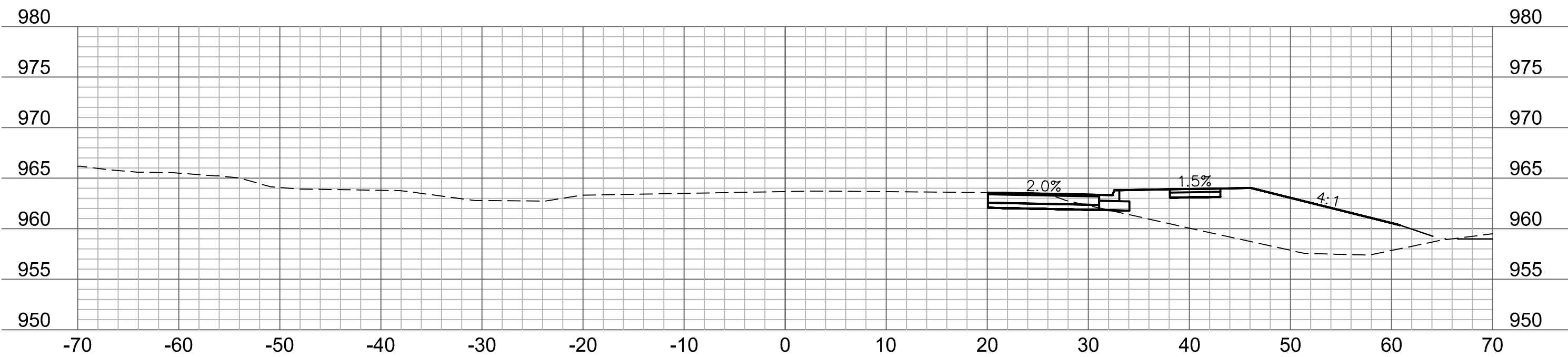
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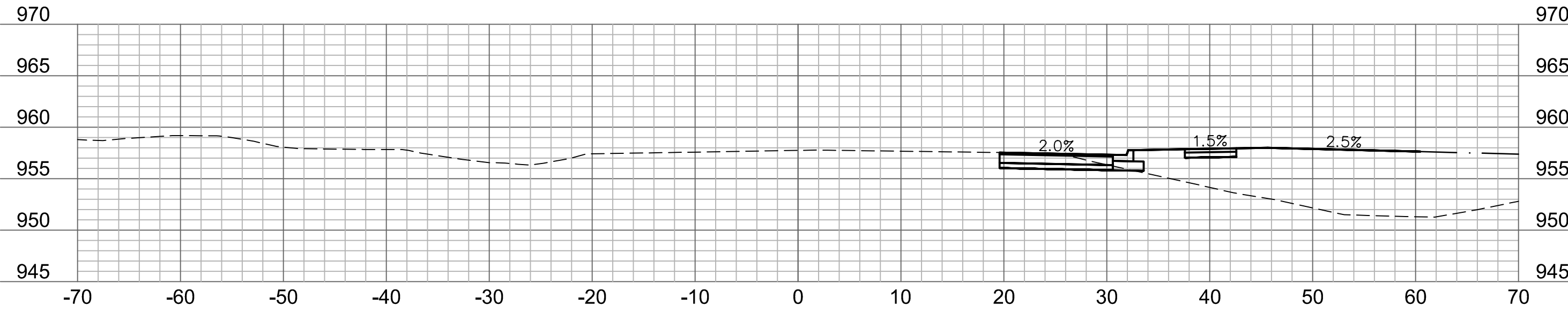
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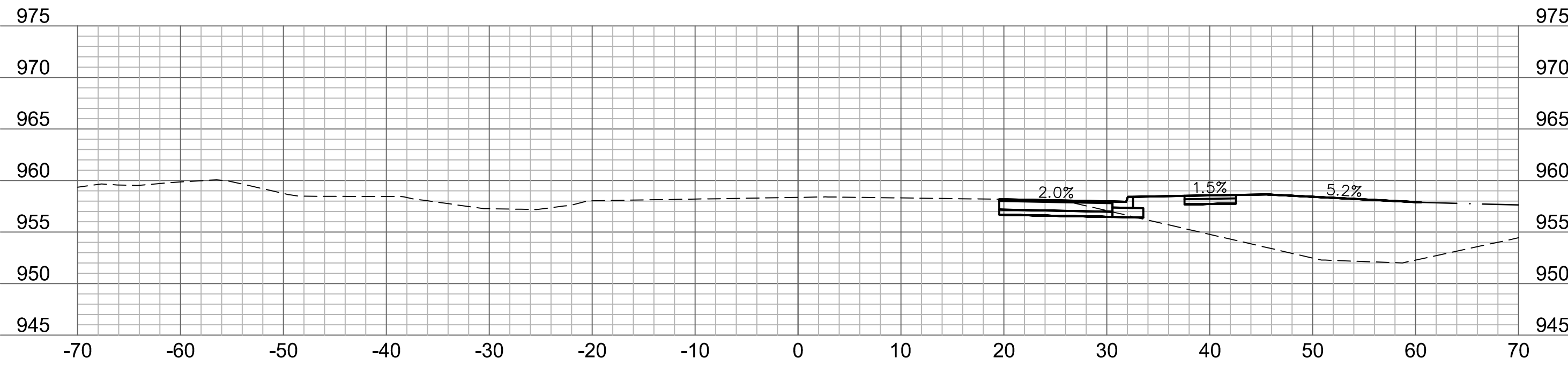
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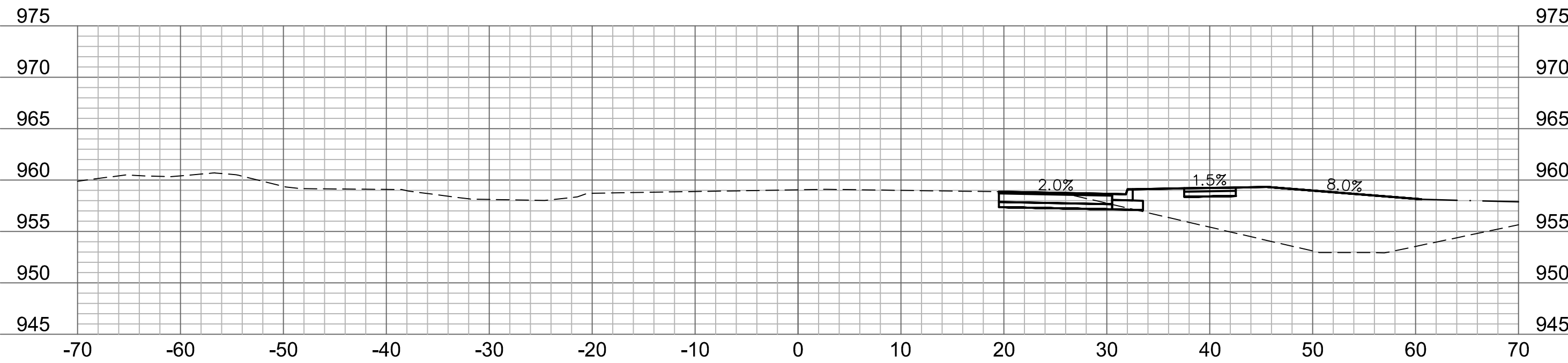
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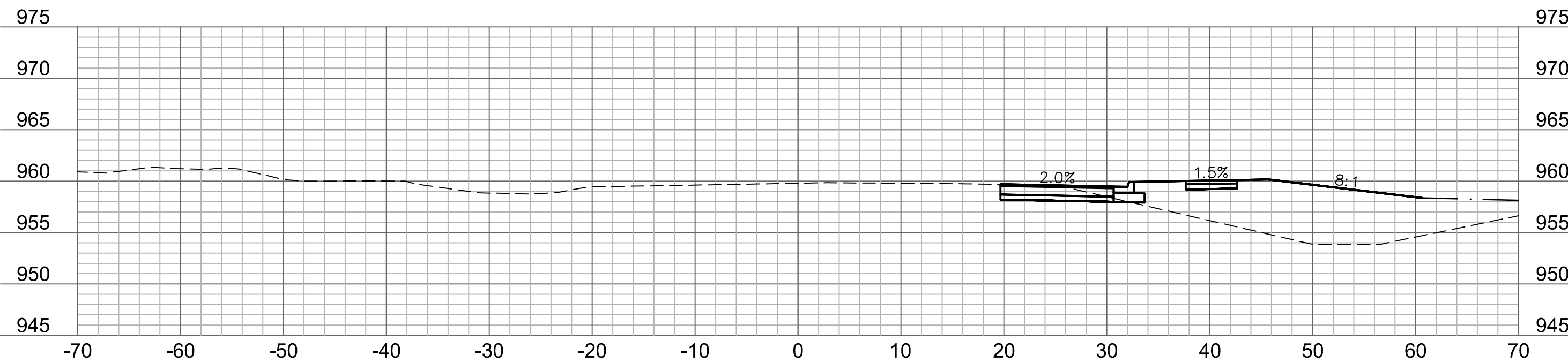
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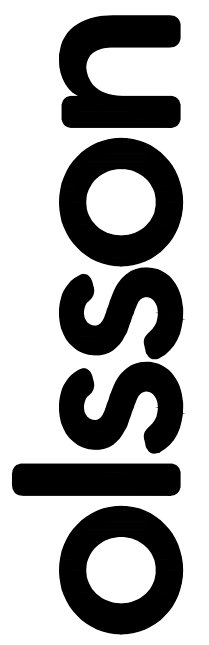
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		PRELIMINARY PLANS
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CROSS SECTIONS
DOUGLAS STREET

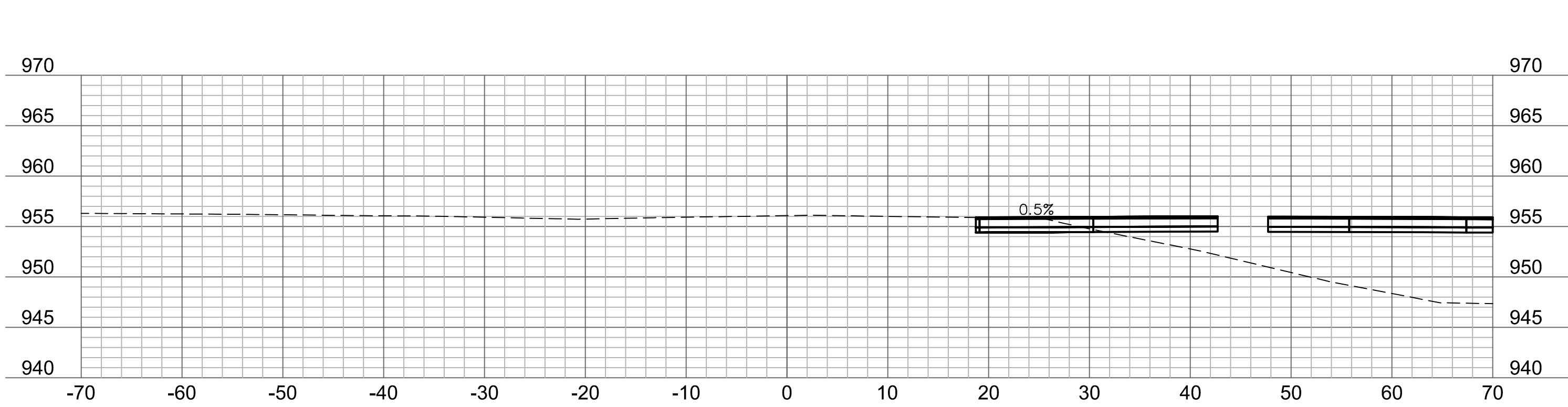
THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

