

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 PHONE: 573.615.2252
ENGINEER	OLSSON 1301 BURLINGTON SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JAMES GALLAGHER PHONE: 816.361.1177 EMAIL: JGALLAGHER@OLSSON.COM
SURVEYOR	OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JASON ROUDEBUSH PHONE: 816.361.1177 EMAIL: JROUDEBUSH@OLSSON.COM

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	☉-☉	TRAFFIC SIGNAL POLE
☐GAR	GAS RISER	☒	TRAFFIC SIGNAL CONTROL BOX
☉	GAS MANHOLE	☒	TRAFFIC SIGNAL PEDESTAL
☐GR	GAS REGULATOR	☉	ELECTRIC MANHOLE
☐TYP	TELEVISION PEDESTAL	☒	ELECTRIC METER
☐F	FIBER BOX	☒	ELECTRIC RISER
☉	FIBER PEDESTAL	☒	ELECTRIC BOX
☐	CABLE BOX	☒	ELECTRIC CABINET
☐	CABLE VAULT	☒	ELECTRIC JUNCTION BOX
☐	TELEPHONE PEDESTAL	☒	SPRINKLER HEAD
☉	STORM MANHOLE	☒	SPRINKLER CONTROL VALVE
☐	STORM GRATE	☉	WATER METER PIT
☉	SANITARY MANHOLE	☉	FIRE HYDRANT
☉YL	YARD LIGHT	☒	WATER METER
☐LTP	LIGHT POLE	☒	WATER VALVE
☐	POWER POLE	☒	FLAG POLE
☐LPPP	POWER POLE W/ LIGHT	☉	SIGN
☐	GUY WIRE	☉	BOLLARD
☐	STUMP	☒	WOOD POST
☐	BUSH	☒	STEEL POST
☐	EVERGREEN TREE	☉COL	COLUMN
☐	DECIDUOUS TREE	☐	BORE HOLE

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

ABBREVIATION TABLE

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



DESIGN DESIGNATION

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

LOCATION MAP

STREET CLASSIFICATION

COLBERN ROAD = MAJOR ARTERIAL
DOUGLAS STREET = MAJOR ARTERIAL

LENGTH OF PROJECT

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

UTILITY EMERGENCY CONTACTS DURING CONSTRUCTION

AT&T - DISTRIBUTION
TIM BUSHART
816-803-2608

SPIRE
PEGGY BURNS-YOCUM
816-969-2218

LUMEN TECHNOLOGIES
SANDRA MUNOZ-CABUYA
913-748-2602

LEE'S SUMMIT WATER UTILITY
JOSH ROACH
816-969-1940

EVERGY
BRANDON TIESING
816-245-3659

INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE SHEET
2	GENERAL LAYOUT
3	ALIGNMENT DATA & SURVEY CONTROL
4	GENERAL NOTES AND SUMMARY OF QUANTITIES
5-10	DEMOLITION & REMOVALS
11-12	TYPICAL SECTIONS
13-18	PLAN & PROFILE
19-20	DRIVE LAYOUTS
21-22	SIDEWALK RAMP LAYOUTS
23-27	CONCRETE JOINTING PLANS
28-36	STANDARD DETAILS
37	DRAINAGE AREA MAP
38	STORM SEWER DRAINAGE CALCULATIONS
39	STORM SEWER PLAN AND PROFILE
40-41	STORM SEWER DETAILS
42-48	LIGHTING PLAN
49	SIGNAL MODIFICATION
50-57	PAVEMENT MARKING & SIGNING PLAN
58-59	TRAFFIC CONTROL
60-63	EROSION CONTROL PLANS
64-69	EROSION CONTROL DETAILS
70-86	CROSS SECTIONS

PREPARED & SUBMITTED BY:

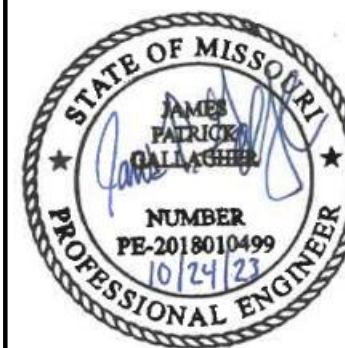
OLSSON
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

JAMES P. GALLAGHER, P.E.

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

REVIEWED BY:

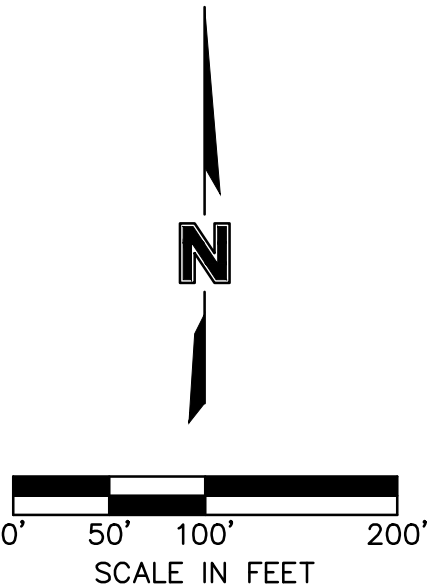
CITY OF LEE'S SUMMIT, MISSOURI



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

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

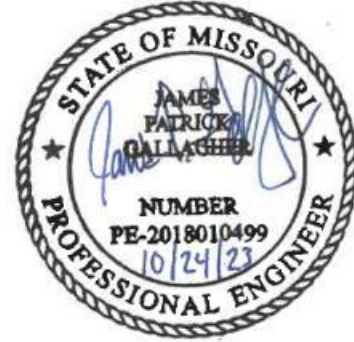
drawn by:	BJW
checked by:	KLW
approved by:	JPG
QA/QC by:	JWJ
project no.:	021-04643
drawing no.:	T_TTL01_D02104643
date:	7/14/2023



drawn by: _____ BJW
checked by: _____ KLW
approved by: _____ JPG
QA/QC by: _____ JJW
project no.: _____ 021-04643
drawing no.: _____ GEN01 D02104643
date: _____ 7/14/2023

SHEET
2 OF 86

GENERAL LAYOUT	202
----------------	-----

[illegible]

olsson

Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116
TEL 816 361 1177 WWW

DWG: F:\2021\04501-05000\021-04643-0\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_LAYOUT1_D02104643.dwg
DATE: Sep 28, 2023 4:06pm XREFS: C_XALTA_02104643 T_PTBK_D02104643 USER: kwilliams2

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

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

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

Control Point #53
Set 1/2" imbedded cap on the east side of Douglas Street just south of the I-470 interchange. In the NW corner of the parking lot to the old Outback.
N - 1011007.340
E - 2823445.284
Leveled Elev. = 988.436

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

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

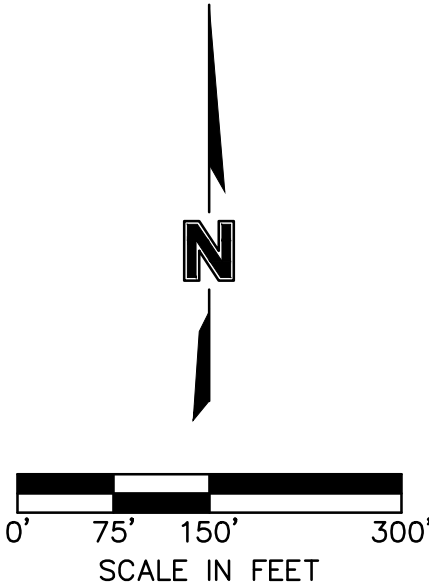
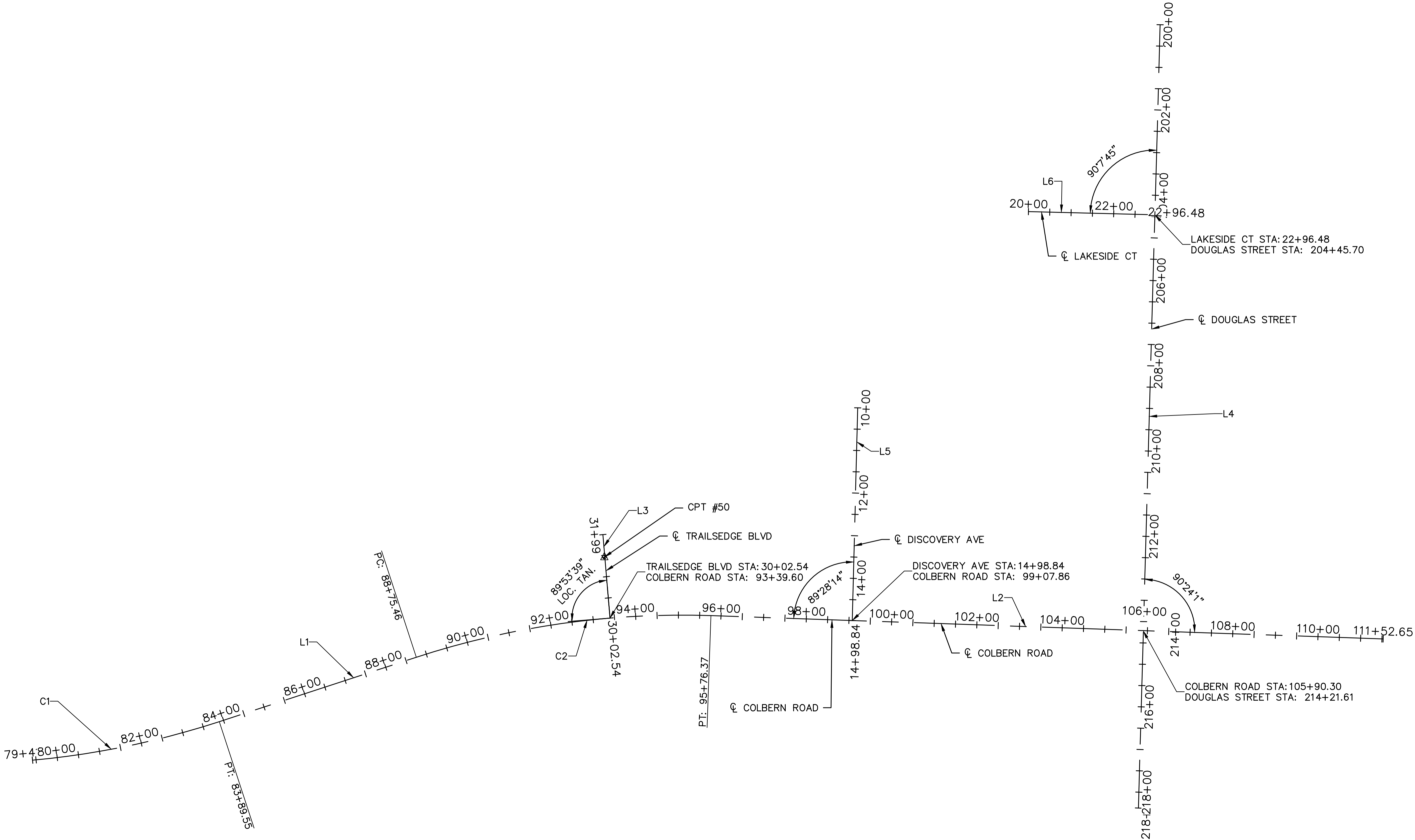
COLBERN ROAD									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
C1	PC= PI= PT=	79+41.74 81+66.59 83+89.55	1011913.6889 1011934.3124 1012004.1358	2820768.5448 2820992.4440 2821206.1749	447.81'	N78°19'22"E	12°49'44"	224.85'	2000.00'
L1		83+89.55 88+75.46	1012004.1358 1012155.0268	2821206.1749 2821668.0554	485.90'	N71°54'30"E			
C2	PC= PI= PT=	88+75.46 92+29.54 95+76.37	1012155.0268 1012264.9841 1012252.7006	2821668.0554 2822004.6372 2822358.5115	700.91'	N81°56'54"E	20°04'47"	354.09'	2000.00'
L2		95+76.37 111+52.65	1012252.7006 1012198.0183	2822358.5115 2823933.8401	1576.28'	S88°00'43"E			

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

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

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

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



olsson

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

STATE OF MISSOURI
JAMES W. GALLAGHER
NUMBER
PE-3018010499
9/18/2023
PROFESSIONAL ENGINEER

REVISIONS DESCRIPTION

DATE

REV. NO.