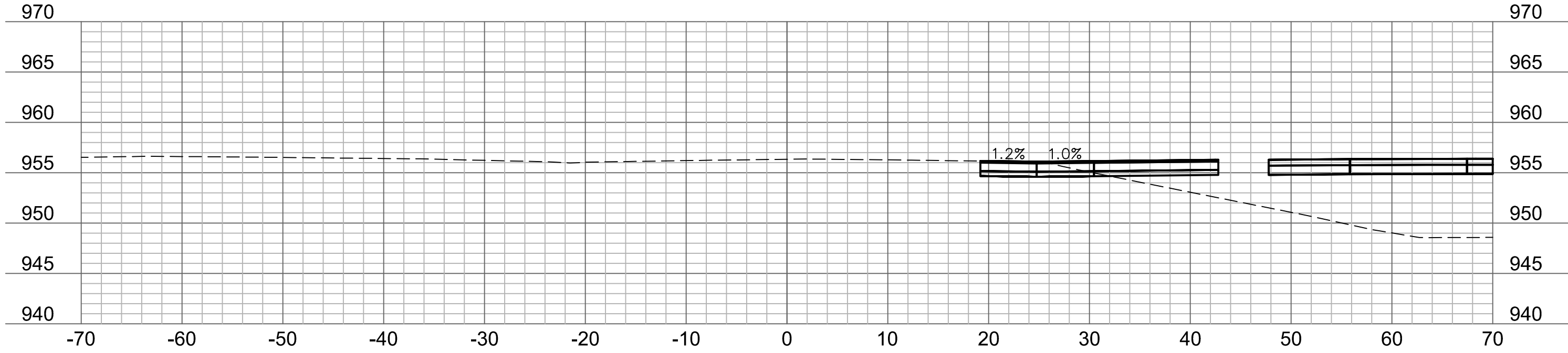
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checked by: KIW
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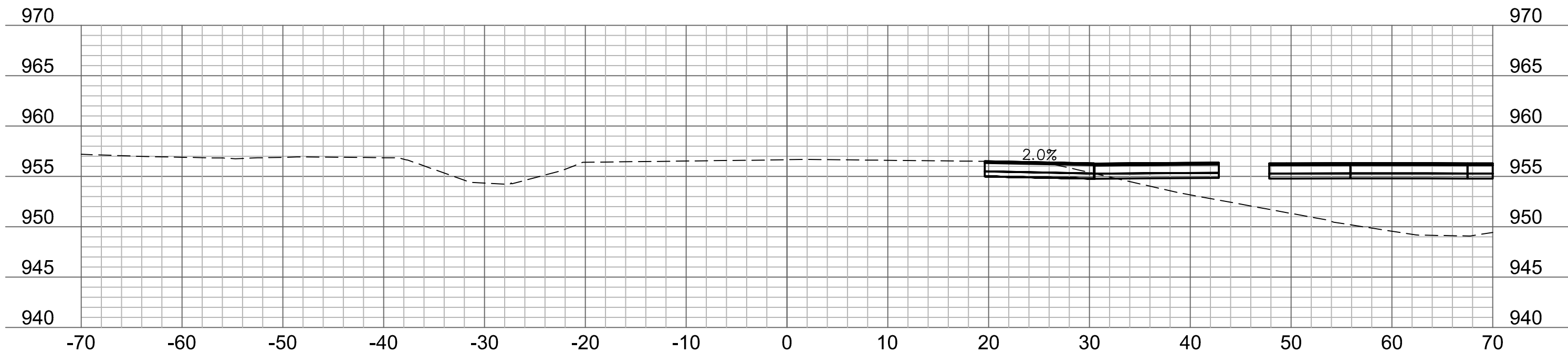
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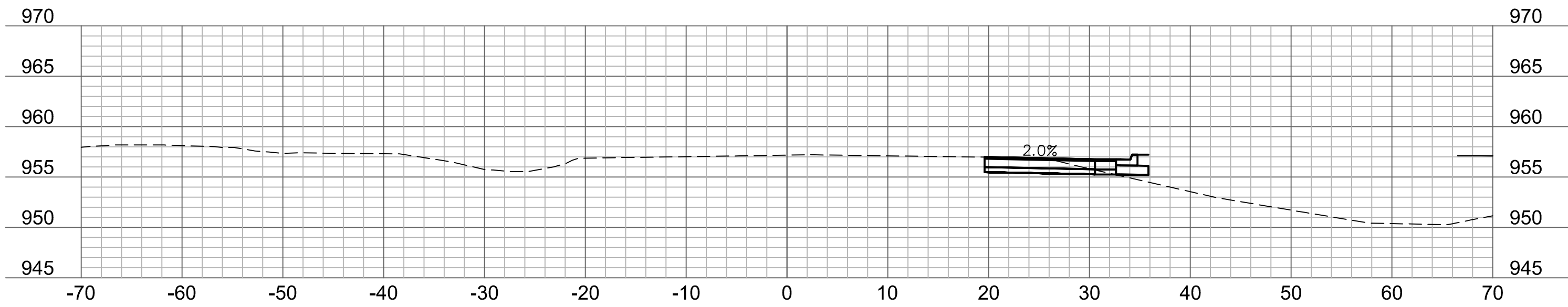
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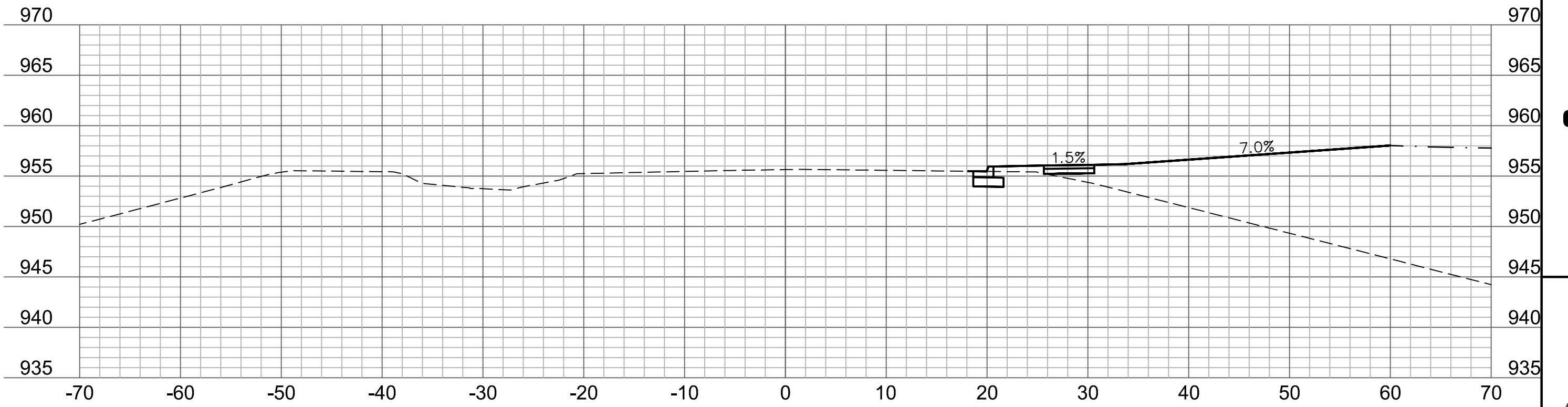
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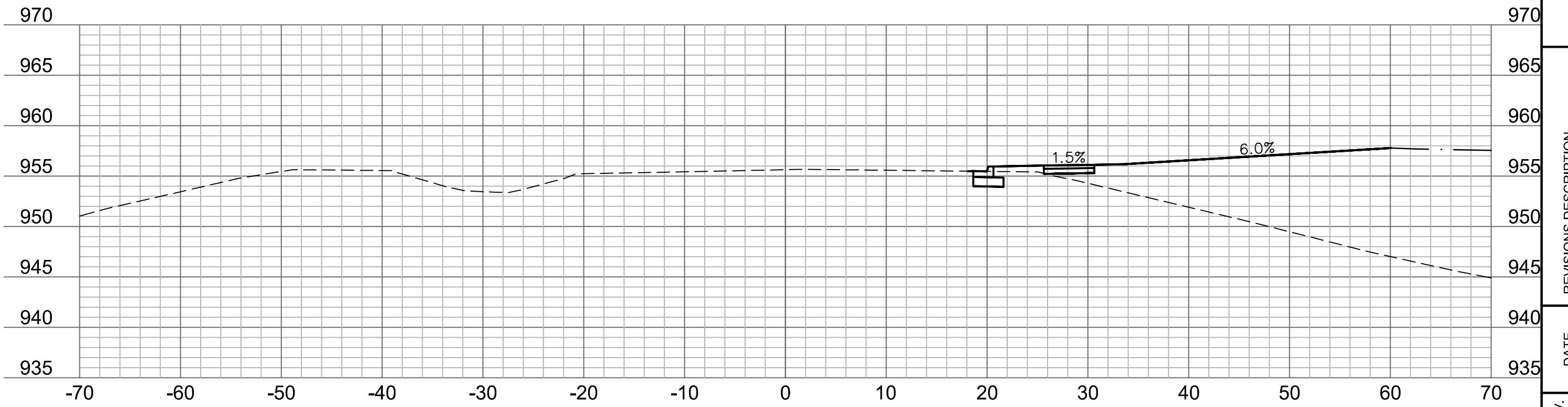
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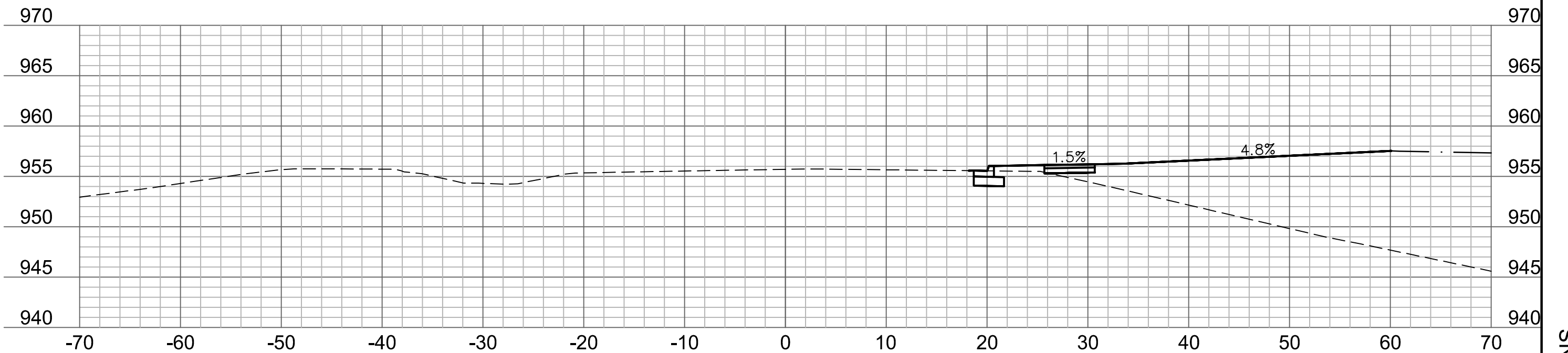
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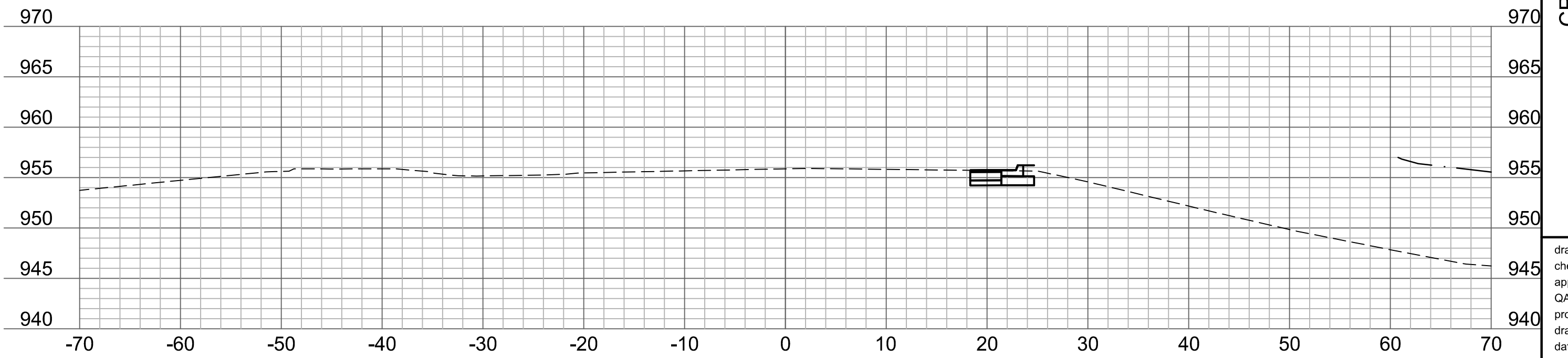