REVISIONS

ALIGNMENT DATA & SURVEY CONTROL

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

LEE'S SUMMIT, MISSOURI

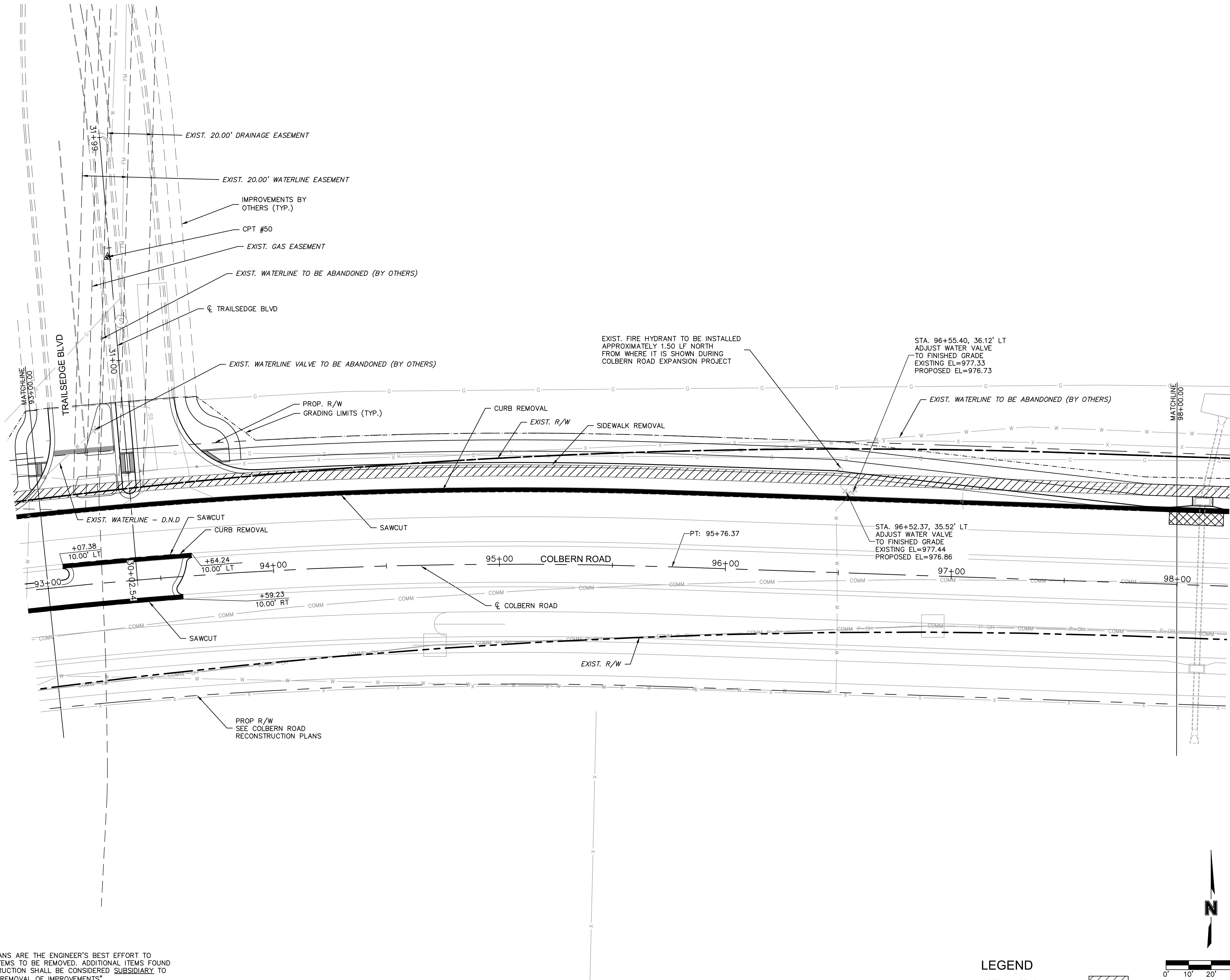
drawn by: BJW
checked by: KJW
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: T_LAYOUT1_D02104643
date: 7/14/2023

SHEET
3 OF 86

DWG: F:\2021\04501-05000\021-04643-0\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_DEM01_D02104643.dwg
DATE: Oct 20, 2023 2:40pm
XREFS: T_PTBULK_D02104643 C_FROAD_D02104643 T_PSTRM_D02104643 C_XALTA_B2104643 I_PBASE_D02104643 C_PBASE_D2104643 C_PUTIL_D2104643 USER: twilliams2

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"

SEE PUBLIC WATER MAIN EXTENSION PLANS FOR LIMITS OF WATERLINE ABANDONMENT

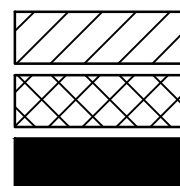


LEGEND

SIDEWALK REMOVAL

PAVEMENT REMOVAL

CURB AND GUTTER REMOVAL



DEMOLITION & REMOVALS
COLBERN ROAD

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

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



olsson

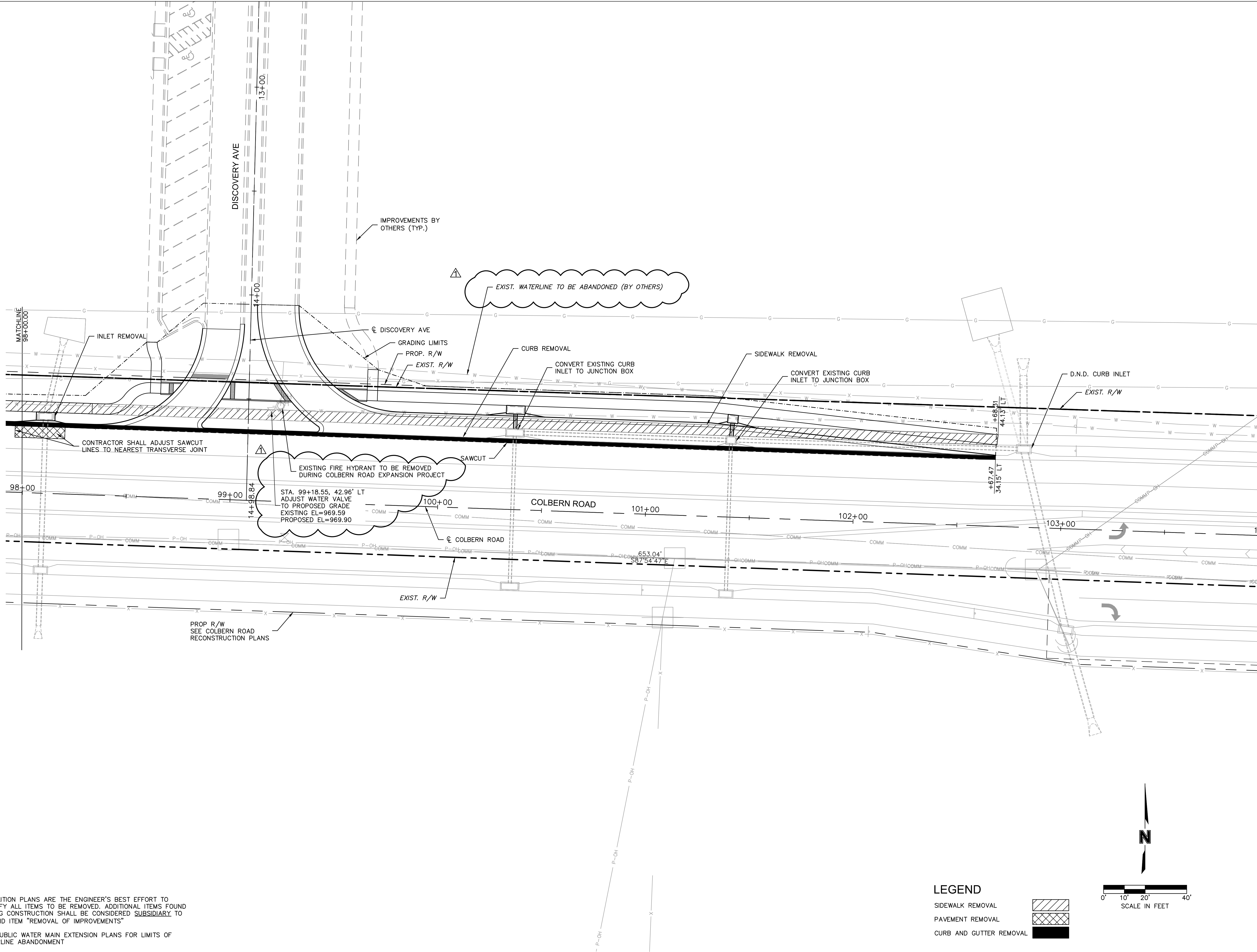
Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177 www.olsson.com

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

DWG: F:\2021\04501-05000\021-04643-0\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_DEM01_D02104643.dwg
DATE: Oct 20, 2023 2:40pm
XREFS: T_PTBULK_D02104643 C_FROAD_D02104643 T_PSTRM_D02104643 C_XALTA_B2104643 T_PBASE_D2104643 I_PBASE_D02104643 C_PUTIL_D2104643
USER: kwilliams2 C_XALTA_B2104643

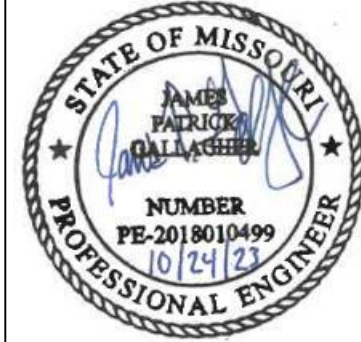
NOTE:
DEMOLITION PLANS ARE THE ENGINEER'S BEST EFFORT TO IDENTIFY ALL ITEMS TO BE REMOVED. ADDITIONAL ITEMS FOUND DURING CONSTRUCTION SHALL BE CONSIDERED SUBSIDIARY TO THE BID ITEM "REMOVAL OF IMPROVEMENTS"

SEE PUBLIC WATER MAIN EXTENSION PLANS FOR LIMITS OF WATERLINE ABANDONMENT



LEGEND

- SIDEWALK REMOVAL [Hatched pattern]
- PAVEMENT REMOVAL [Cross-hatched pattern]
- CURB AND GUTTER REMOVAL [Solid black]



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

DEMOLITION & REMOVALS
COLBERN ROAD

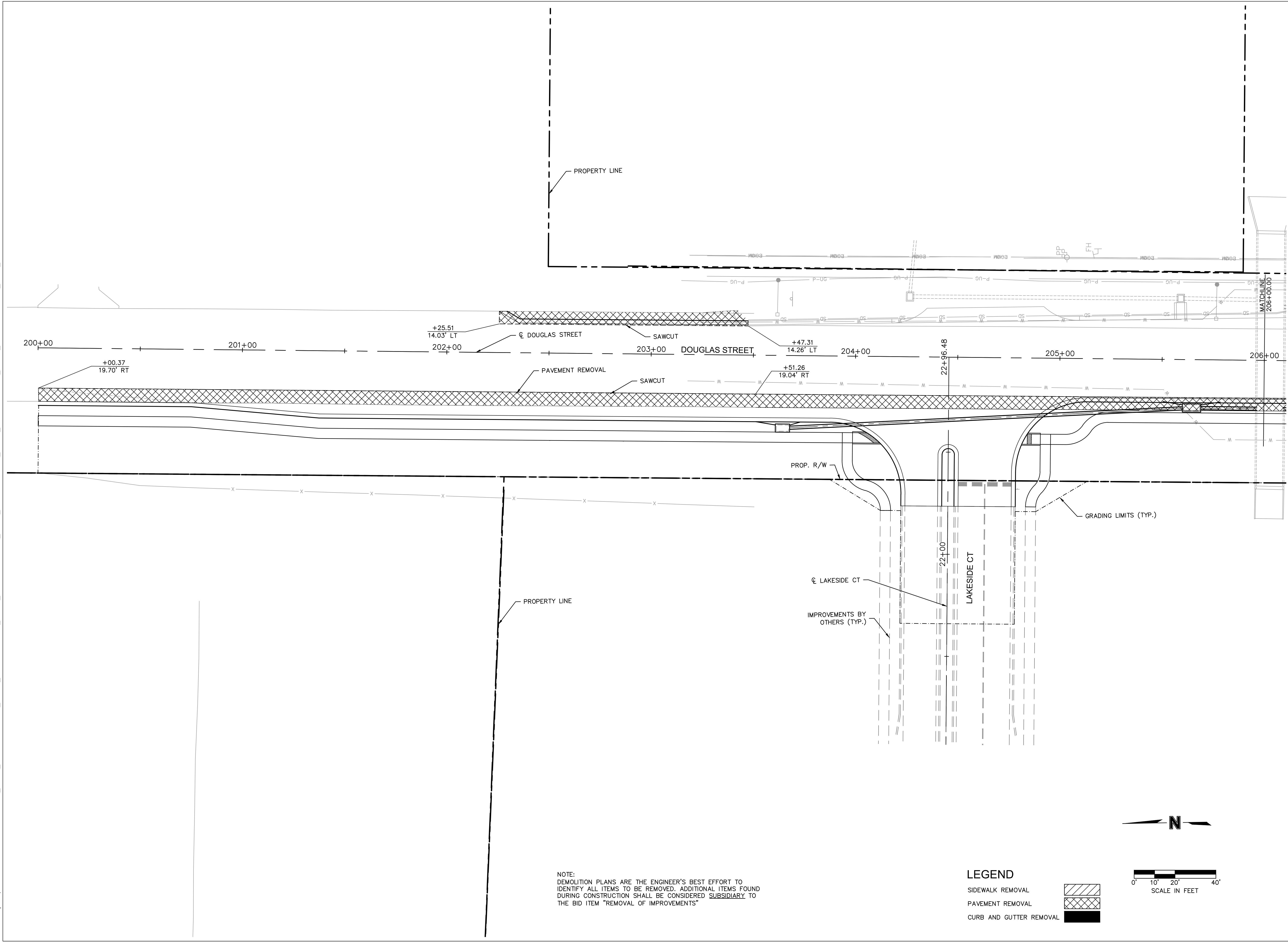
THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2023

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

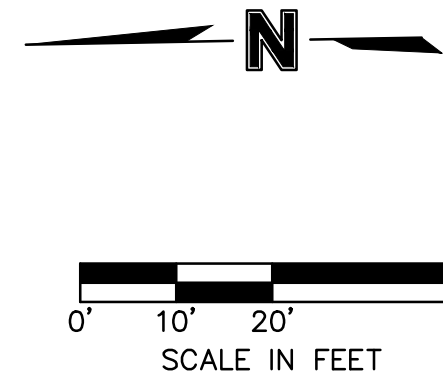
DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final Plans\Sheets\RDWY\T_DEM01_D02104643.dwg
DATE: Sep 28, 2023 4:08am XREFS: T_PBLK.D02104643 C_FROAD.D2104643 T_PSTRM_D02104643 C_XALTA_B2104643 T_PBASE_D02104643 C_PUTILT_D2104643
USER: kwilliams2



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 |  |

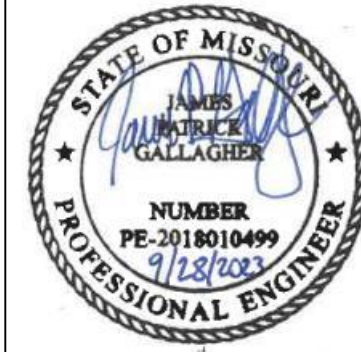


drawn by: _____ BJW
checked by: _____ KLW
approved by: _____ JPG
QA/QC by: _____ JJW
project no.: _____ 021-04643
drawing no. T_DEM01_D02104643
date: _____ 7/14/2023

SHEET
8 OF 86

DEMOLITION & REMOVALS
DOUGLAS STREET

THE VILLAGE AT DISCOVERY PARK COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	202
---	-----

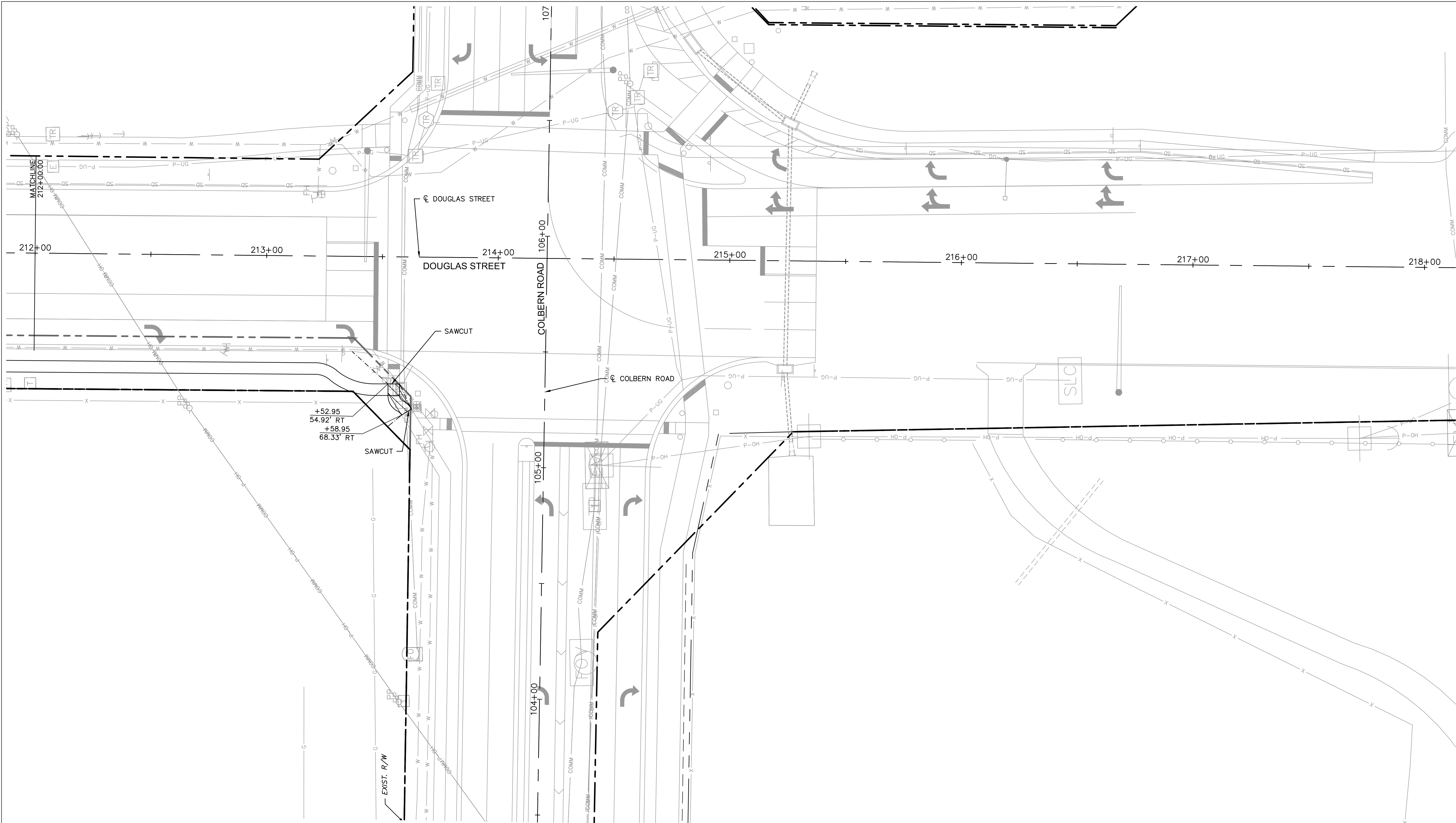
[illegible]

olsson

Olsson - Civil Engineering
Missouri Certificate of Authority #0011592
1301 Burlington Street
St. Louis, MO 63104
TEL 816 361 1177 www.olsson.com

1301 Burlington Street
North Kansas City, MO 64116
TEL 816 361 1177 www.olson.com

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"

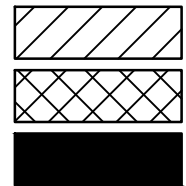


LEGEND

SIDEWALK REMOVAL

PAVEMENT REMOVAL

CURB AND GUTTER REMOVAL

[illegible]

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

drawn by: _____ BJW
checked by: _____ KLW
approved by: _____ JPG
QA/QC by: _____ JJW
project no.: _____ 021-04643
drawing no.: _____ DEM01 D02104643
date: _____ 7/14/2023