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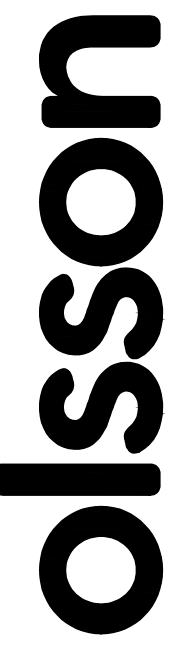
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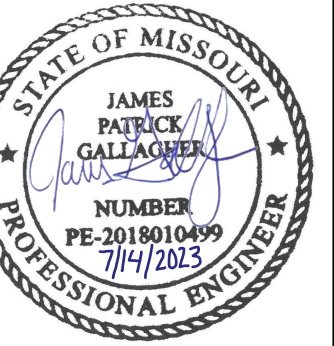
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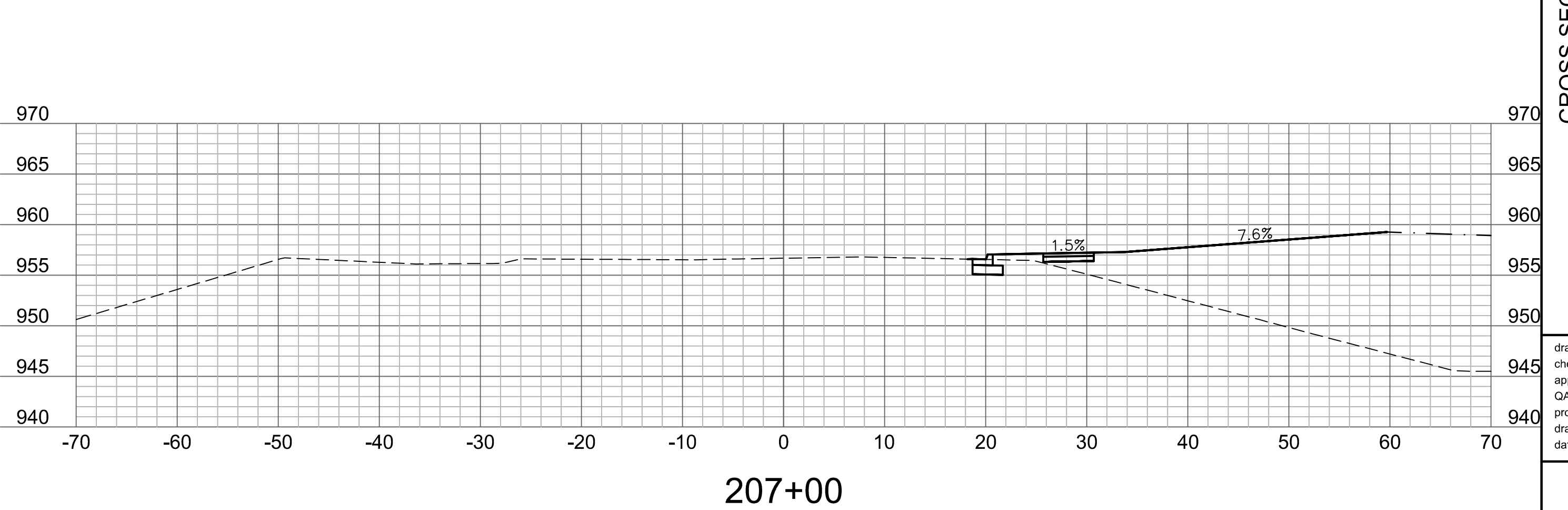
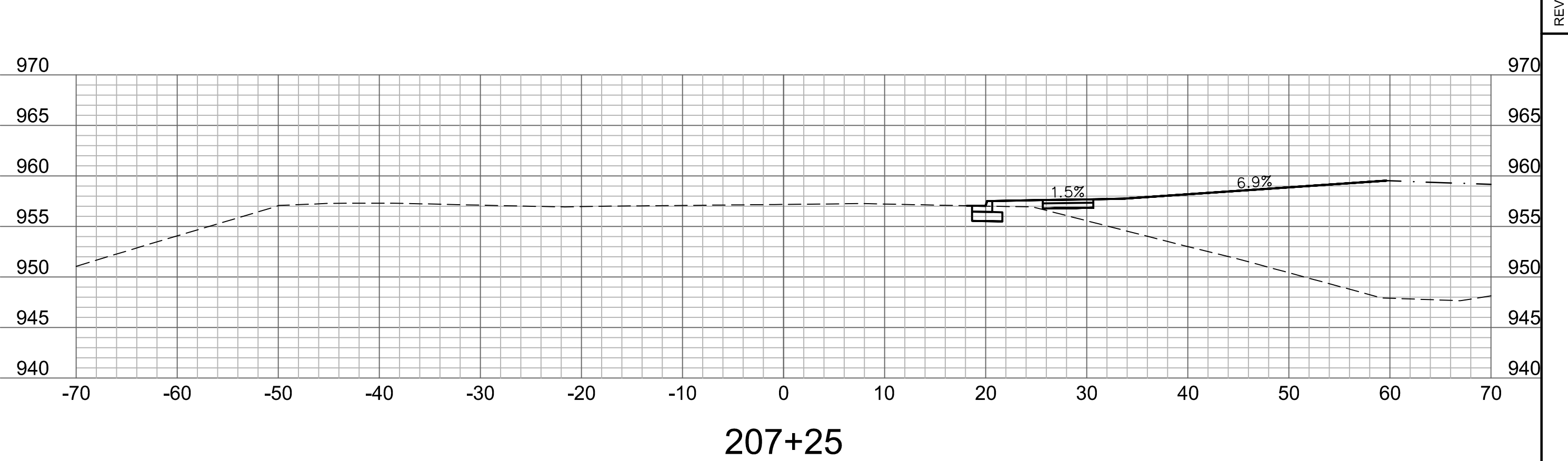
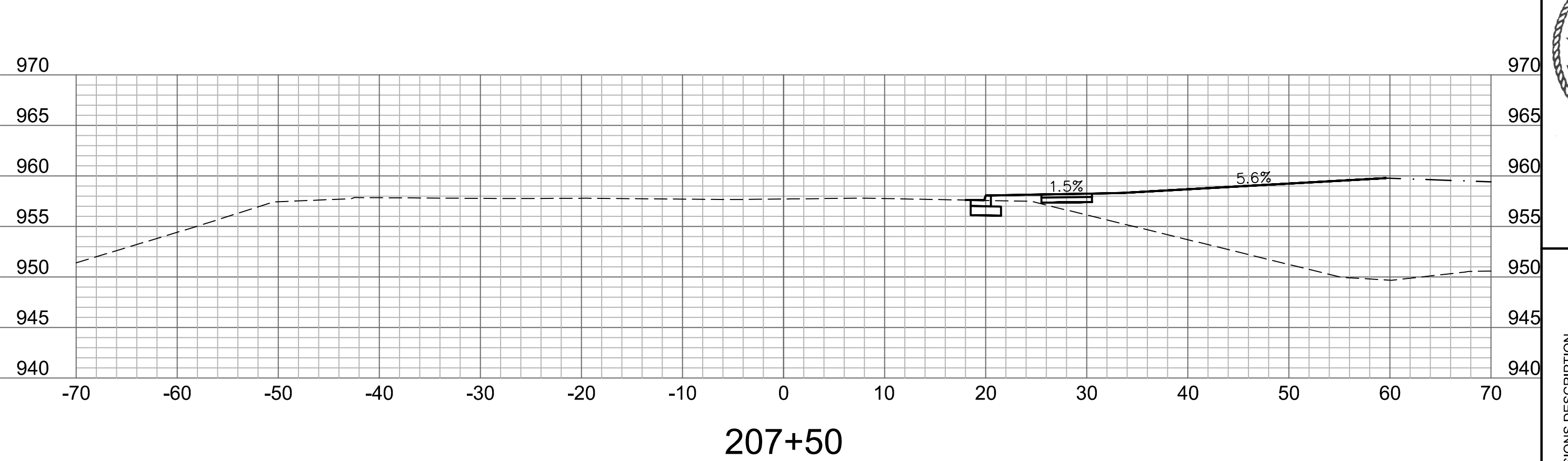
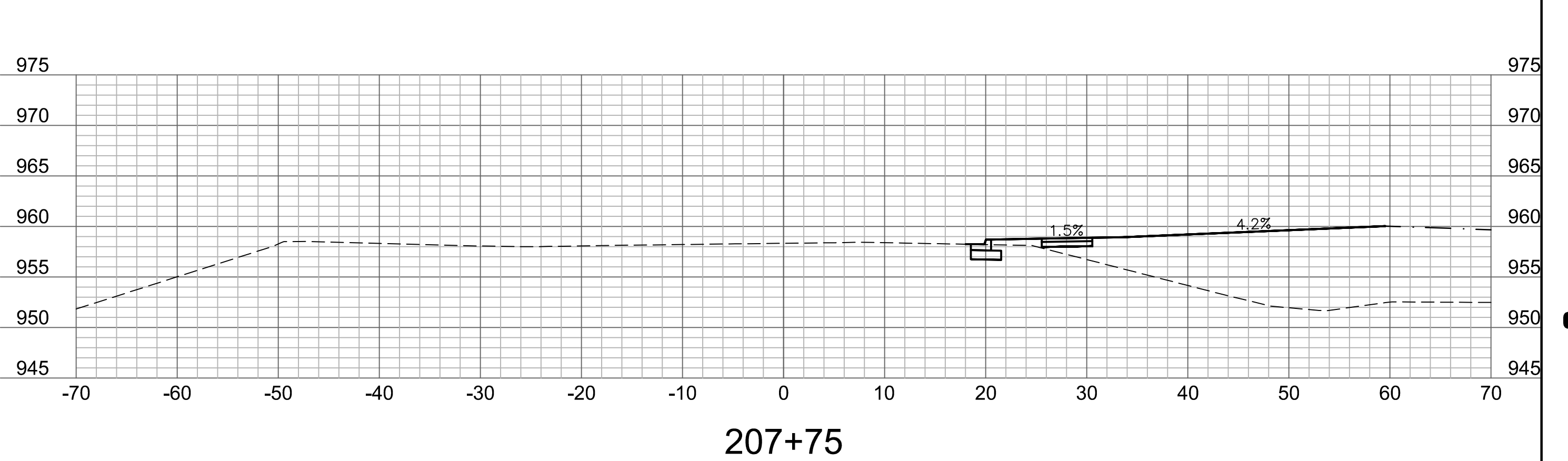
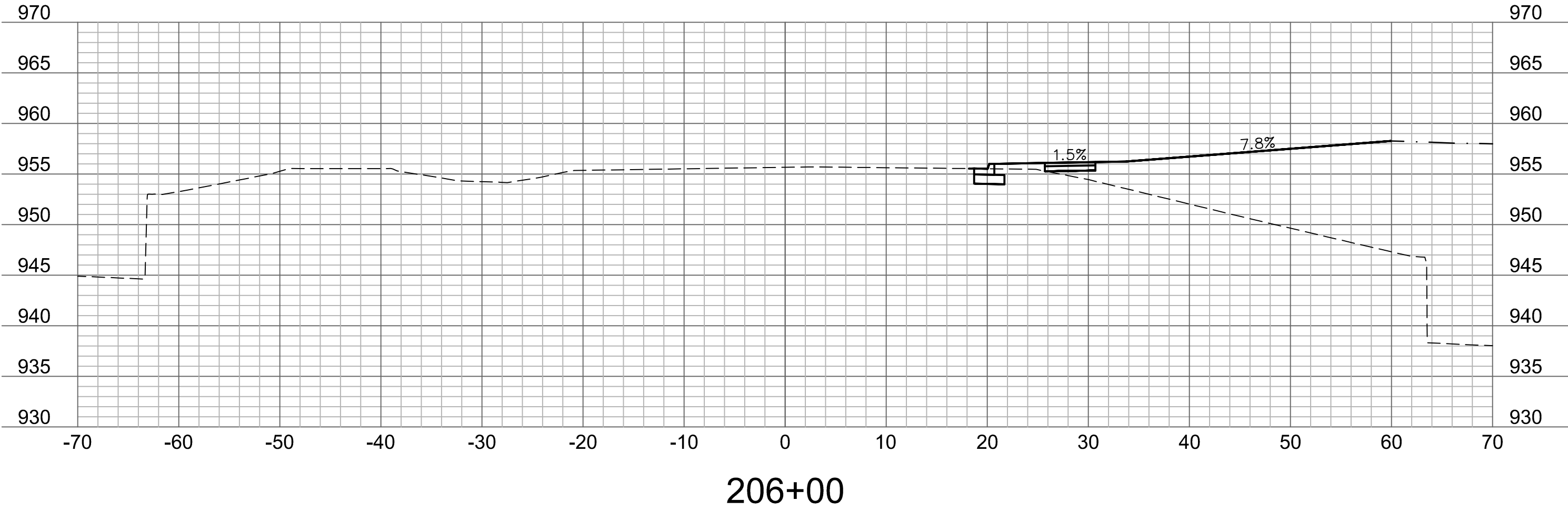
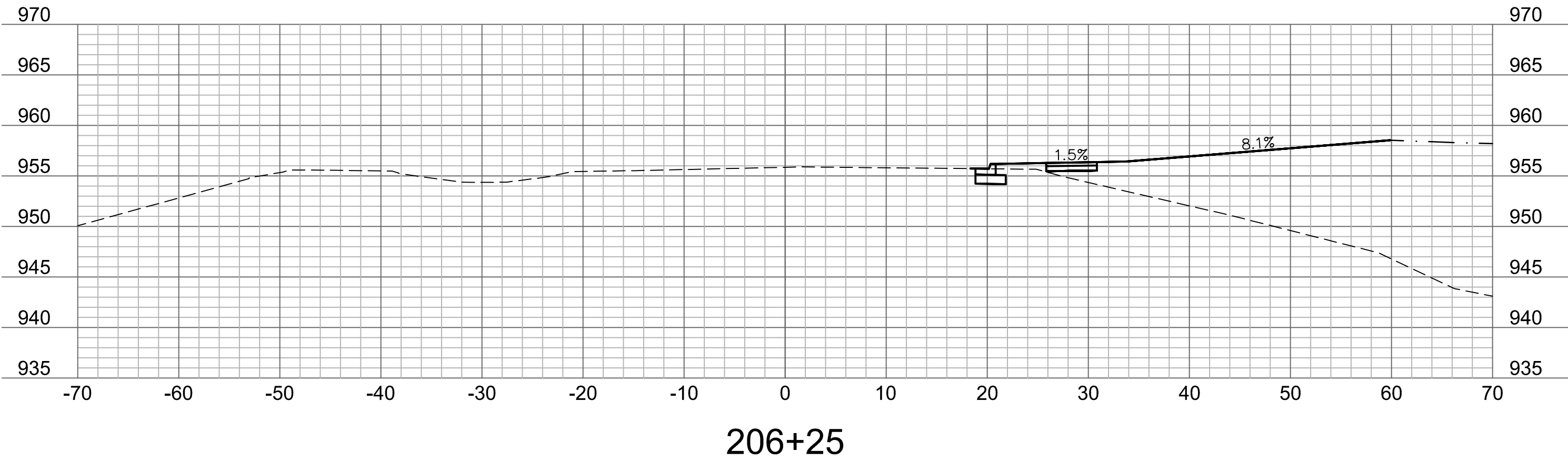
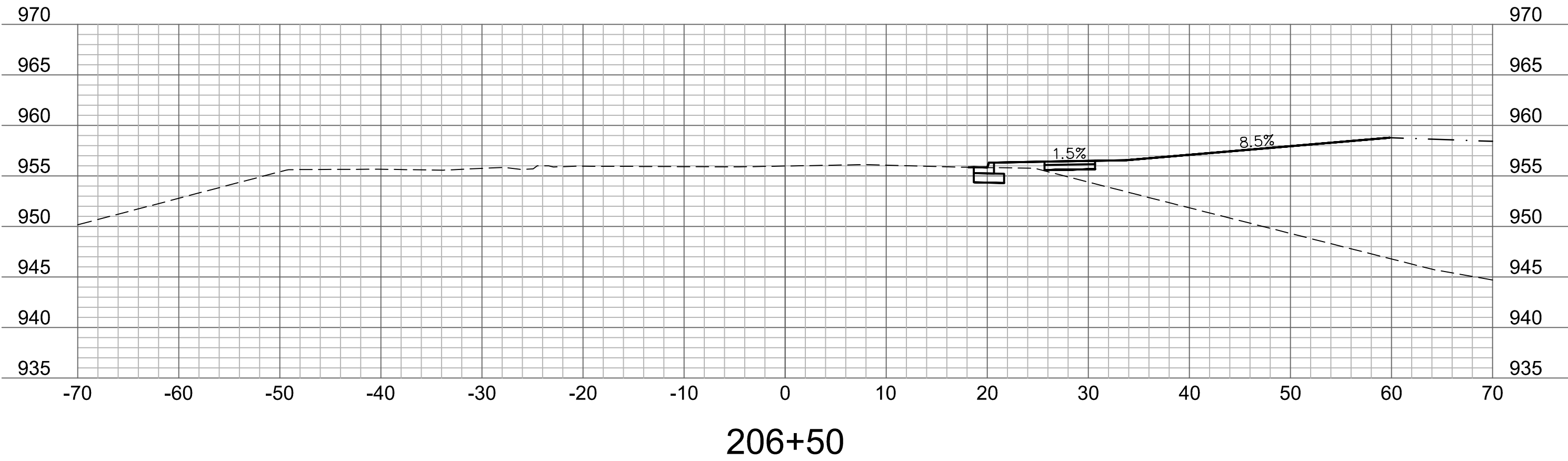
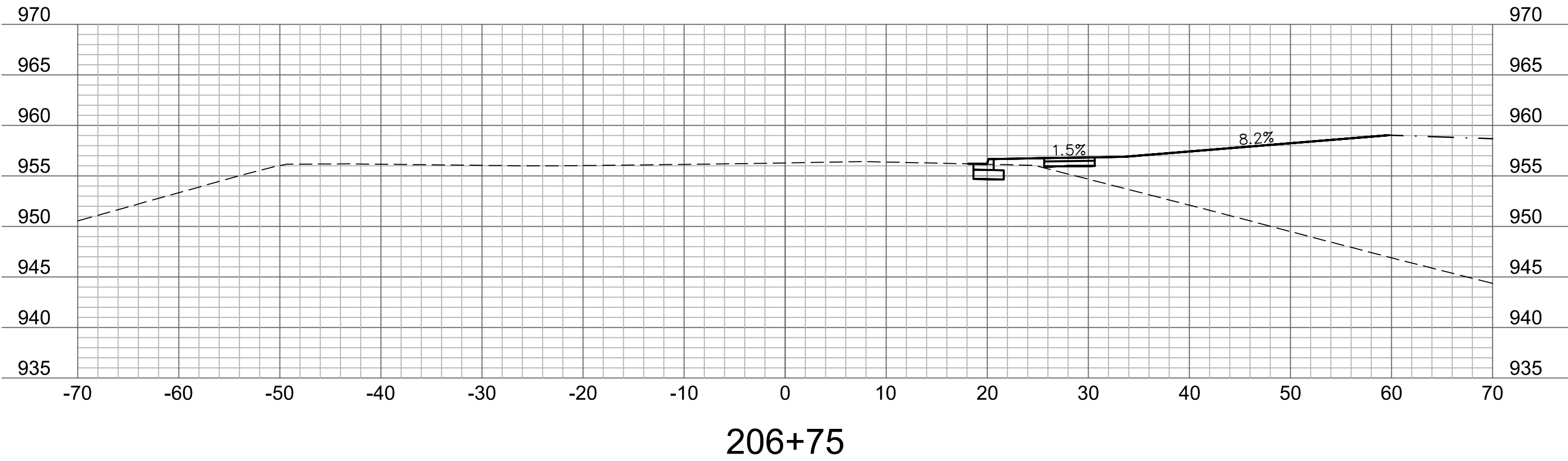
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COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	
LEE'S SUMMIT, MISSOURI	