SHEET
0 OF 86

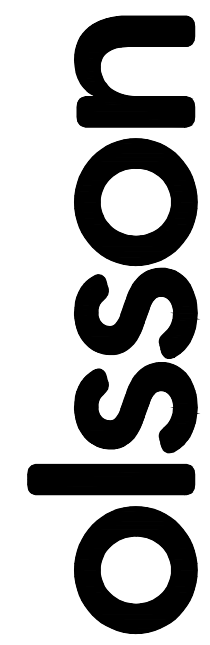


DEMOLITION & REMOVALS
DOUGLAS STREET

THE VILLAGE AT DISCOVERY PARK

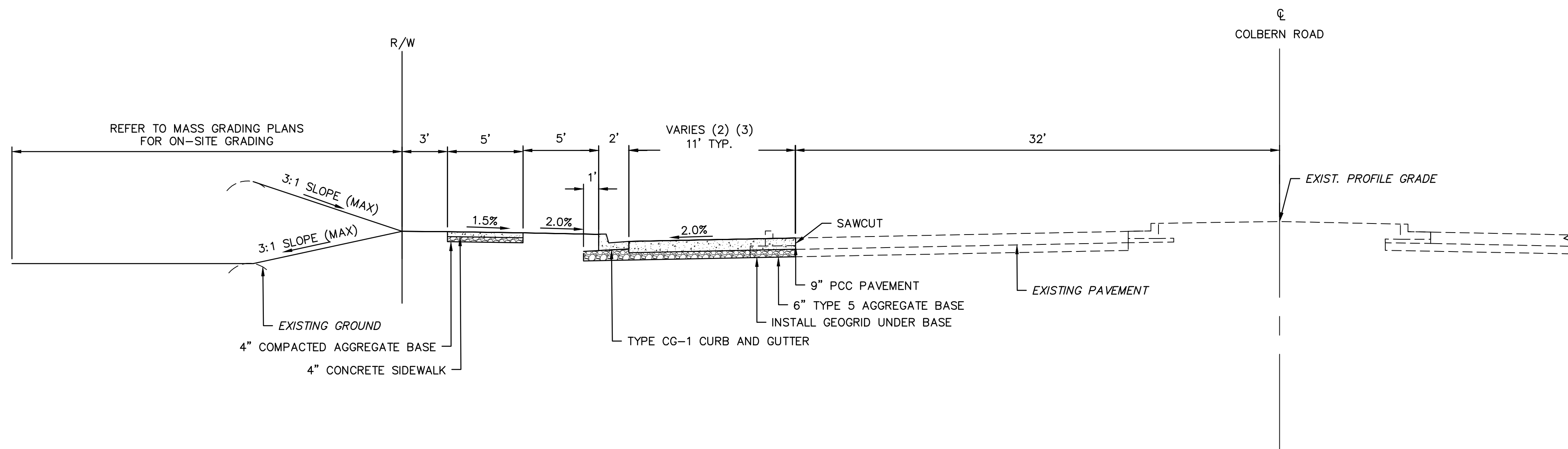
LEE'S SUMMIT, MISSOURI

2023

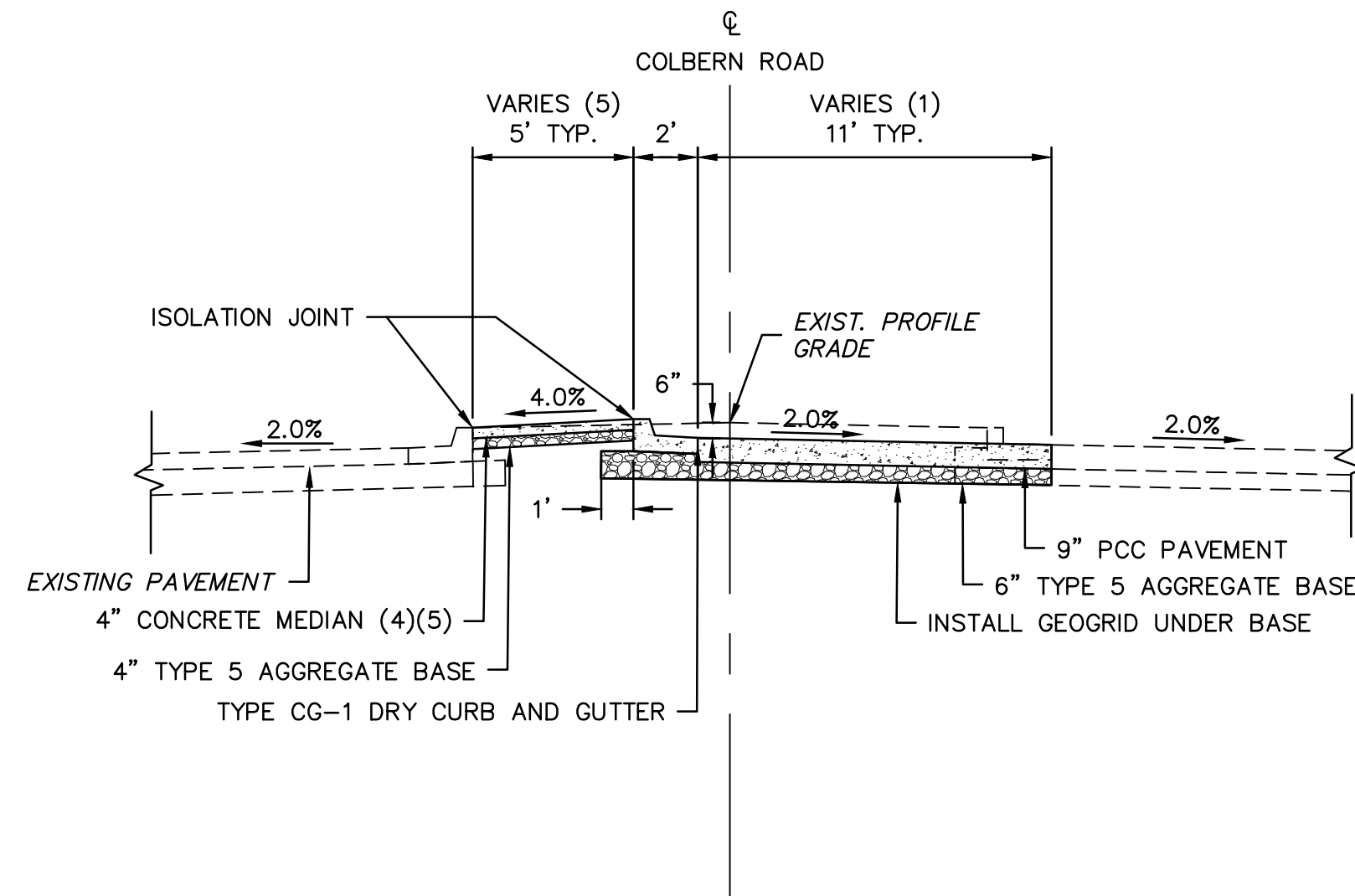


Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116 TEL 816-441-1111

TEL 816.361.1177 www.olsson.com



TYPICAL SECTION - COLBERN ROAD



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

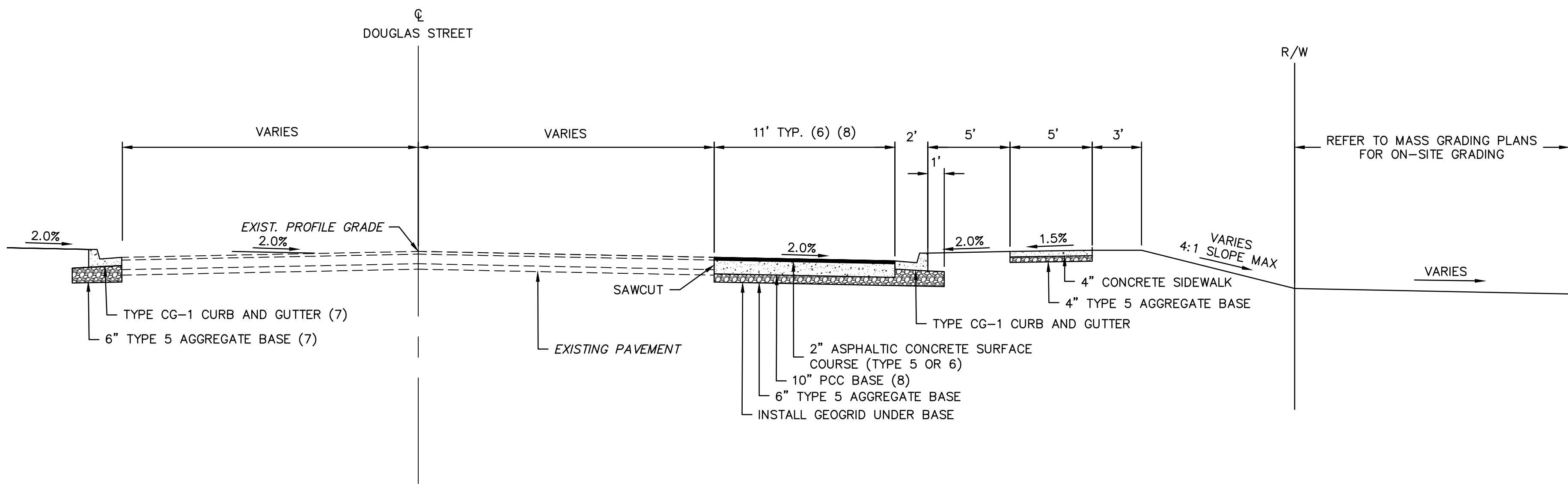
- NOTES:
- (1) WIDTH VARIES 0 FEET TO 11 FEET FROM STATION 90+10.77 TO STATION 90+91.60, RESPECTIVELY.
 - (2) WIDTH VARIES 11 FEET TO 0 FEET FROM STATION 96+47.55 TO STATION 97+84.65, RESPECTIVELY.
 - (3) WIDTH VARIES 11 FEET TO 0 FEET FROM STATION 101+30.07 TO STATION 102+67.55, RESPECTIVELY.
 - (4)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

[illegible]

TYPICAL SECTIONS	
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: _____ JPG
QA/QC by: _____ JJW
project no.: _____ 021-04643
drawing no.: TYP01 D02104643
date: 7/14/2023

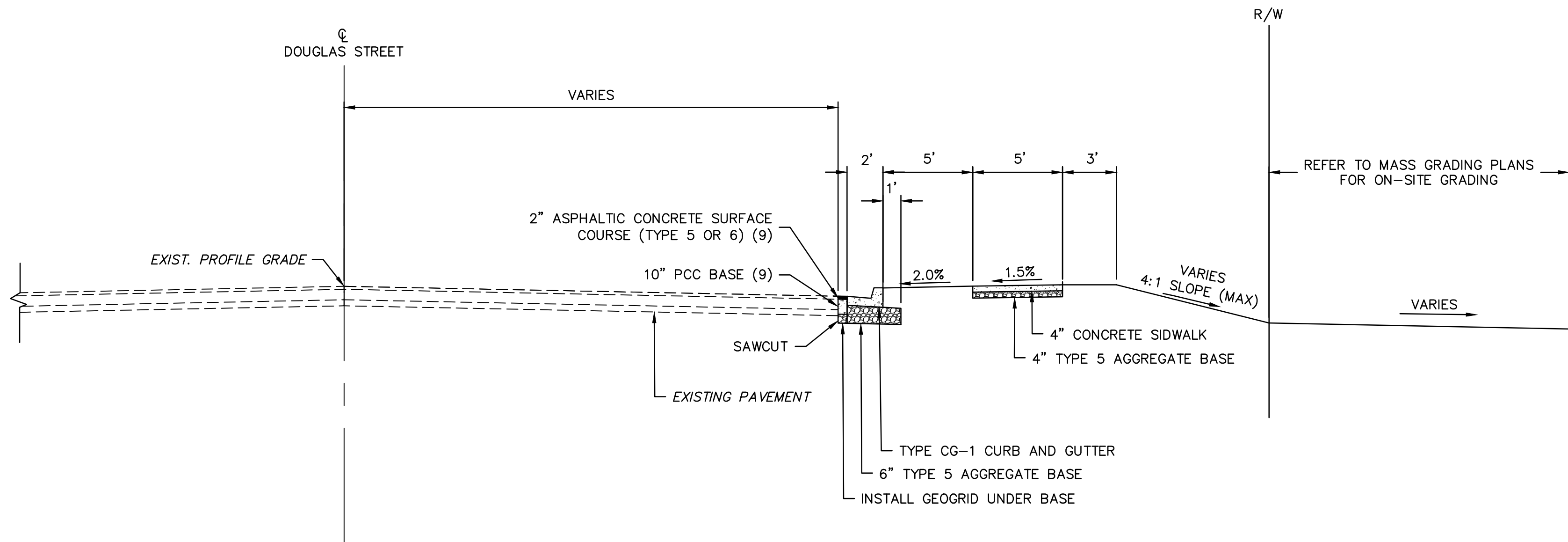
DWG: F:\2021\04501-05000\021-04643-0\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_TYP01_D02104643.dwg
DATE: Sep 28, 2023 10:40am
XREFS: T_PTBK_D02104643
USER: jgallagher



TYPICAL SECTION - DOUGLAS STREET

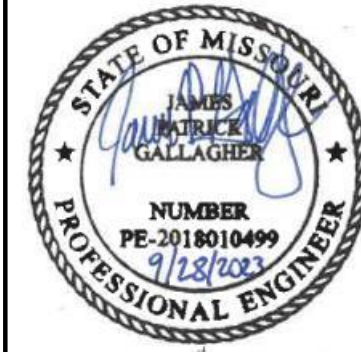
STA. 200+00.38 TO STA. 203+87.77

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



TYPICAL SECTION - DOUGLAS STREET

STA. 205+13.75 TO STA. 211+47.42

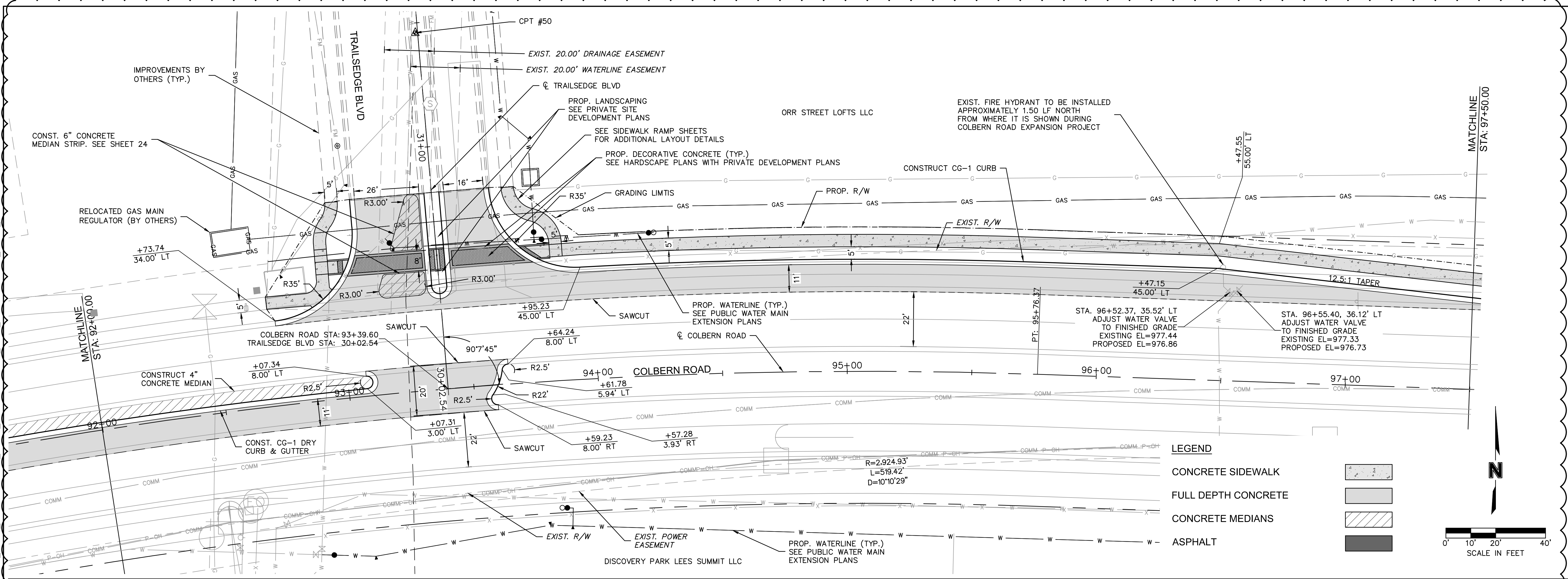


REVISIONS	
REV. NO.	DESCRIPTION

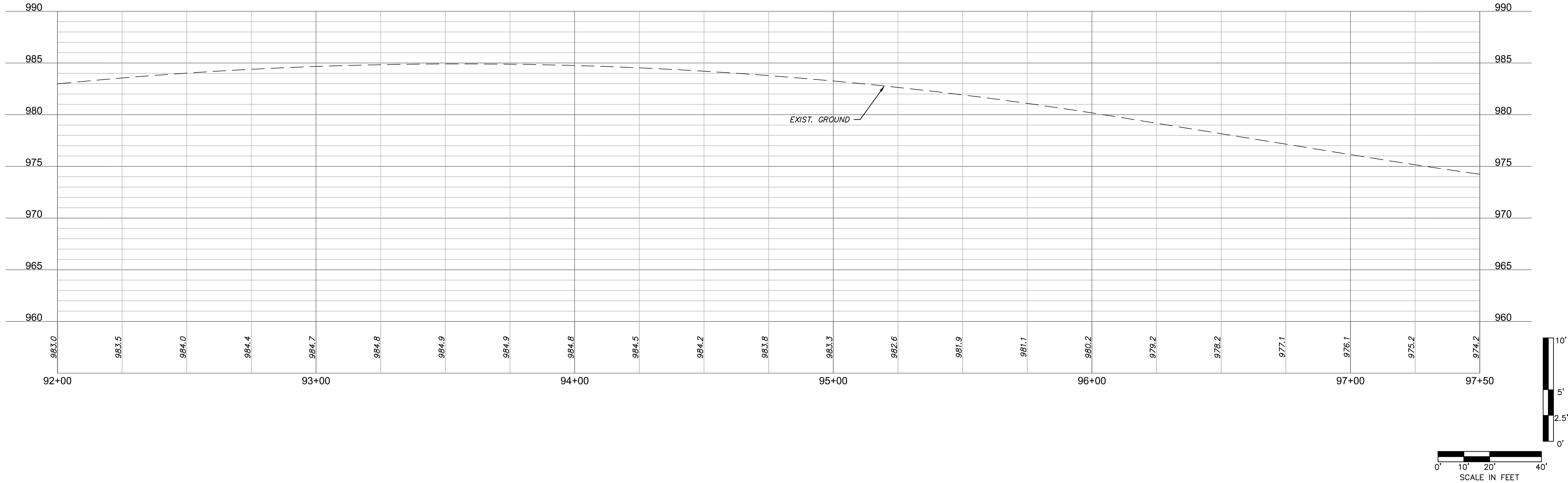
TYPICAL SECTIONS	
THE VILLAGE AT DISCOVERY PARK COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	
LEE'S SUMMIT, MISSOURI	
2023	

drawn by: BJW
checked by: KLV
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: TYP01_D02104643
date: 9/14/2023

DWG: F:\2021\04501-05000\021-04643-0\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_RPP01_D02104643.dwg
DATE: Oct 20, 2023 2:42pm
XREFS: T_PPA1T_D02104643 T_PBLK_D02104643 T_PBASE_D02104643
USER: twilliams2
C_FROAD_D02104643
I_PSTRM_D02104643
C_XALTA_B2104643
C_PUTIL_D2104643
C_PBASE_D2104643



COLBERN ROAD (92+00 - 97+50)



olsson

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

STATE OF MISSOURI
JAMES PATRICK
DALLAS
NUMBER
PE-2018010499
01/14/23
PROFESSIONAL ENGINEER

REVISIONS DESCRIPTION
CITY COMMENTS ON 10/05/2023

DATE
10/18/2023

REV. NO.
1

PLAN & PROFILE
COLBERN ROAD

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
14 OF 86

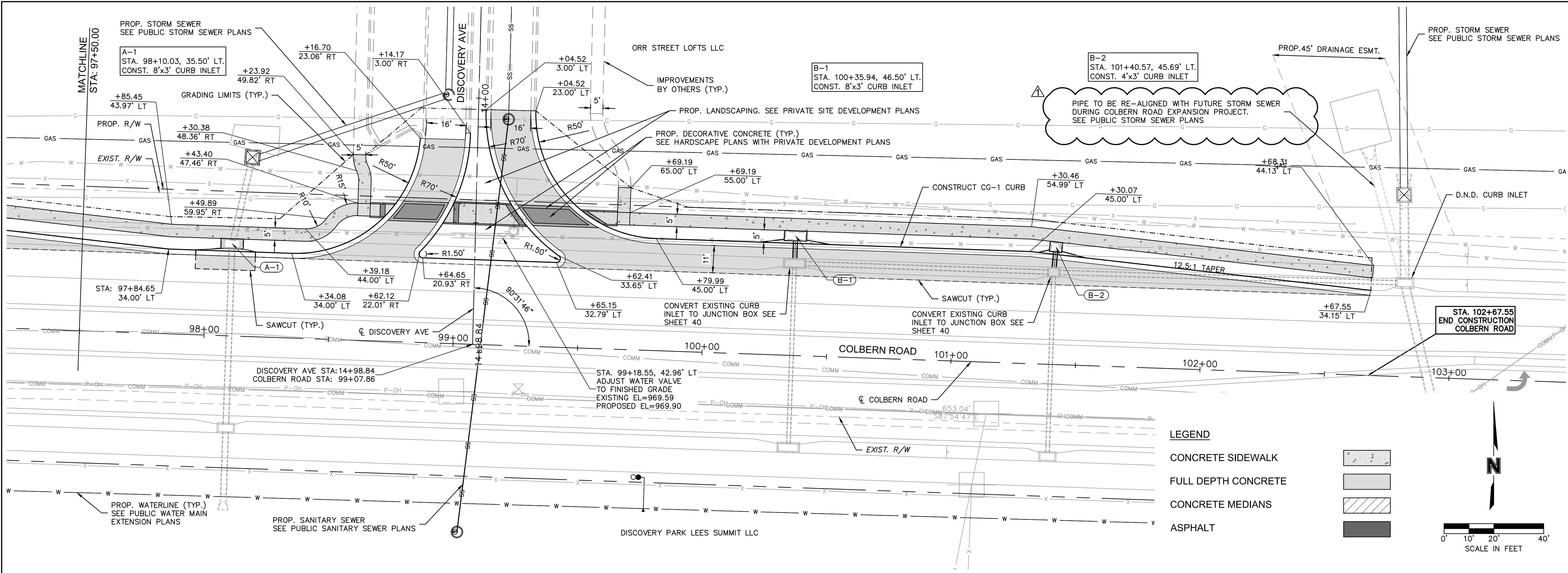
DWG: F:\2021\04501-05000\021-04643-0\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_RPP01_D02104643.dwg
DATE: Oct 20, 2023 2:42pm XREFS: T_PATT_D02104643 T_PBLK_D02104643 T_PBASE_D02104643

USER: twilliams2
C_FROAD_D02104643

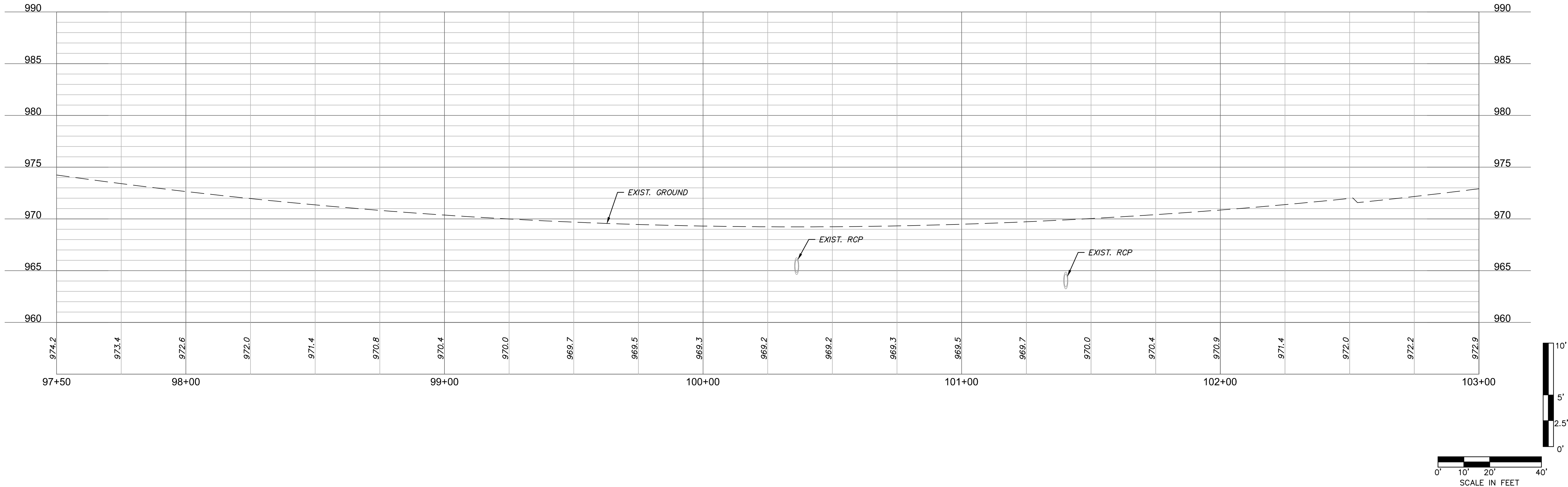
T_PSTRM_D02104643

C_PUTIL_D2104643

C_PBASE_D2104643



COLBERN ROAD (97+50 - 103+00)



olsson

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

STATE OF MISSOURI
JAMES PATRICK
PAUL L. OLSSON
NUMBER
PE-2018010499
01/24/23
PROFESSIONAL ENGINEER

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

PLAN & PROFILE
COLBERN ROAD

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

LEE'S SUMMIT, MISSOURI

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
15 OF 86

2023

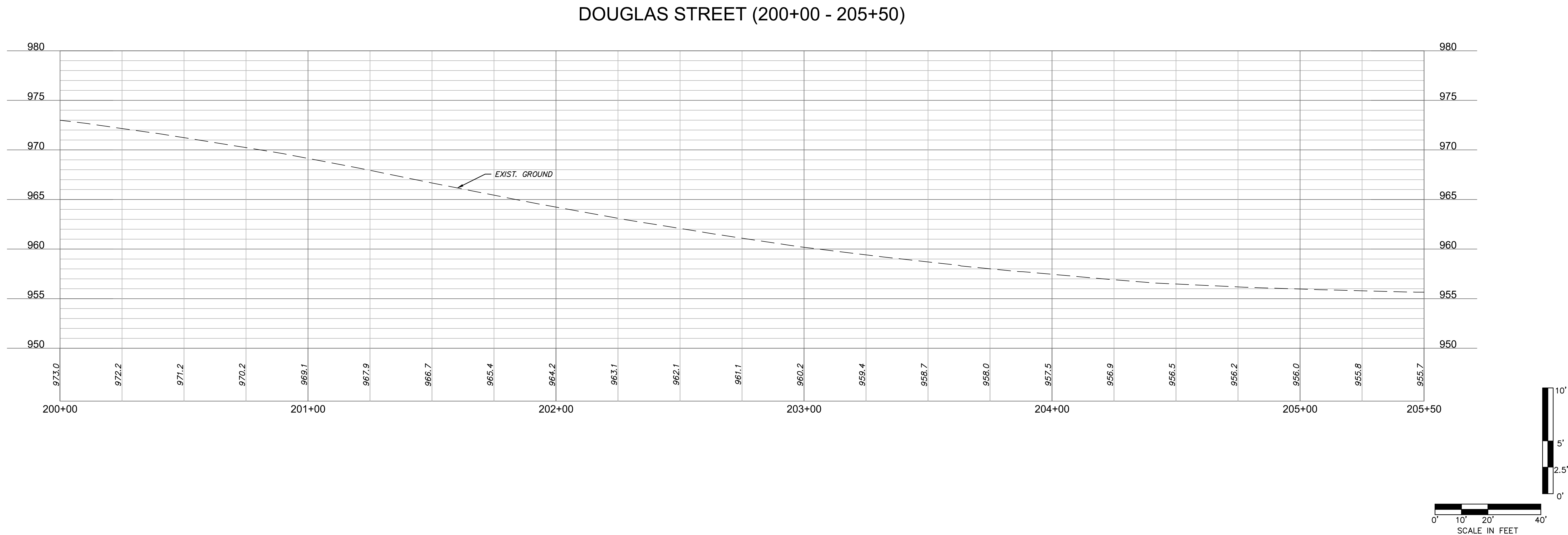
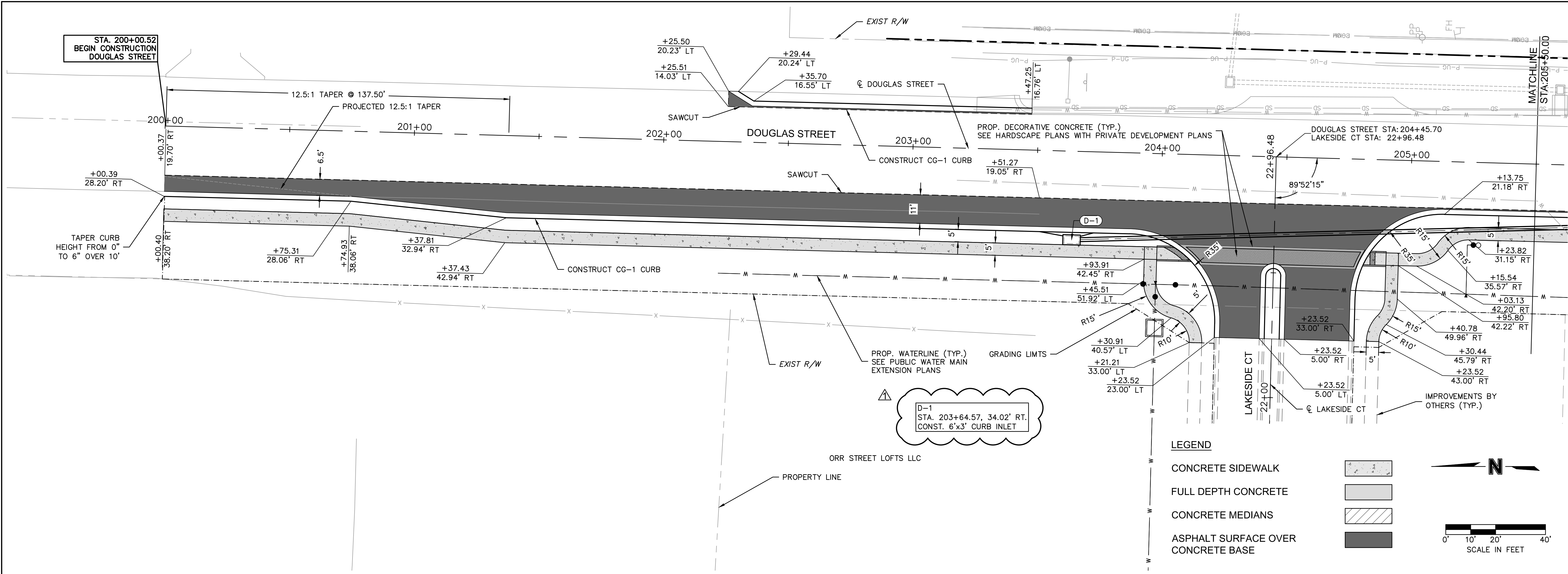
DWG: F:\2021\04501-05000\021-04643-D\04-Design\AutoCAD\Final_Plans\Sheets\RDV\T_RPP01_D02104643.dwg
DATE: Oct 20, 2023 2:43pm
XREFS: T_PPA1T_D02104643 T_PBLK_D02104643 T_PBASE_D02104643