drawn by: BJW	checked by: KLIW
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project no.: 021-04643	drawing no.: T_XSC01_D02104643
date: 7/14/2023	

SHEET

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STATE OF MISSOURI
JAMES PATRICK GALLAGHER
NUMBER PE-2018010499
7/14/2023
PROFESSIONAL ENGINEER

REVISIONS DESCRIPTION

PRELIMINARY PLANS

NOT FOR CONSTRUCTION

REVISIONS

CROSS SECTIONS DOUGLAS STREET

THE VILLAGE AT DISCOVERY PARK

COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

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project no.: 021-04643

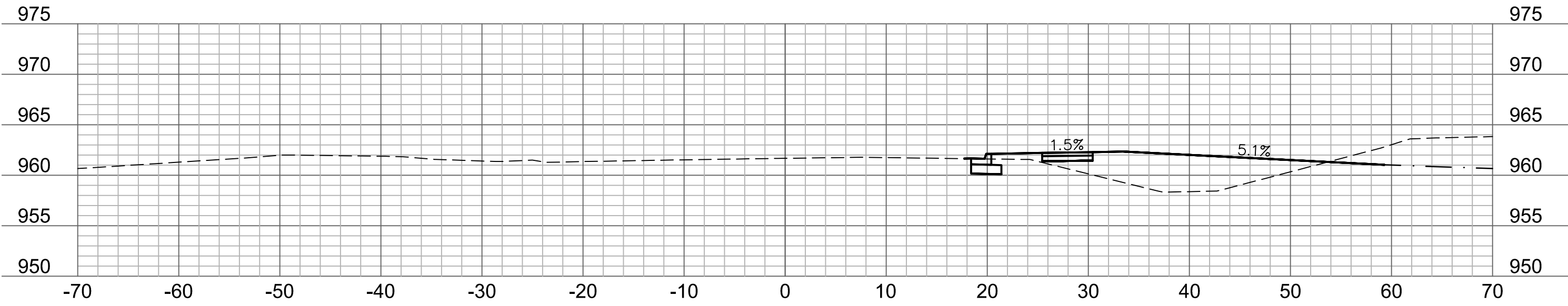
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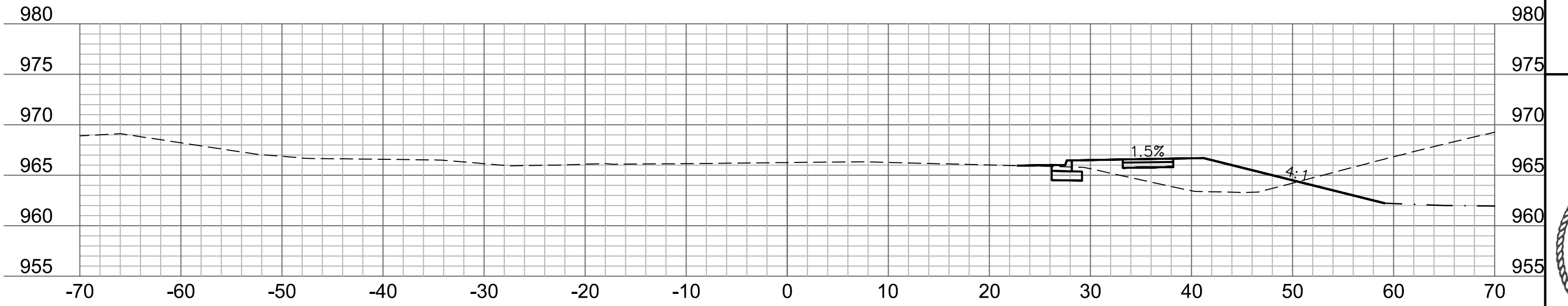
SHEET