USER: twilliams2
C_FROAD_D02104643

C_XALTA_B2104643
T_PSTRM_D02104643

C_PUTIL_D2104643

C_PBASE_D2104643

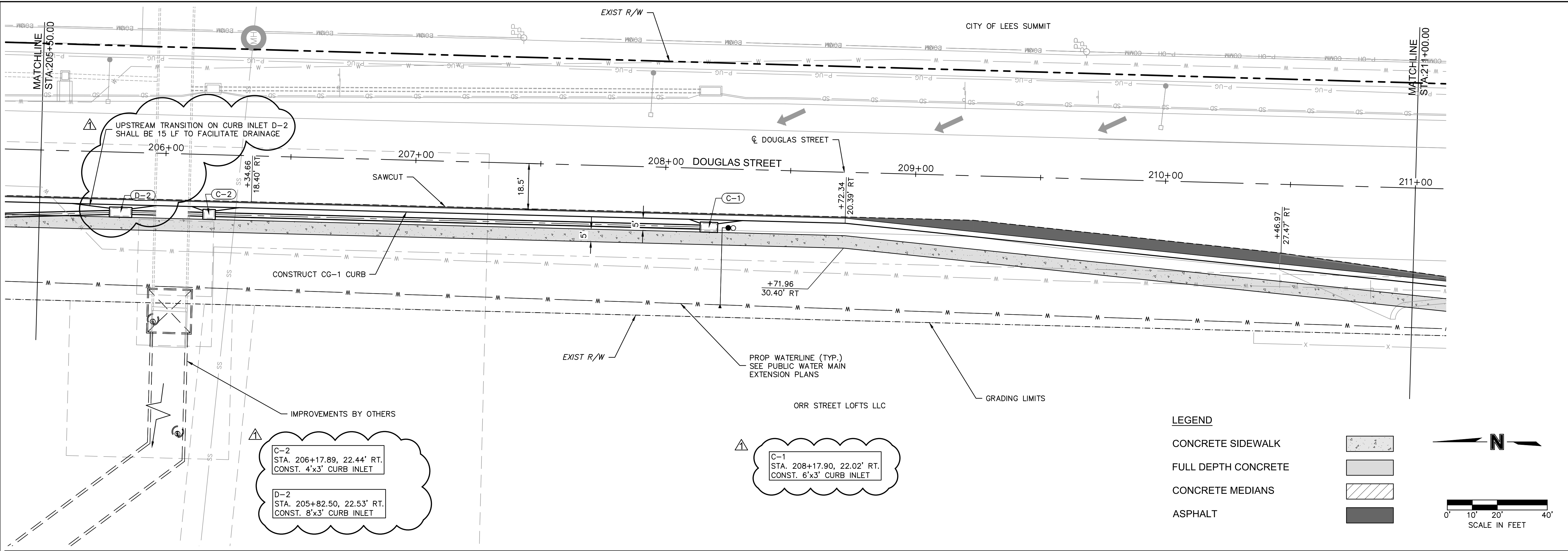


REVISIONS DESCRIPTION		DATE	REV. NO.
CITY COMMENTS ON 10/05/2023		10/18/2023	1

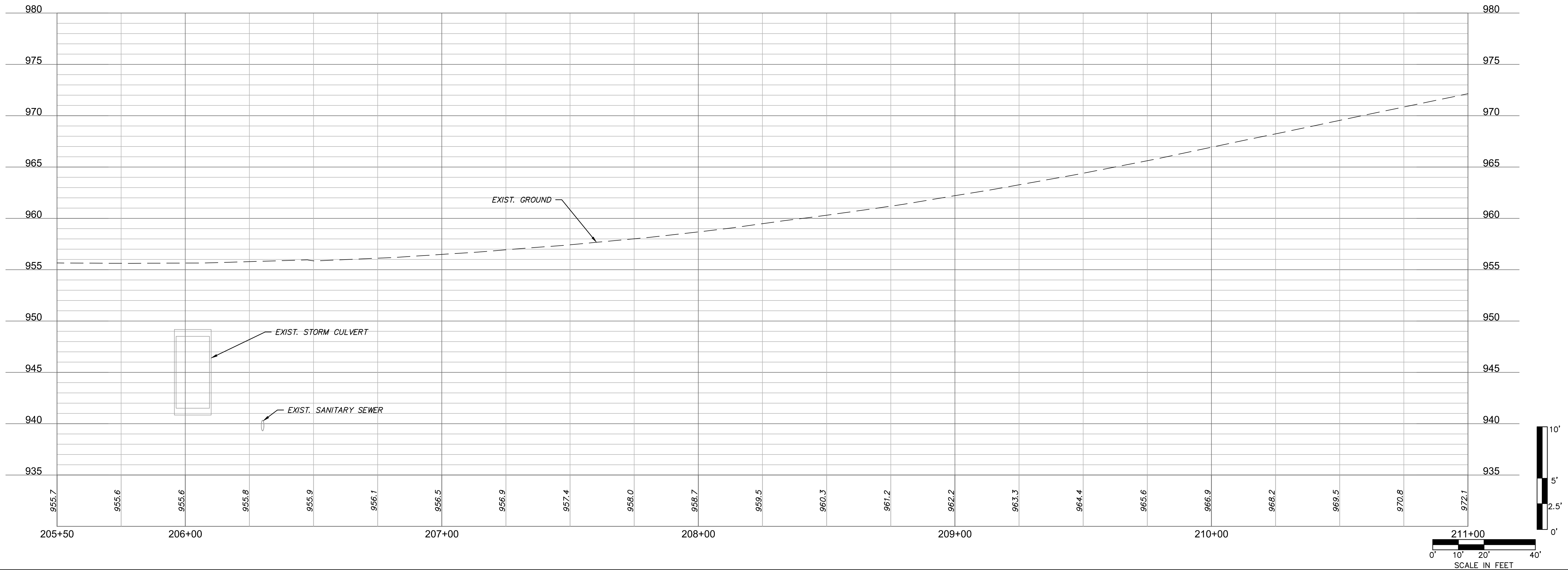
PLAN & PROFILE DOUGLAS STREET		2023
THE VILLAGE AT DISCOVERY PARK COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS		
LEE'S SUMMIT, MISSOURI		

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

DWG: F:\2021\04501-05000\021-04643-0\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_RPP01_D02104643.dwg
DATE: Oct 20, 2023 2:43pm
XREFS: T_PPBATT_D02104643 T_PBLK_D02104643 T_PBASE_D02104643
USER: twilliams2
C_FROAD_D02104643
C_XALTA_B2104643
T_PSTRM_D02104643
C_PUTIL_D2104643
C_PBASE_D2104643



DOUGLAS STREET (205+50 - 211+00)



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

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

PLAN & PROFILE
DOUGLAS STREET

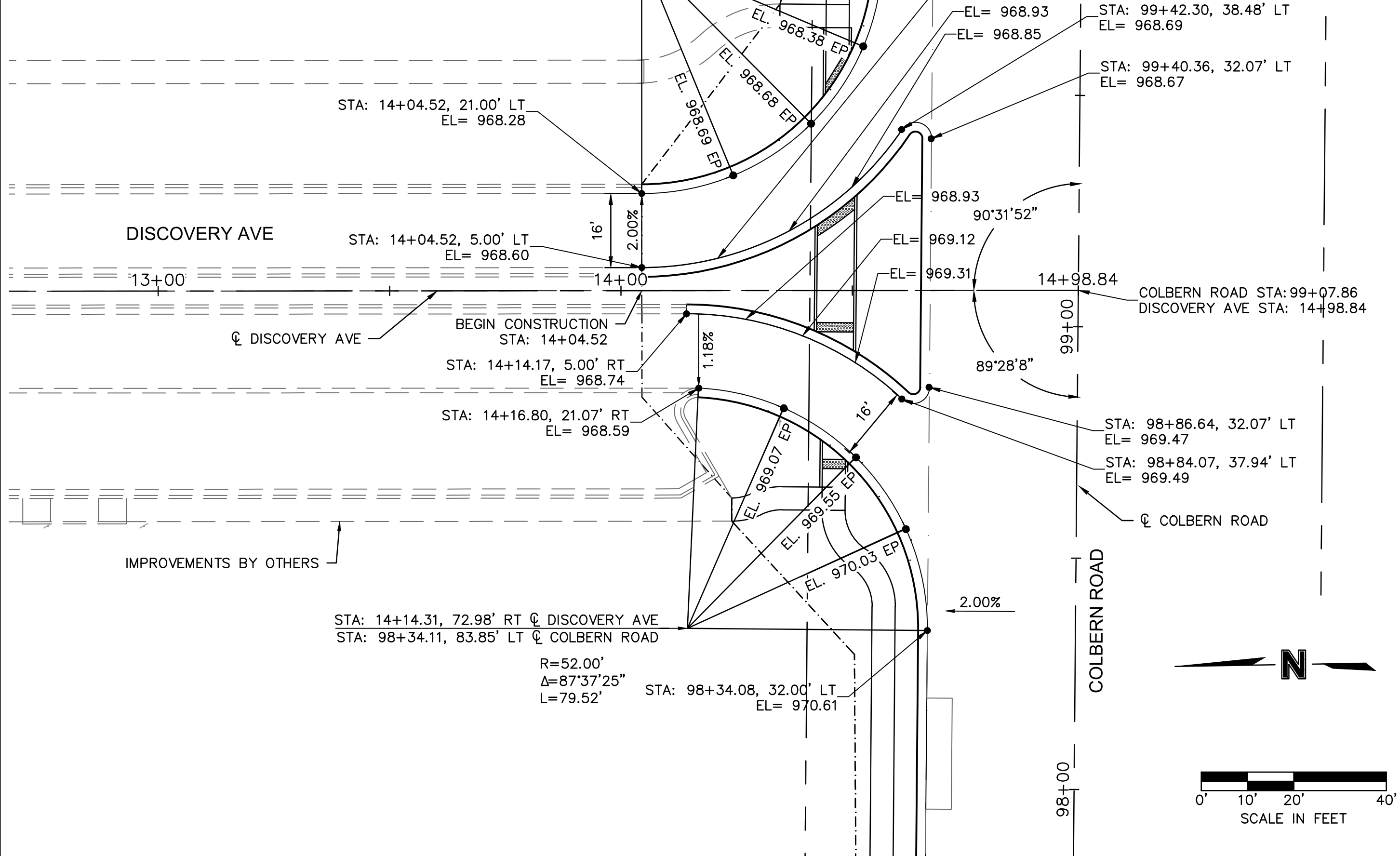
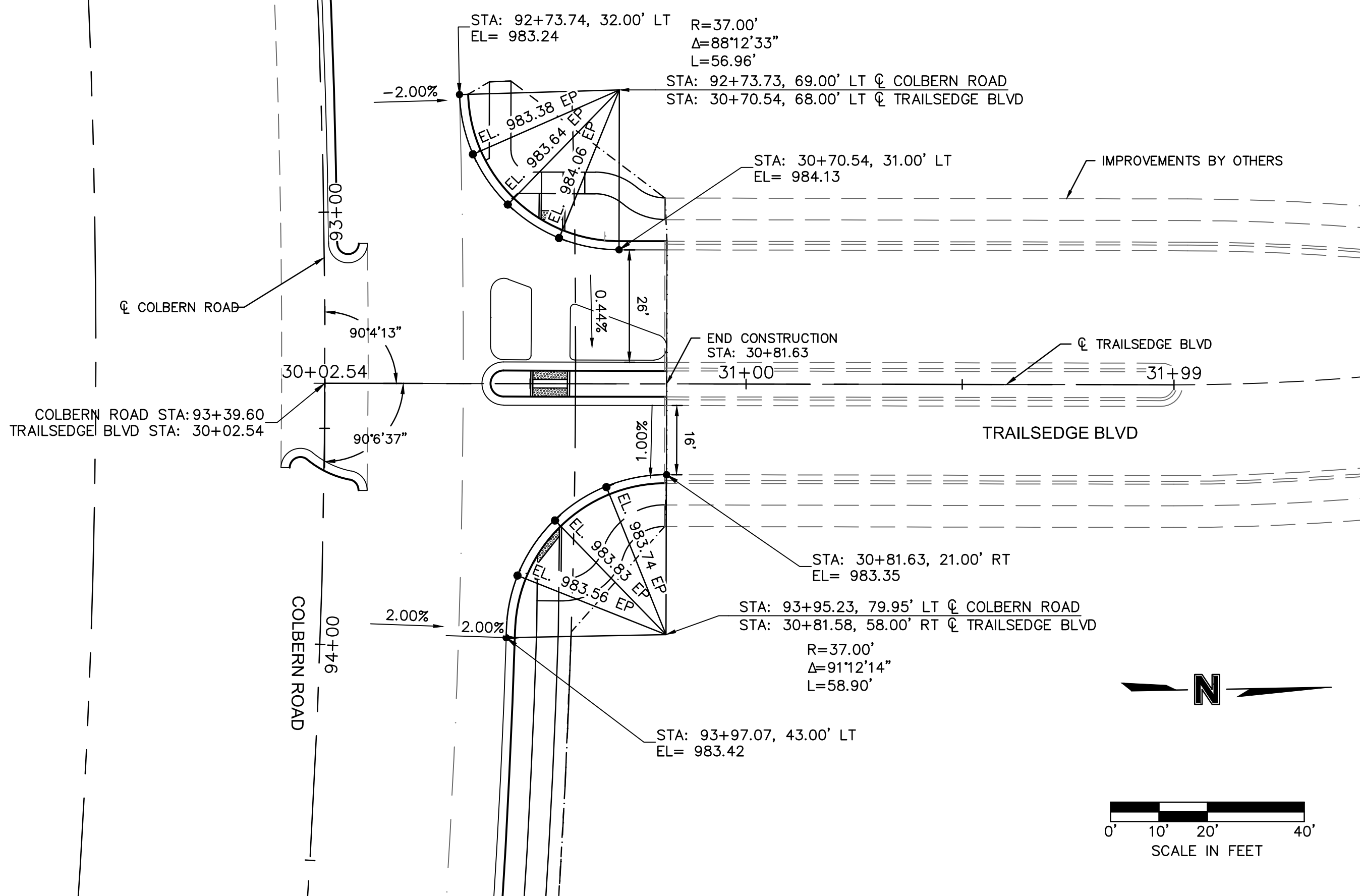
THE VILLAGE AT DISCOVERY PARK
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