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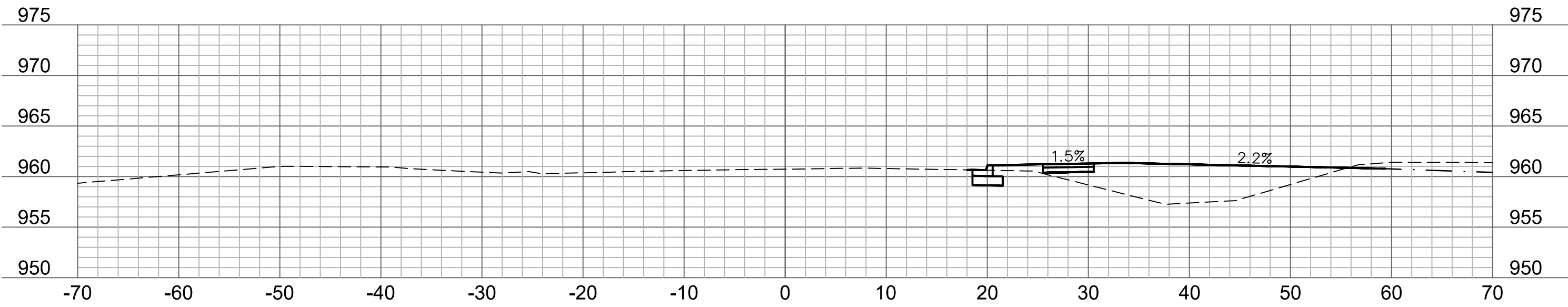
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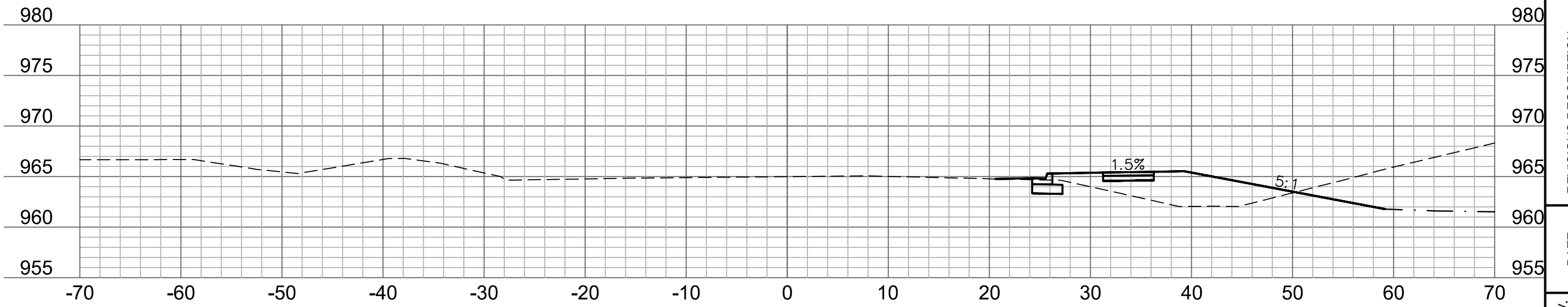
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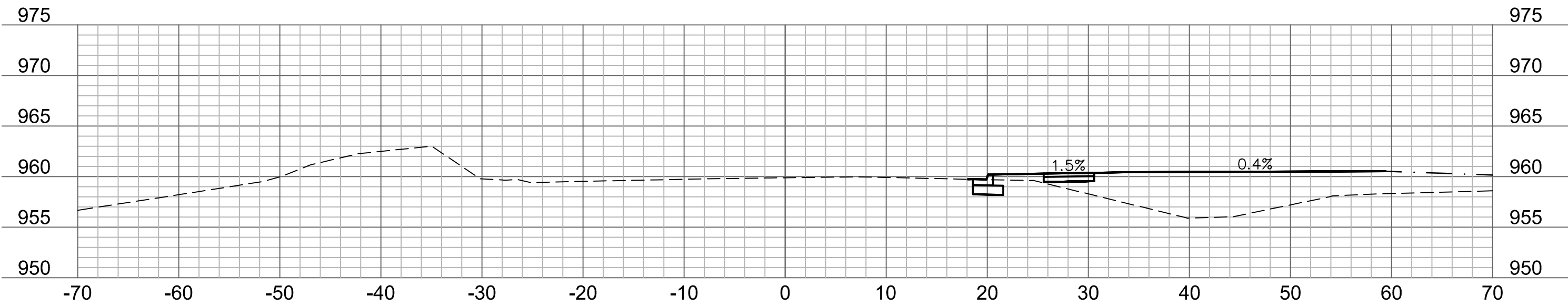
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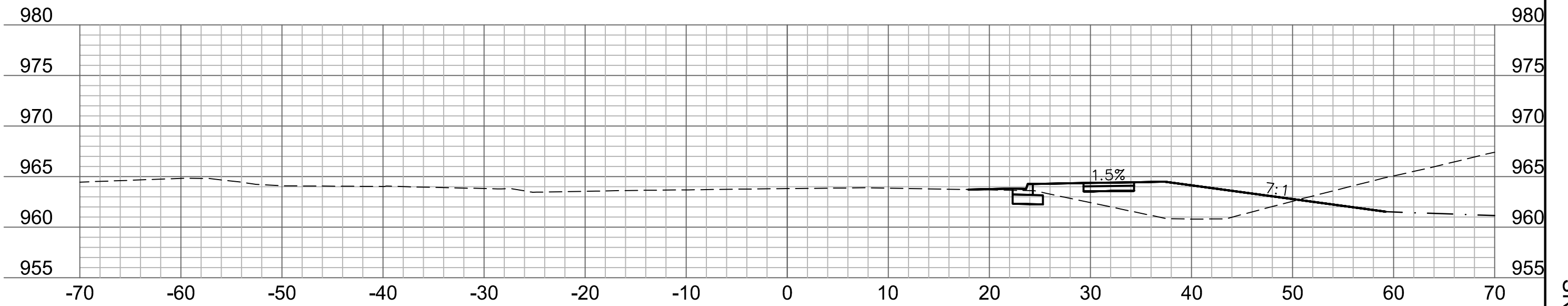
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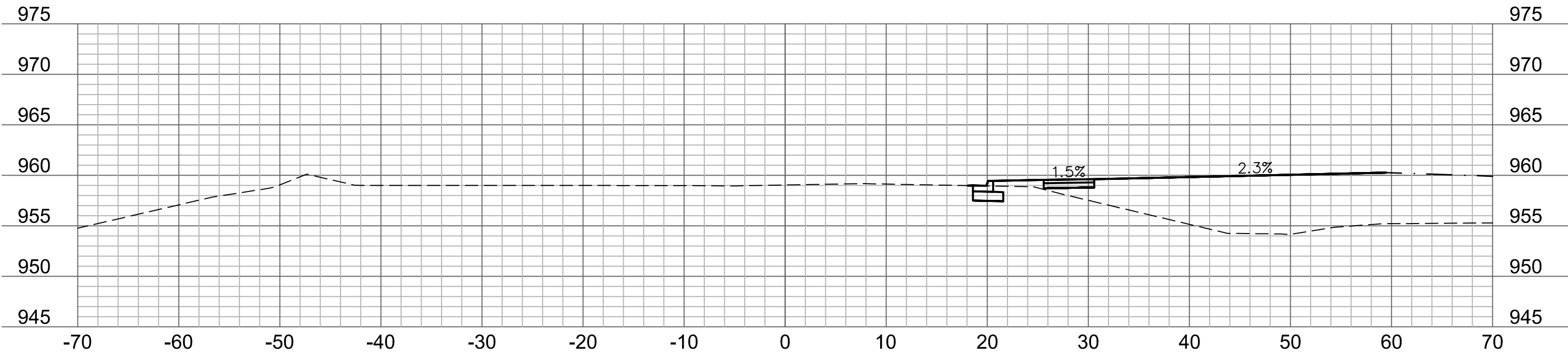
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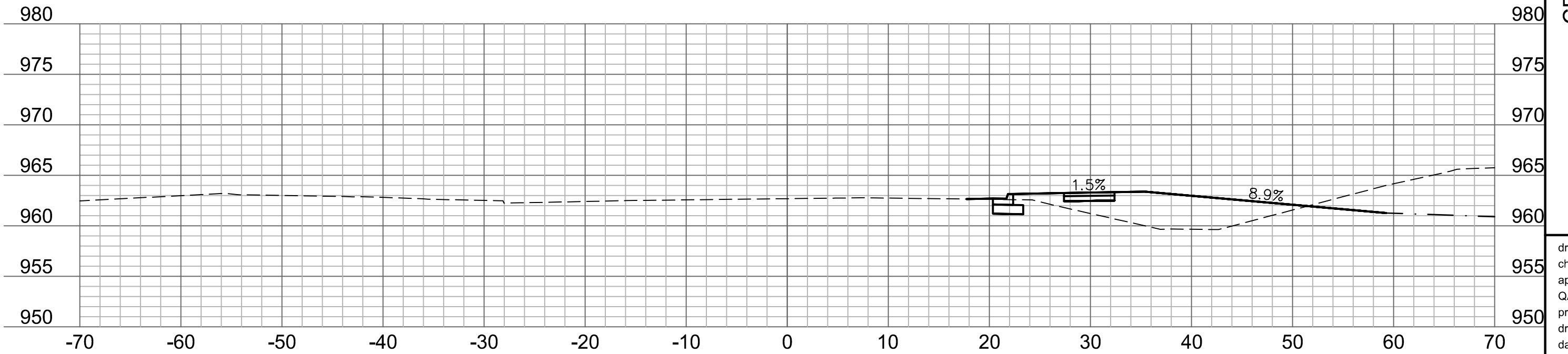
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209+25



208+00



209+00

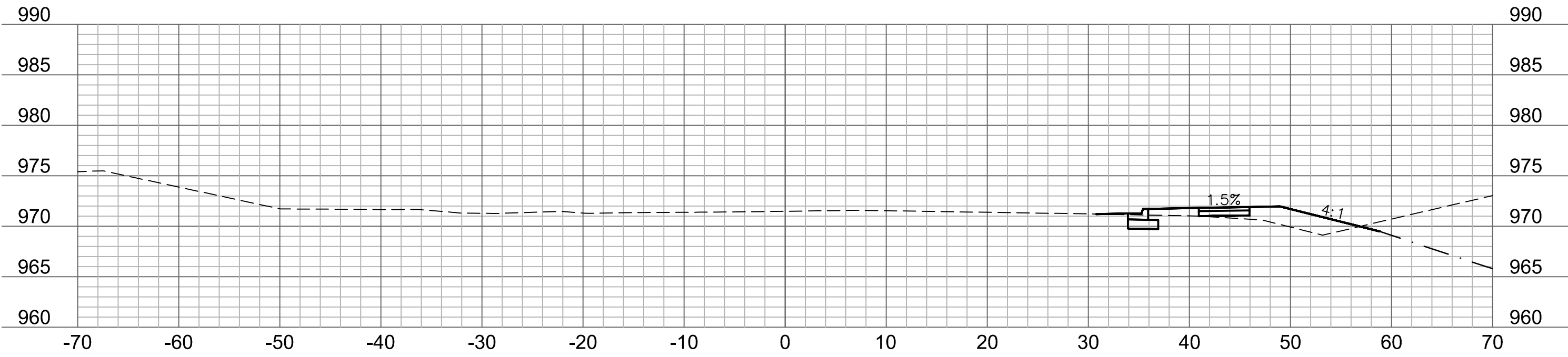


REV. NO.	DATE	REVISIONS DESCRIPTION
		PRELIMINARY PLANS
		NOT FOR CONSTRUCTION

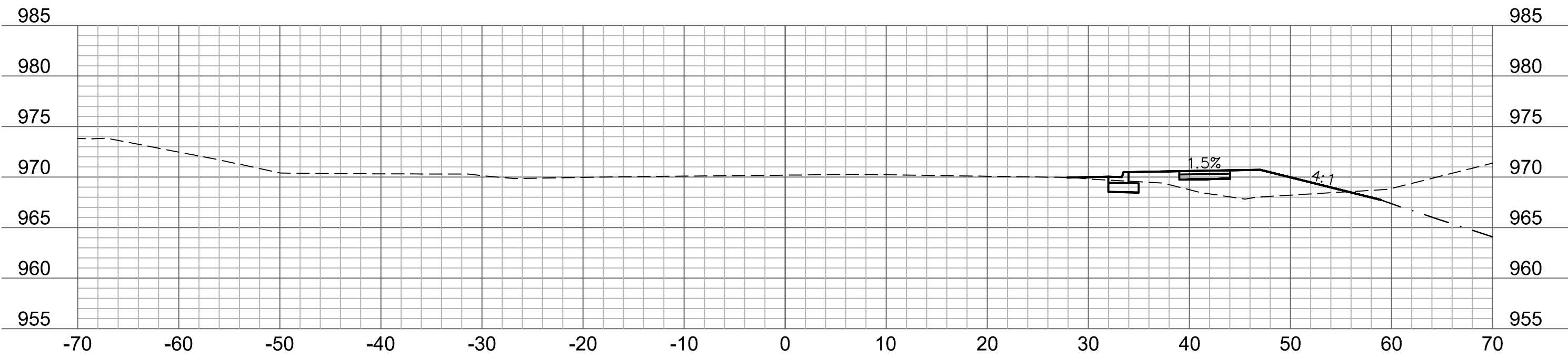
CROSS SECTIONS	2023
DOUGLAS STREET	
THE VILLAGE AT DISCOVERY PARK	
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	
LEE'S SUMMIT, MISSOURI	