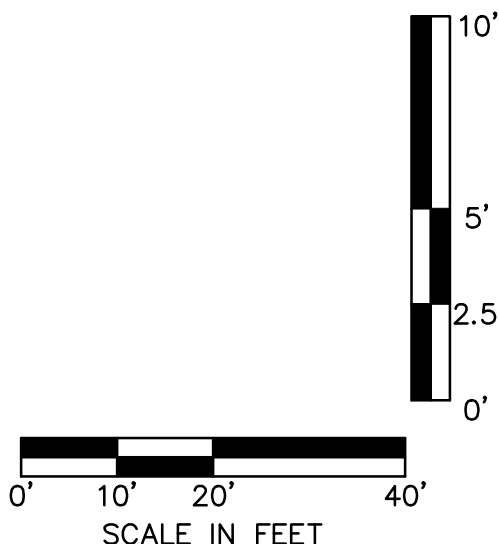
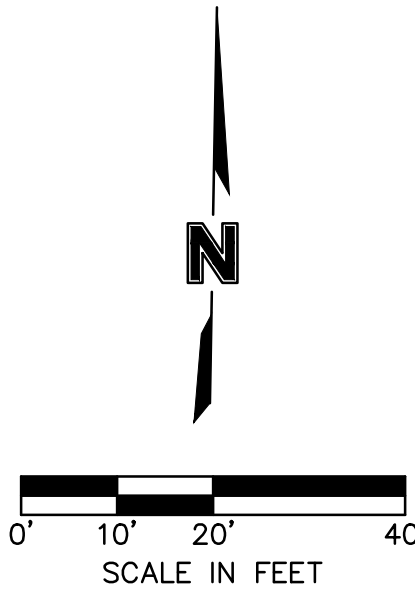
LEE'S SUMMIT, MISSOURI

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

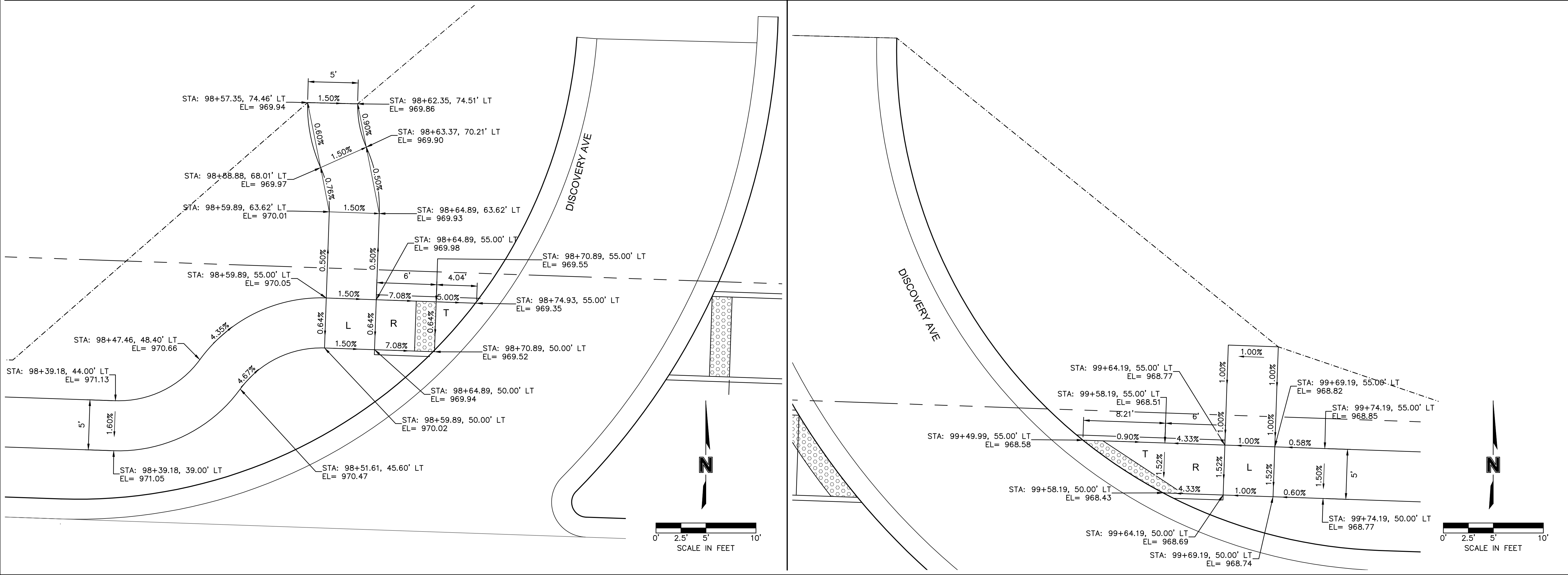
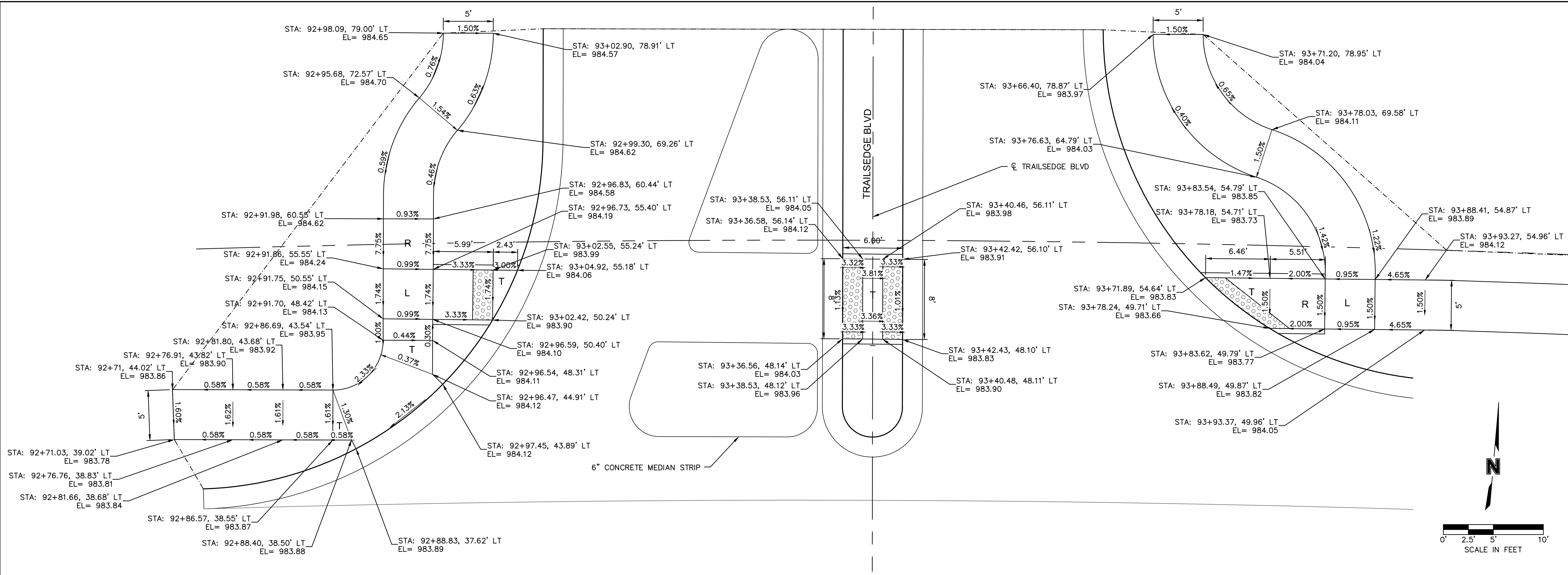
SHEET
17 OF 86

DWG: F:\2021\04501-05000\021-04643-0\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_DRV01_D02104643.dwg
DATE: Oct 20, 2023 2:44pm XREFS: T_PBLK_D02104643 C_PBASE_D02104643 T_PBASE_D02104643 T_PSTRM_D02104643 USER: kwilliams2





DWG: F:\2021\04501-05000\021-04843-0\40-Design\AutoCAD\Final Plans\Sheets\RDWV\T_SDWK01_D02104843.dwg
DATE: Sep 28, 2023 4:14pm
XREFS: T_PBASE_002104843 T_PTBK_002104843 C_XALTA_02104843
USER: kwilliams2



olsson

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

STATE OF MISSOURI
JAMES H. GALLAGHER
NUMBER
PE-2018010499
9/12/2023
PROFESSIONAL ENGINEER

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION

SIDEWALK RAMP LAYOUTS

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

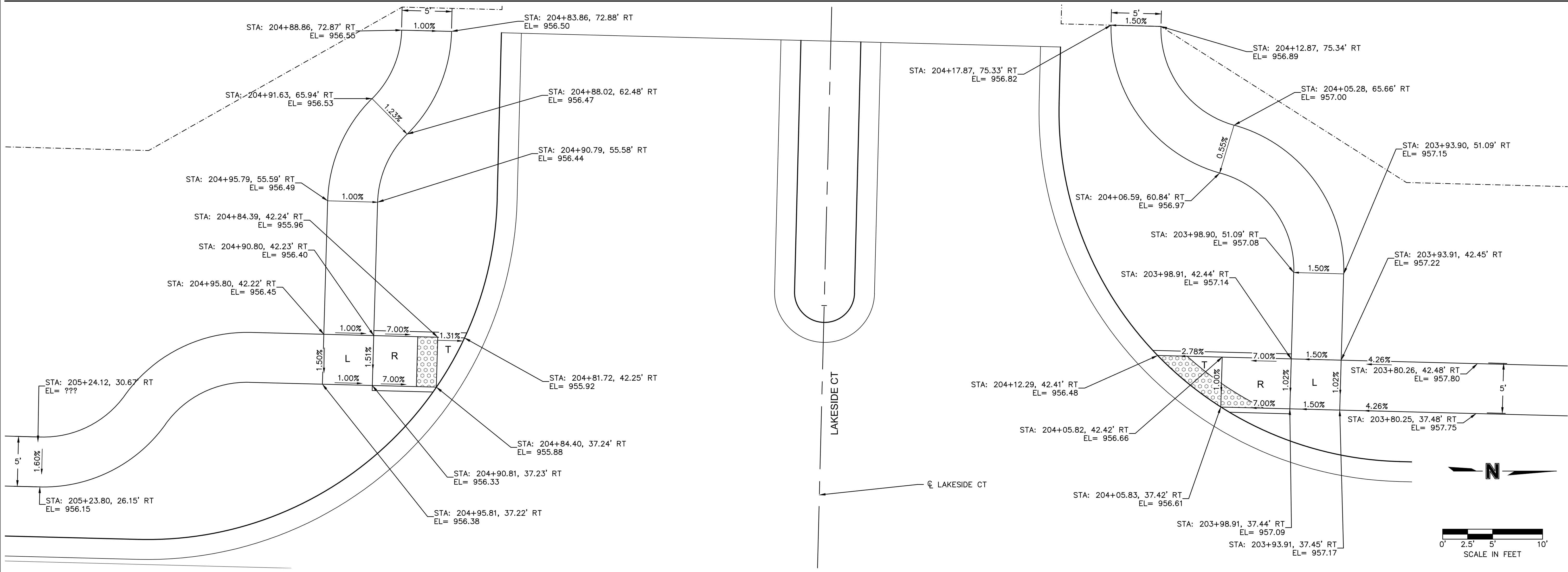
LEE'S SUMMIT, MISSOURI

drawn by: BJW
checked by: KLV
approved by: JFG
QA/QC by: JJW
project no.: 021-04843
drawing no.: SDWK01_D02104843
date: 7/14/2023

SHEET
21 OF 86

2023

USER: kwilliams2



STATE OF MISSOURI
JAMES
PATRICK
GALLAGHER
NUMBER
PE-2018010499
9/28/2021
PROFESSIONAL ENGINEER

REVISIONS DESCRIPTION

REV. DATE

REVISIONS

2023

SIDEWALK RAMP LAYOUTS

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

EE'S SUMMIT. MISSOURI

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

SHEET
22 OF 86

95+00

- PROP. R/W

EXIST. FIRE HYDRANT TO BE INSTALLED
APPROXIMATELY 1.50 LF NORTH
FROM WHERE IT IS SHOWN DURING
COLBERN ROAD EXPANSION PROJECT

TRANSVERSE JOINT SPACING AT 5' (TYP.)

11' TYP

← 15' TYP.

TRANSVERSE CONTRACTION JOINT (TYP.)

STA. 96+52.37, 35.52' LT
ADJUST WATER VALVE
TO PROPOSED GRADE
EXISTING EL=977.44
PROPOSED EL=976.86

STA. 96+55.40, 36.12' LT
ADJUST WATER VALVE
TO PROPOSED GRADE
EXISTING EL=977.33
PROPOSED EL=976.73

— LONGITUDINAL CONTRACTION/CONSTRUCTION JOINT (TYP.)

MATCHLINE
98+00.00

REVISIONS DESCRIPTION

REV. NO.	DATE
1	10/18/20

REVISIONS

CONCRETE JOINTING PLANS
COLBERN ROAD

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

2023

drawn by: BJW
checked by: KLW
approved by: JPG
QA/QC by: JJW
project no.: 021-04643
drawing no.: T JNT01 D02104643
date: 7/14/2023

SHEET
5 OF 86

STATE OF MISSOURI
JAMES
PATRICK
GALLAGHER
NUMBER
PE-2018010499
10/24/23
PROFESSIONAL ENGINEER

olson

Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116 TEL 816-441-1111

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

ALL STATION AND OFFSET LABELS REFERENCE COLBERN ROAD
CENTERLINE.

ALL SAWCUTS SHALL BE FULL DEPTH.