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

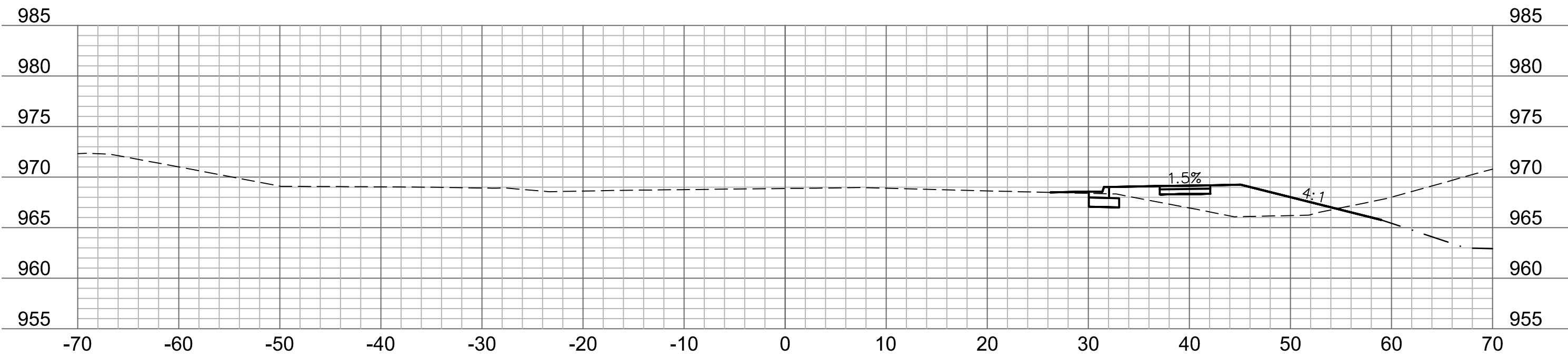
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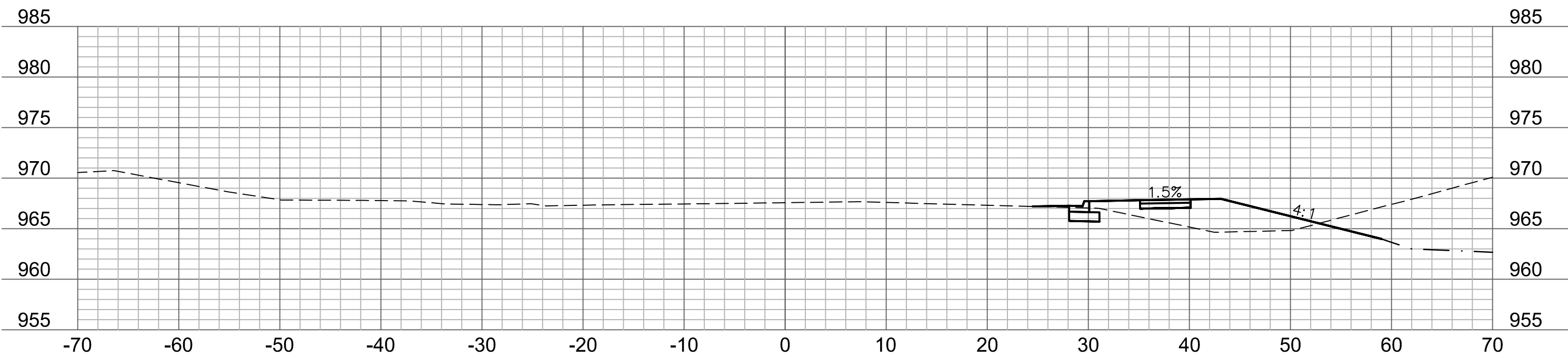
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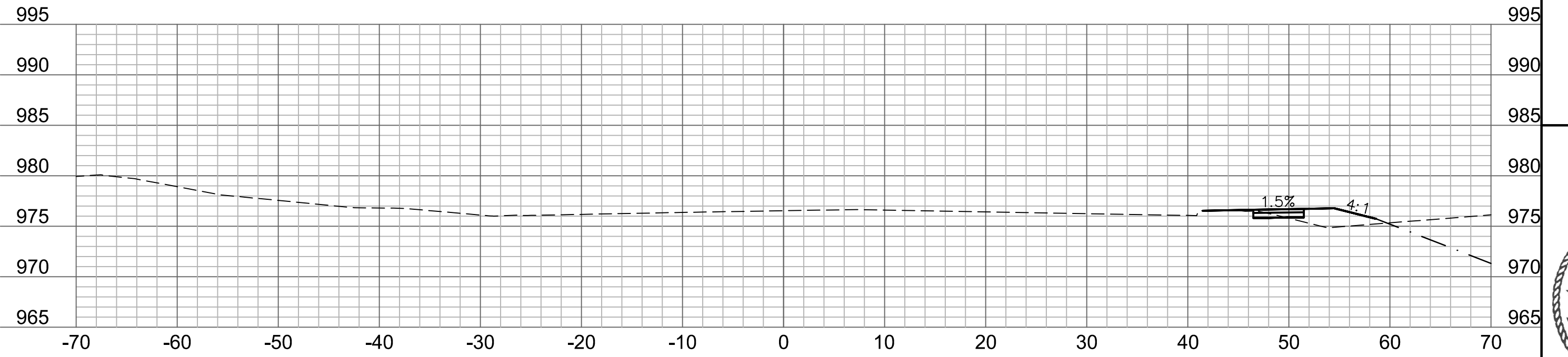
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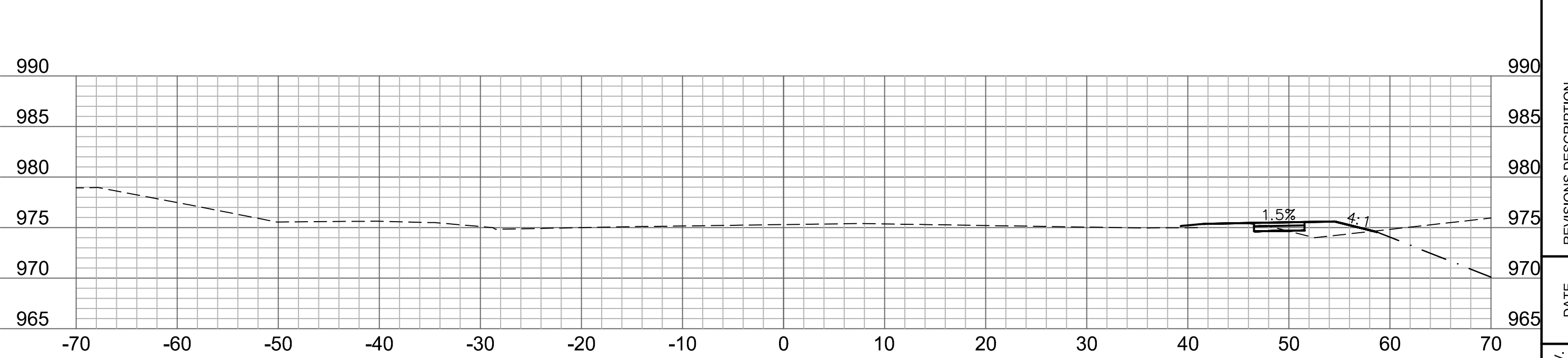
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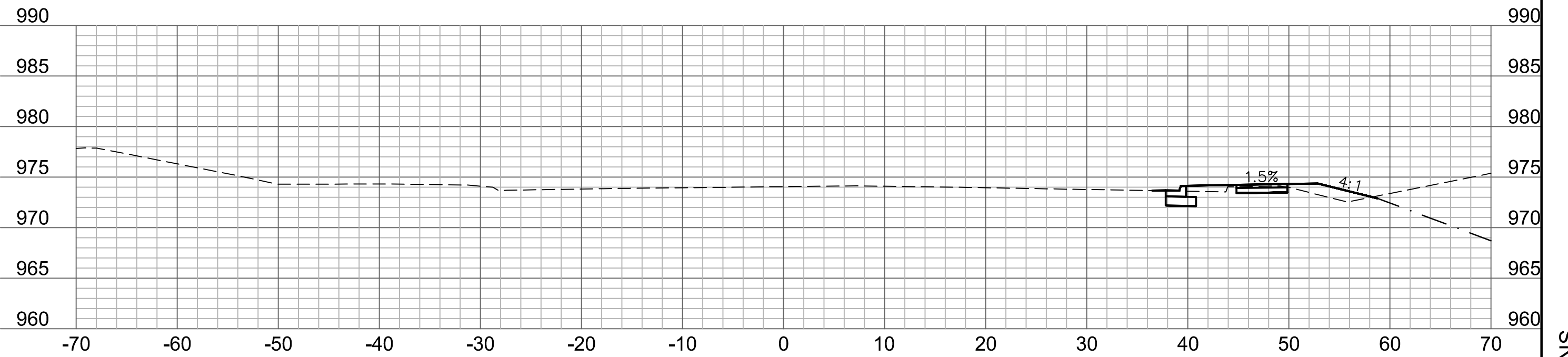
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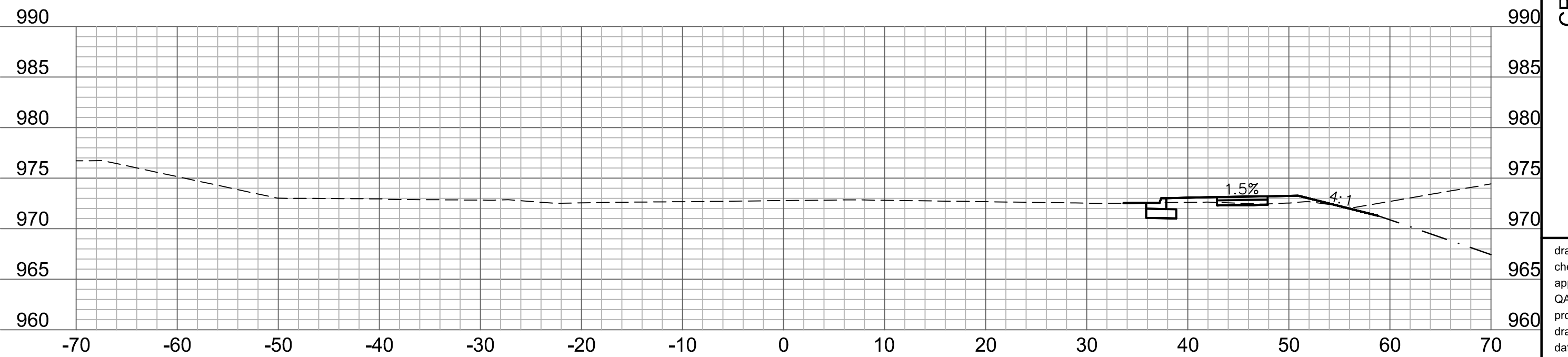
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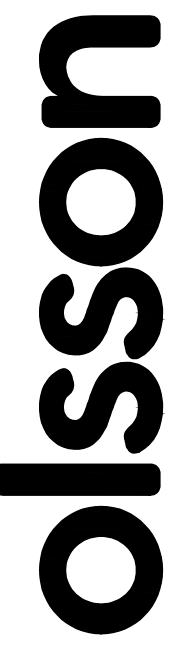
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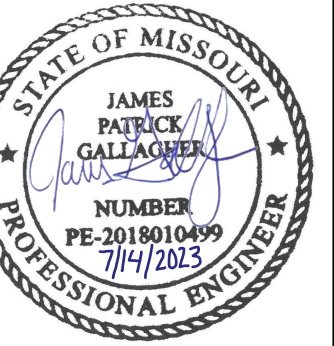
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211+00



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		NOT FOR CONSTRUCTION

CROSS SECTIONS
DOUGLAS STREET

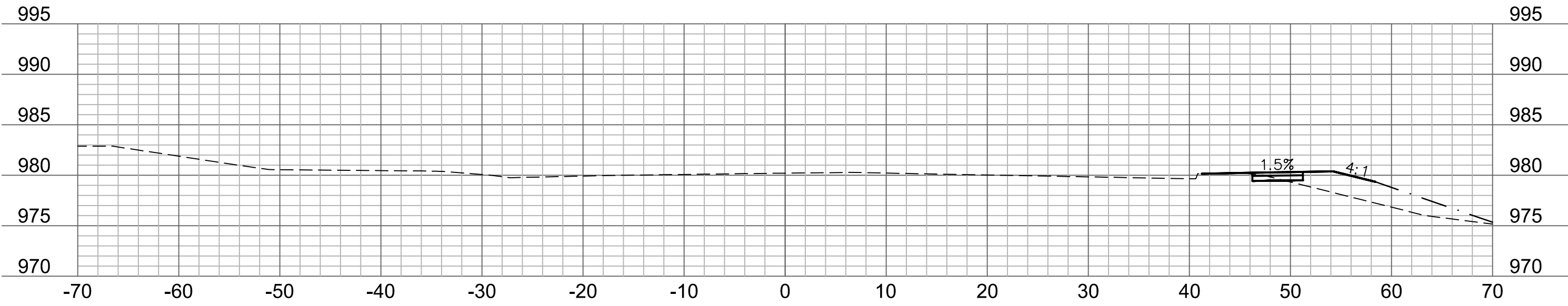
THE VILLAGE AT DISCOVERY PARK
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

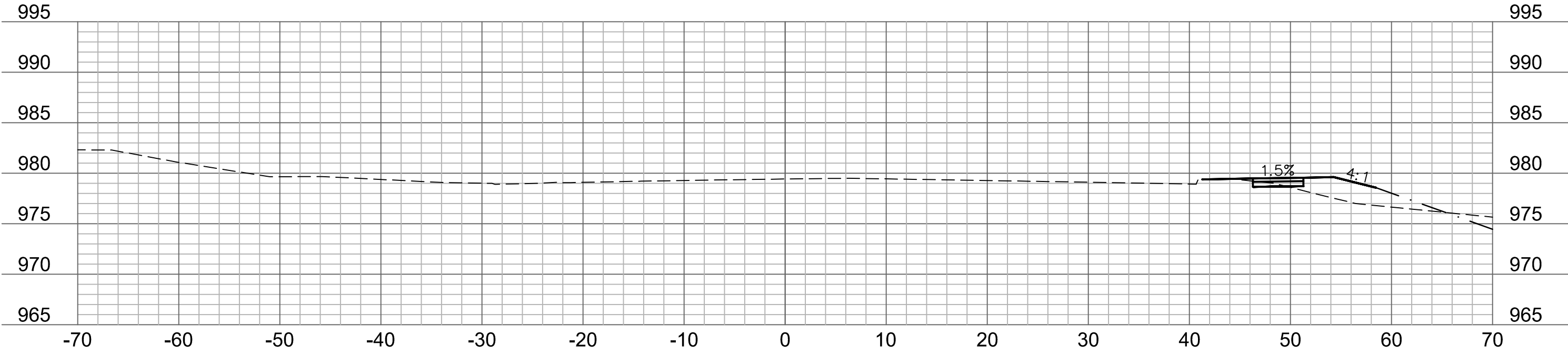
drawn by: BJW
checked by: KJW
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: XSC01_D02104643
date: 7/14/2023

SHEET
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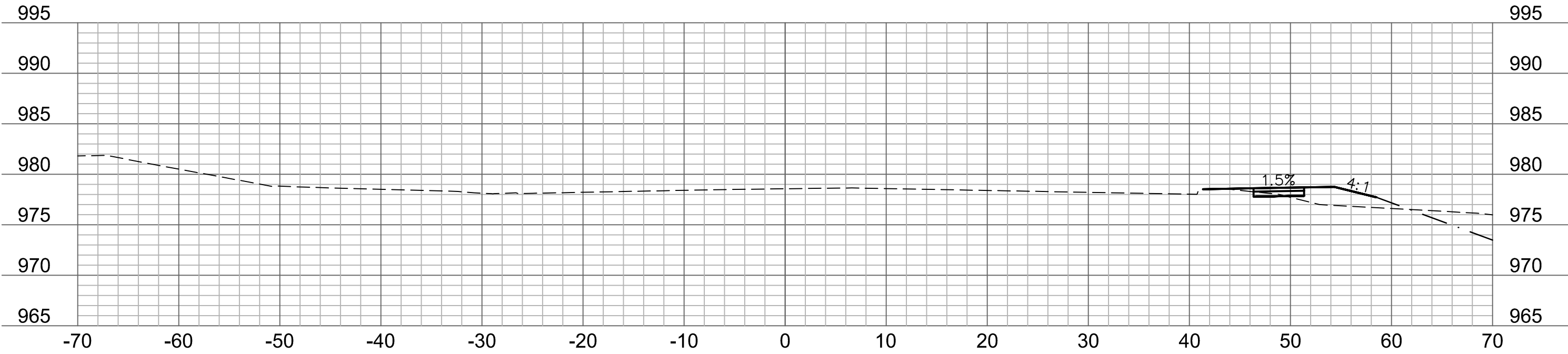
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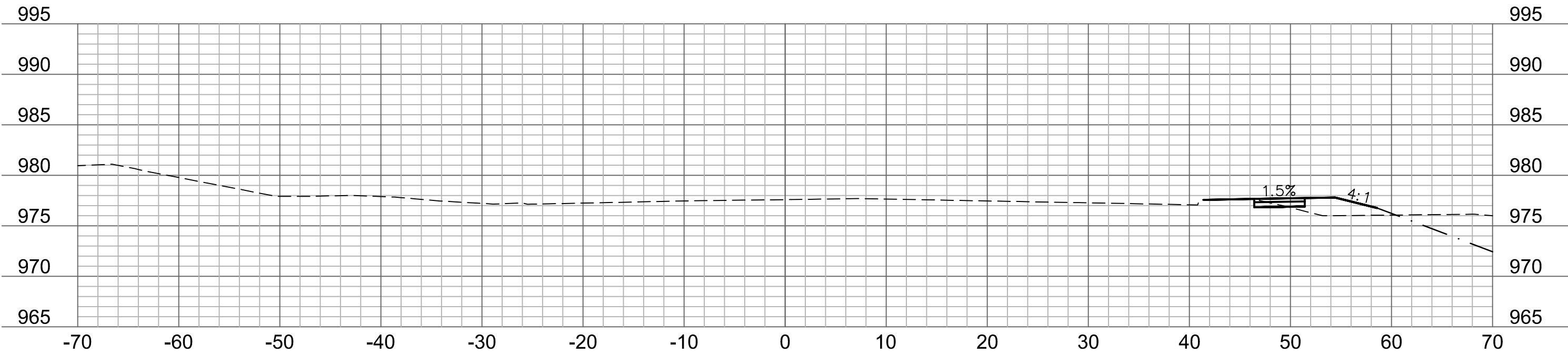
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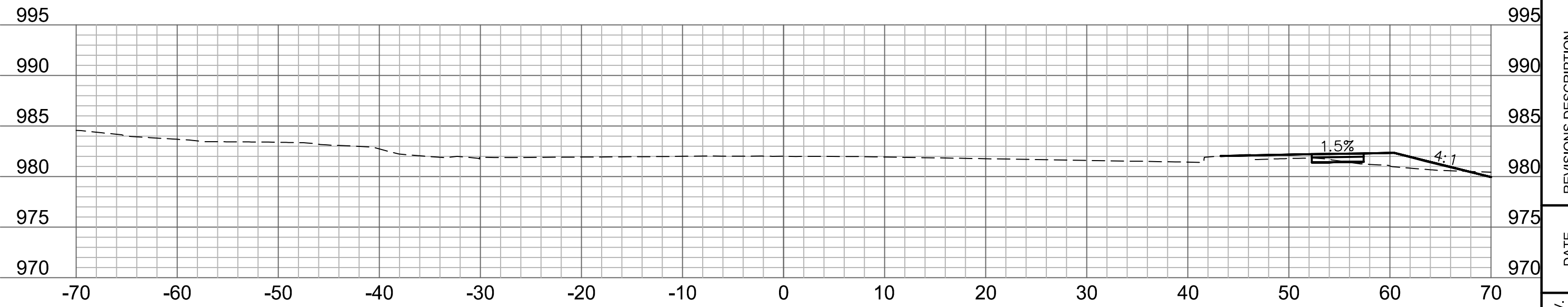
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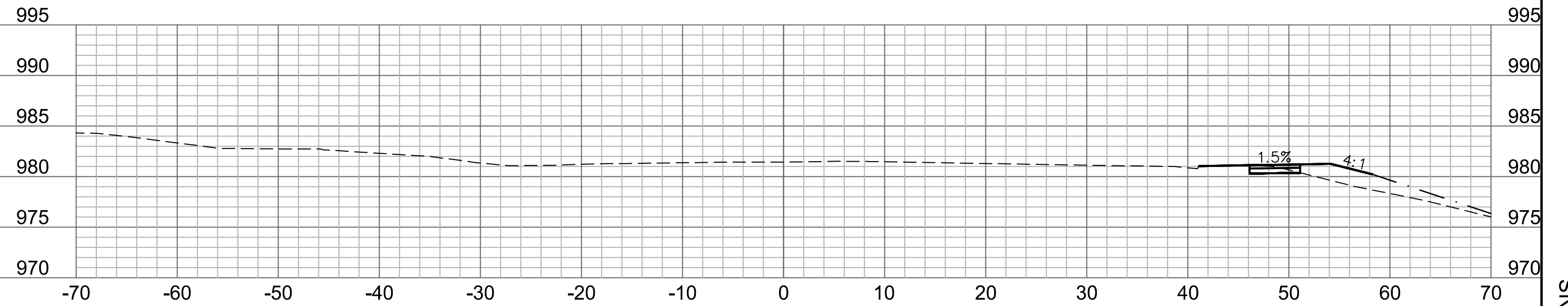
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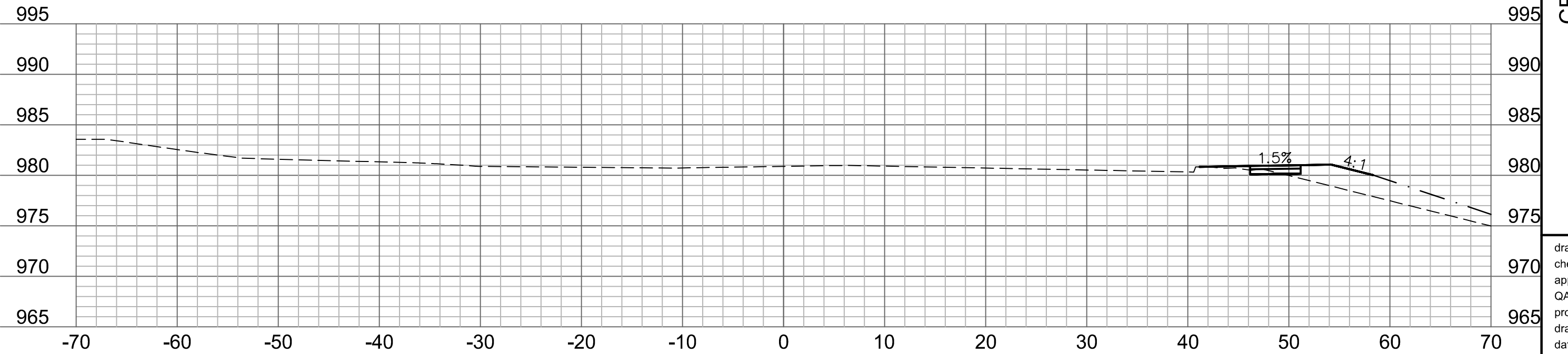
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213+50



213+25



213+00

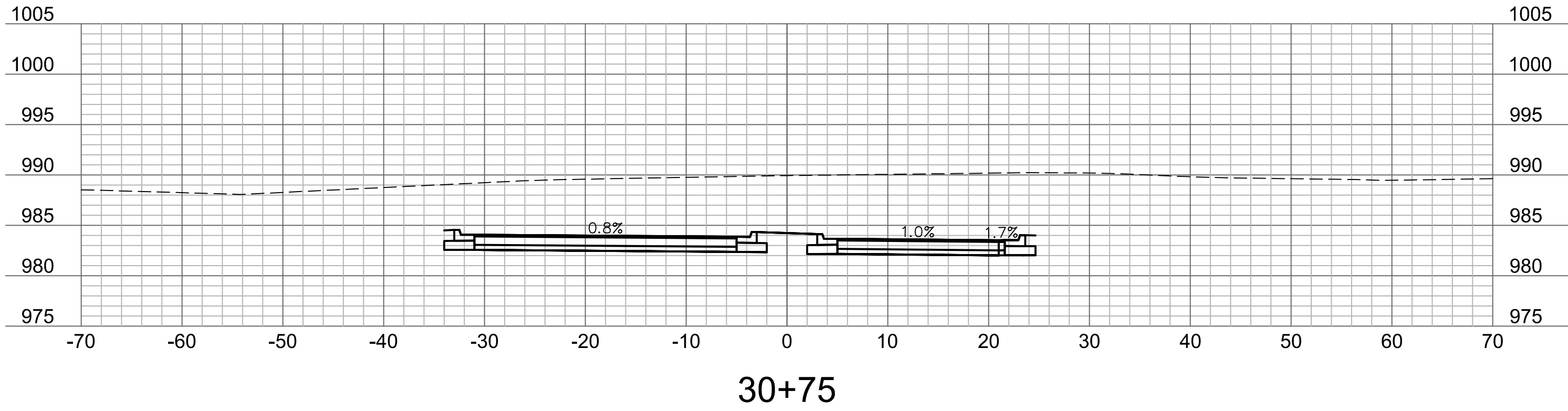
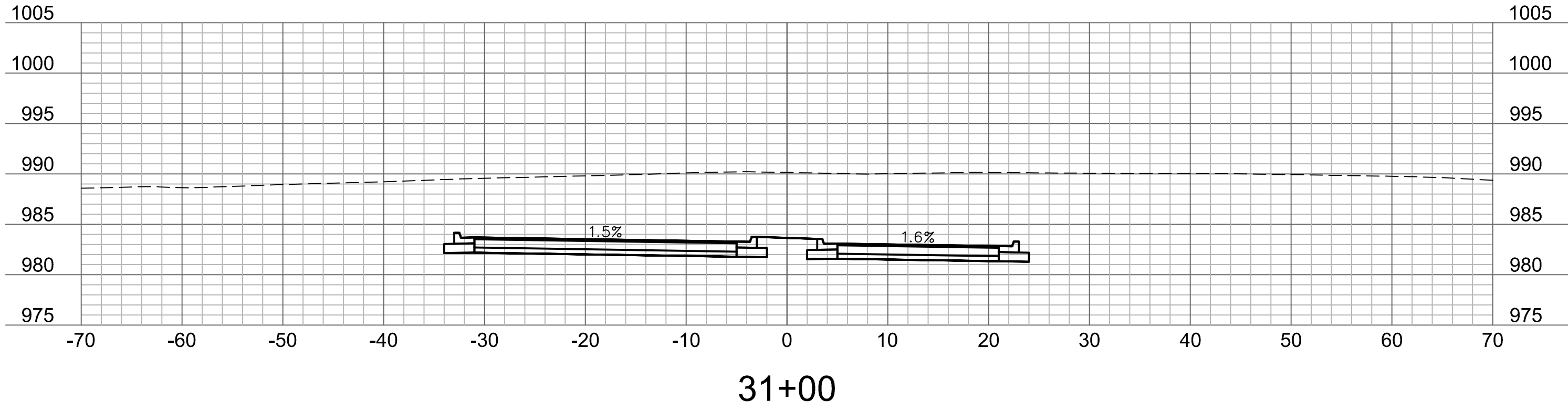


REV. NO.	DATE	REVISIONS DESCRIPTION
		PRELIMINARY PLANS
		NOT FOR CONSTRUCTION
REVISIONS		

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

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

DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final_Plans\Sheets\RDW\T_XSC01_D02104643.dwg
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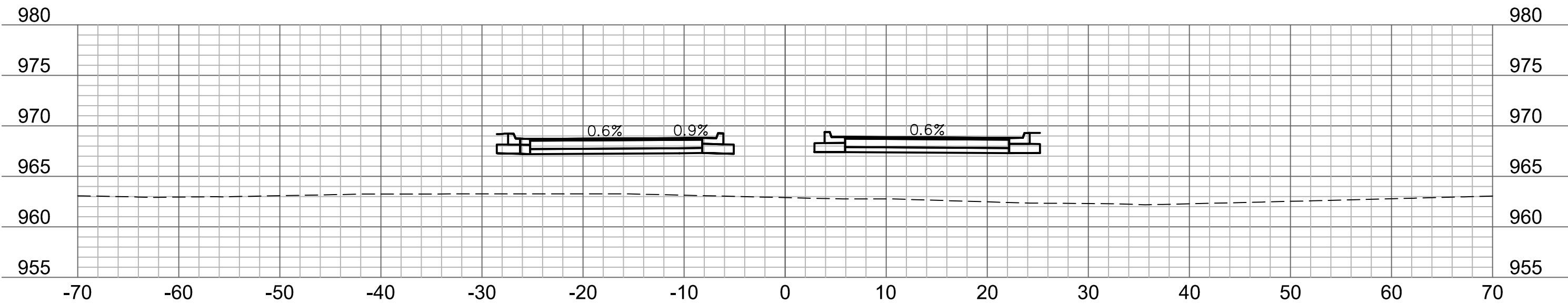
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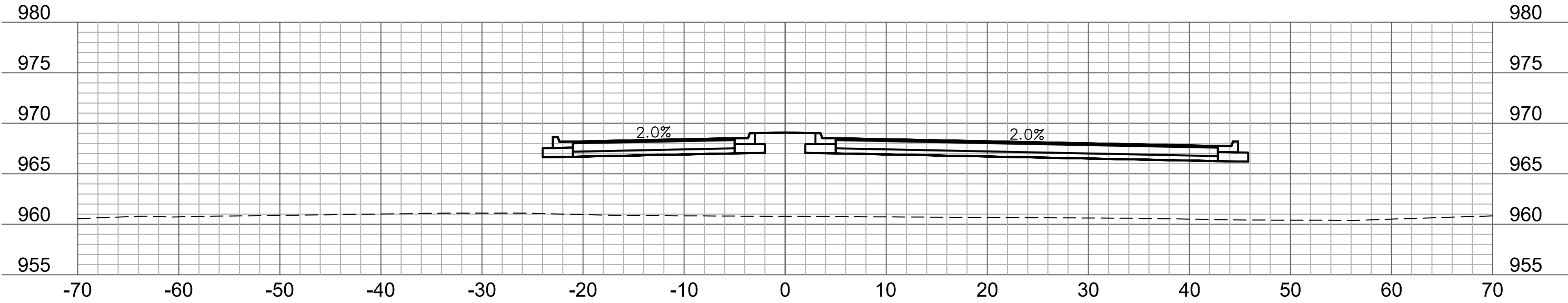
CROSS SECTIONS
CROSSING BLVD
THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
LEE'S SUMMIT, MISSOURI

drawn by: BJW
checked by: KIW
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: XSC01_D02104643
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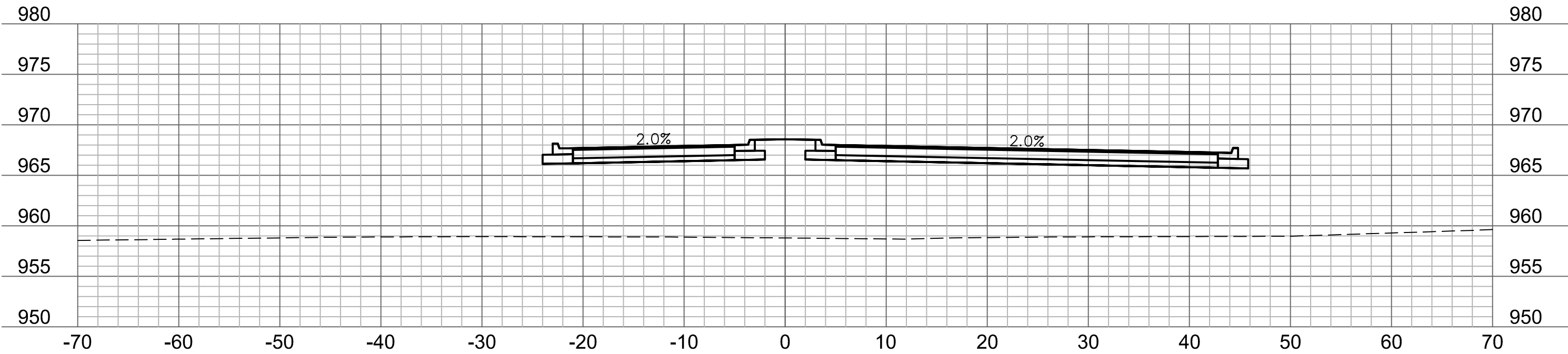
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14+25



14+00



13+75



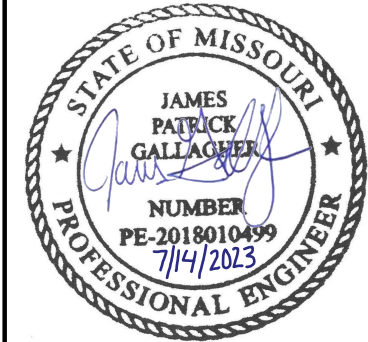
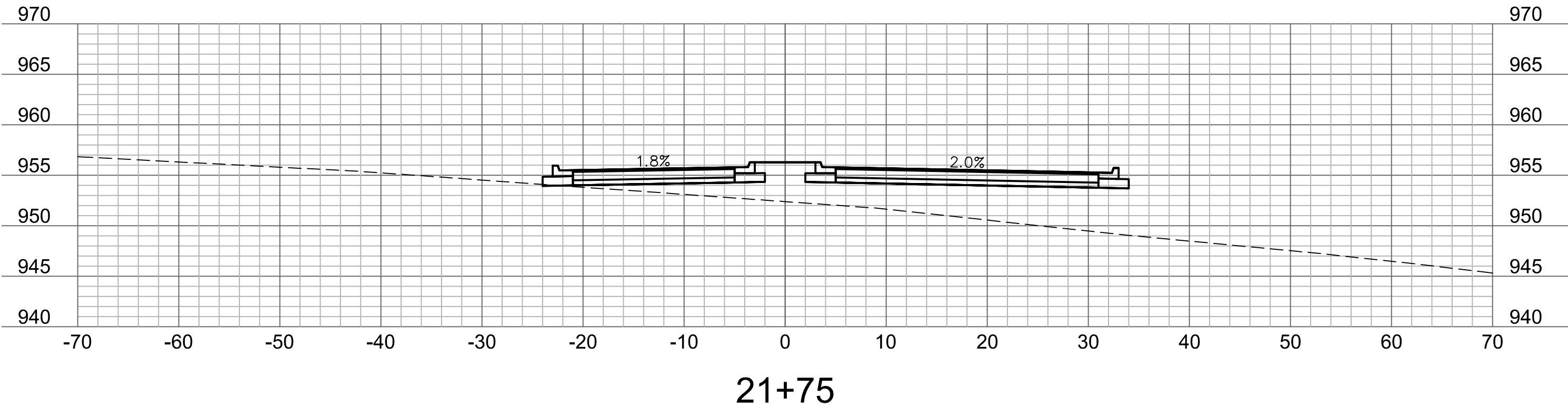
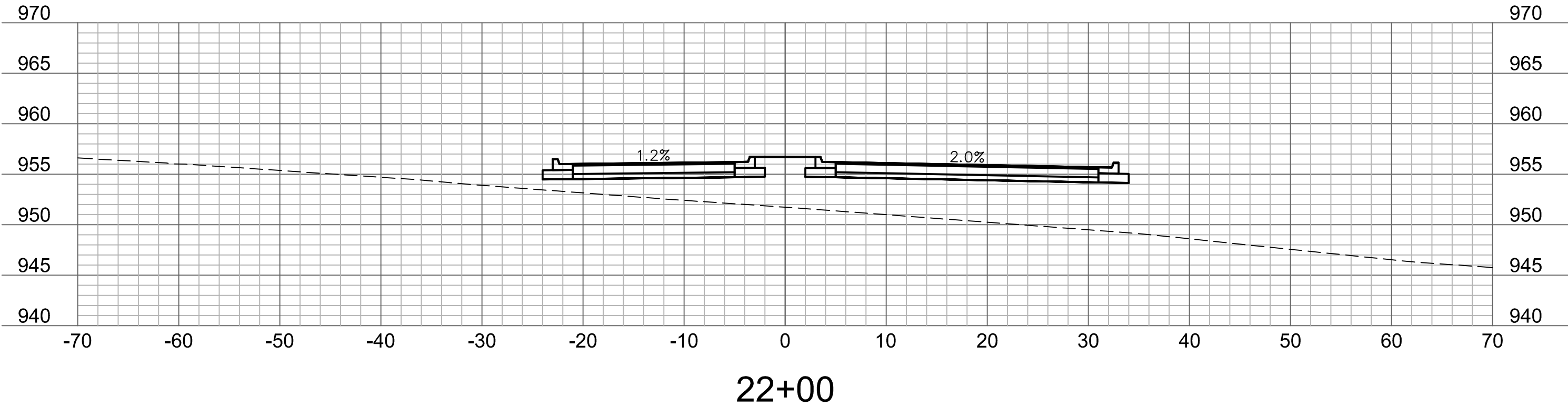
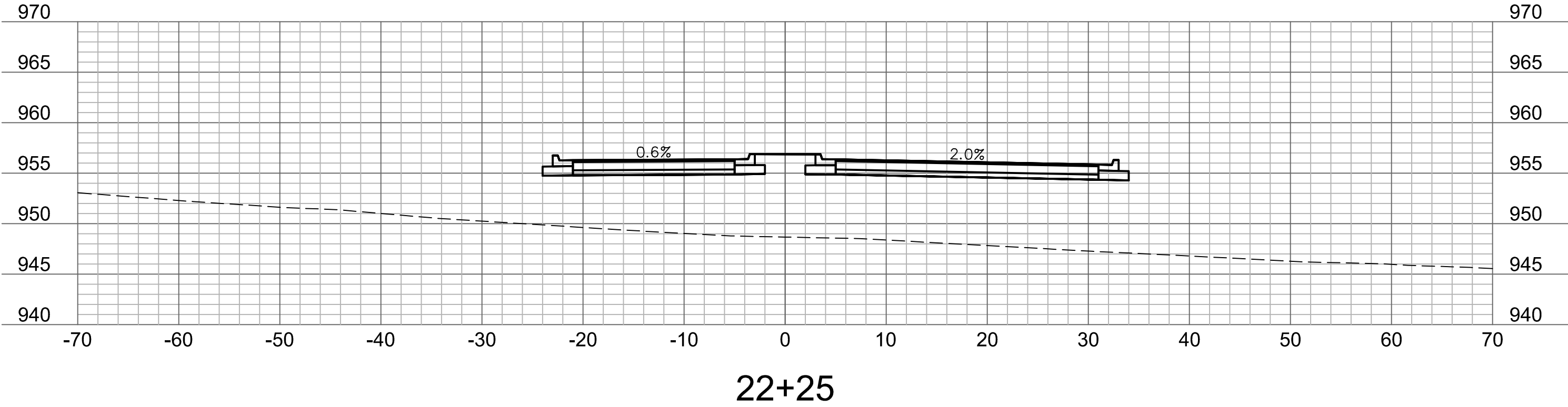
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REV. NO.	DATE	REVISIONS DESCRIPTION
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CROSS SECTIONS DISCOVERY AVE	THE VILLAGE AT DISCOVERY PARK	
	COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	
	LEE'S SUMMIT, MISSOURI	
		2023

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

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DATE: Jul 14, 2023 11:02am XREFS: T_PTBK_D02104643 T_PTBK_D02104643 USER: kwilliams2



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REV. NO.	DATE	REVISIONS DESCRIPTION
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REVISIONS		

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

drawn by: BJW
checked by: KIW
approved by: JFG
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project no.: 021-04643
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