CONTRACTION JOINTS ALONG THE TRAIL SHALL BE SAWED AT RIGHT ANGLES TO THE CENTERLINE OF THE TRAIL. CONTRACTION JOINTS SHALL BE $\frac{1}{2}$ " WIDE BY ONE INCH DEEP AND SHALL BE MADE WITH A CONCRETE SAW ONLY.

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

LEGEND

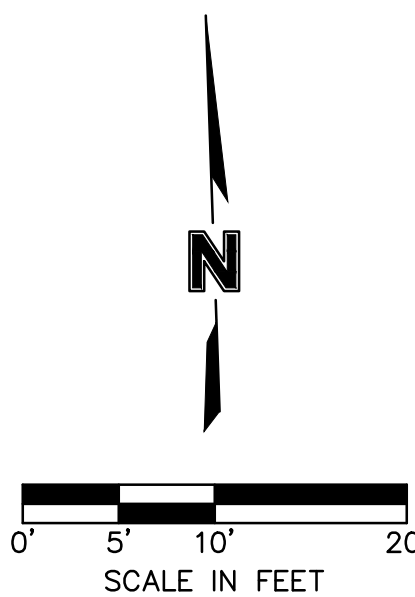
 MONOLITHIC CURB

----- TRANSVERSE CONTRACTION JOINT

— — — — LONGITUDINAL CONTRACTION/CONSTRUCTION JOINT

———— ISOLATION JOINT

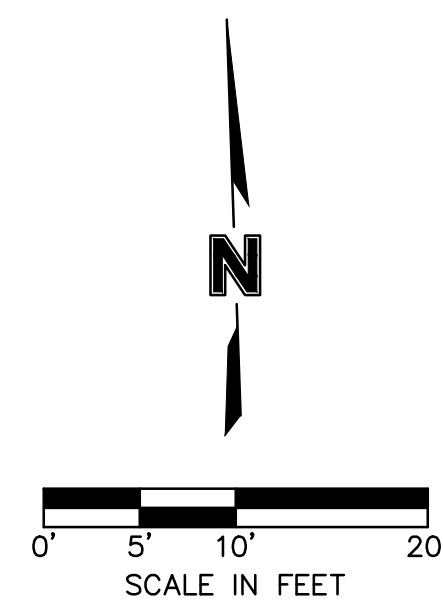
CONTRACTION JOINT WITHOUT DOWEL

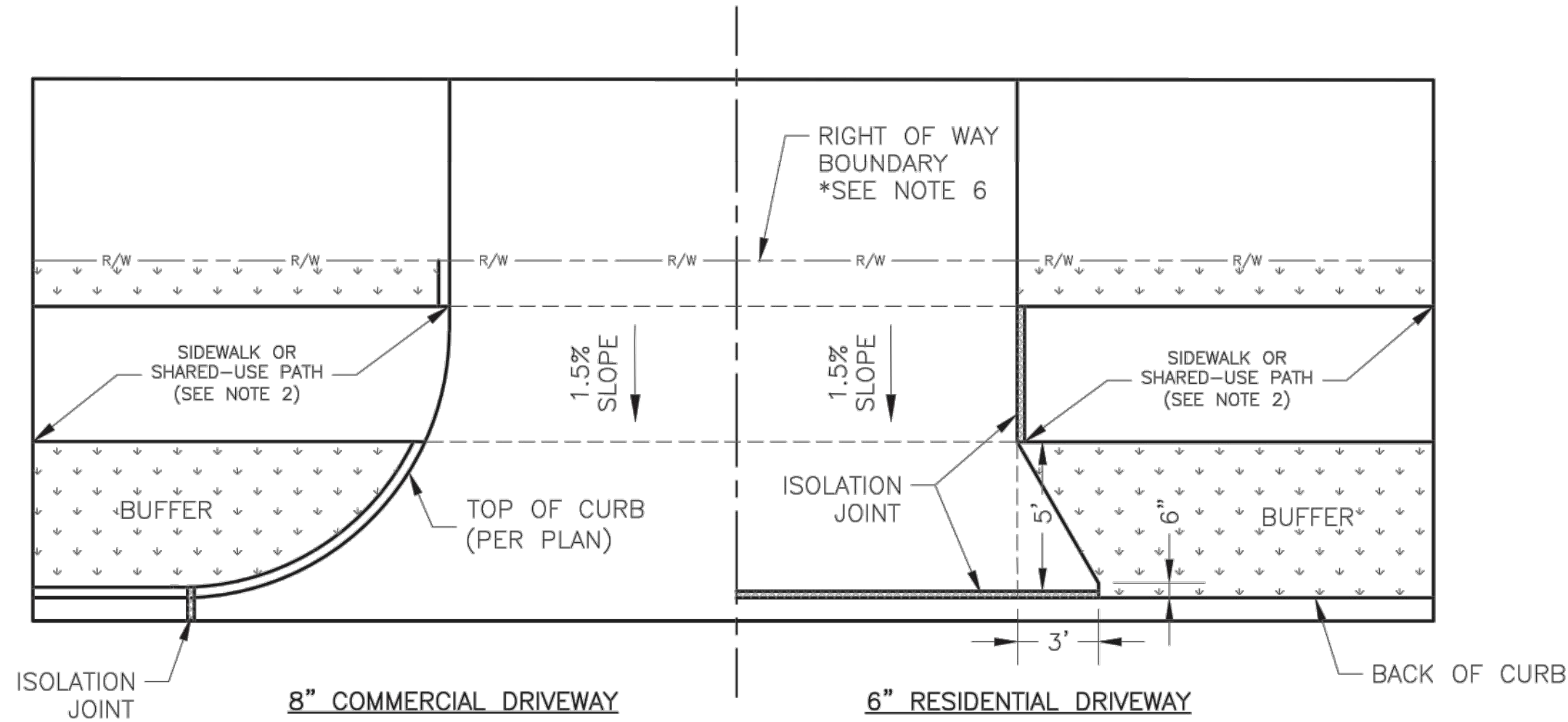




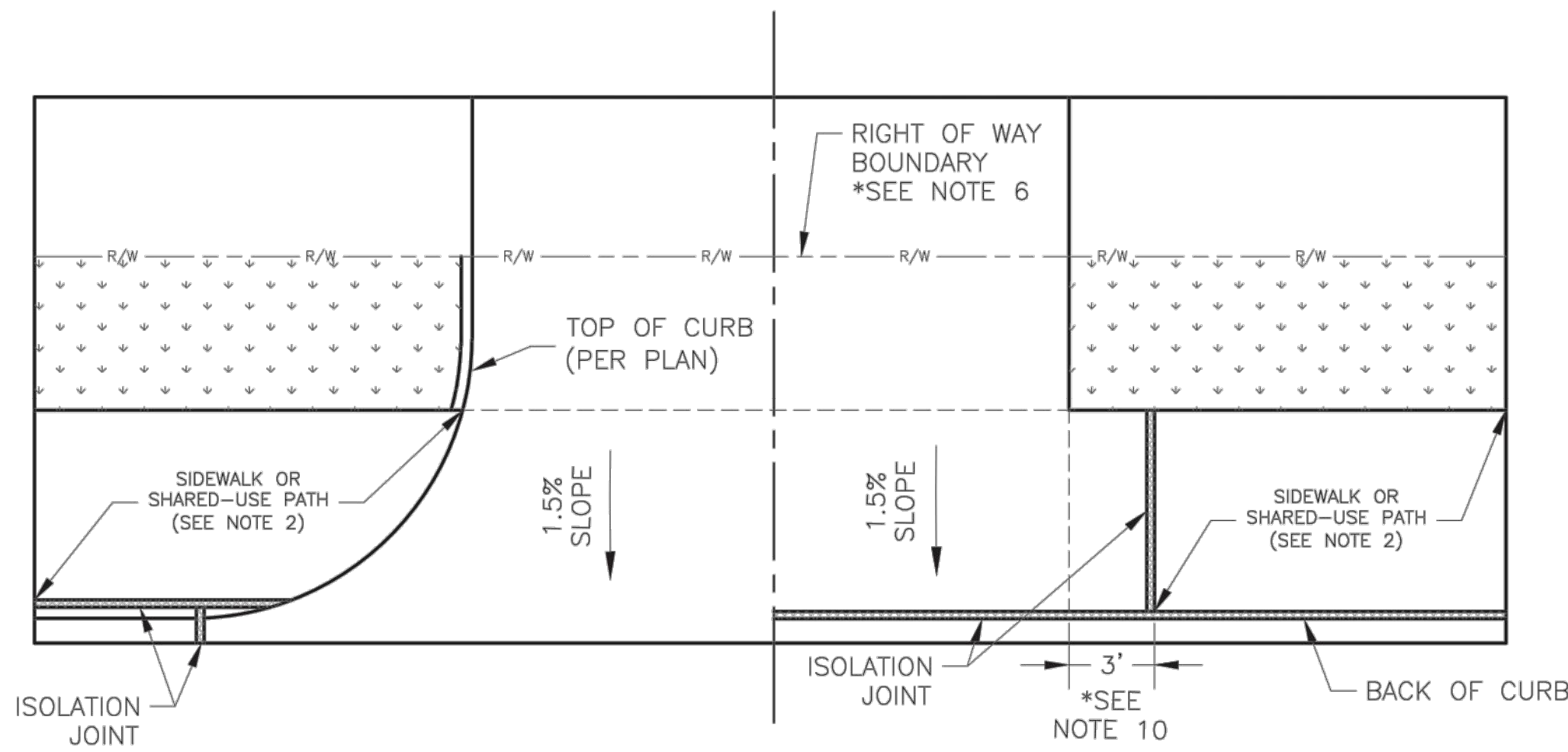
LEGEND

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





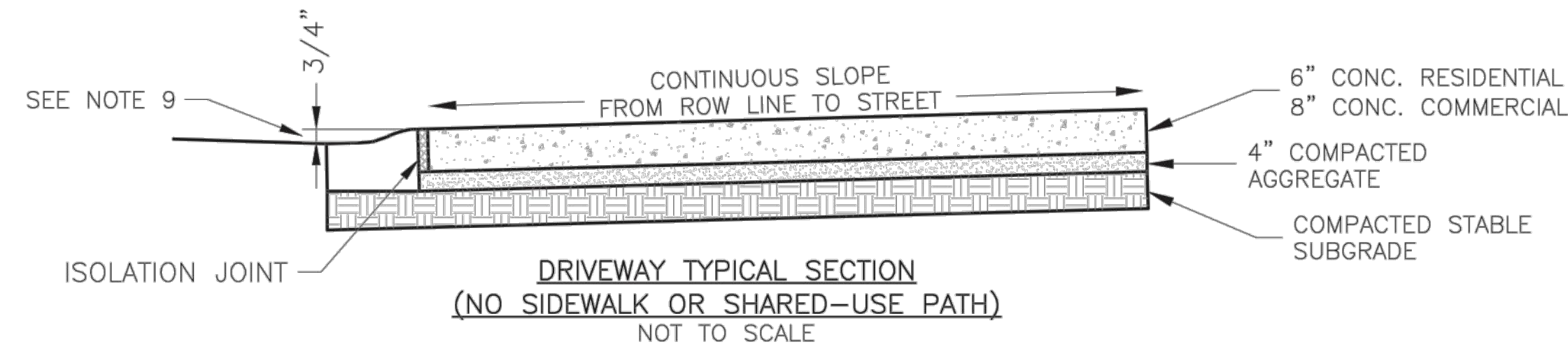
DRIVEWAY WITH BUFFER
NOT TO SCALE



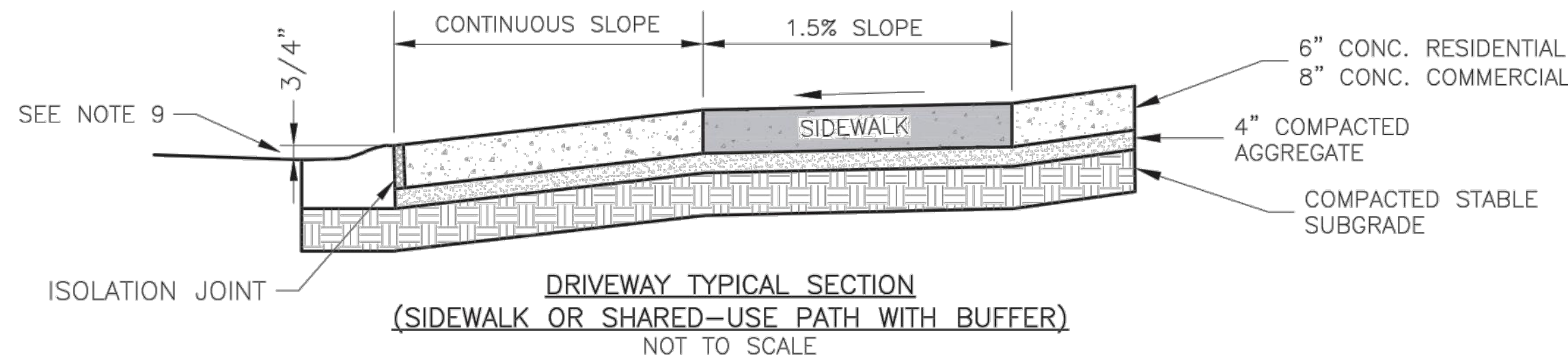
DRIVEWAY WITHOUT BUFFER
NOT TO SCALE

GENERAL NOTES

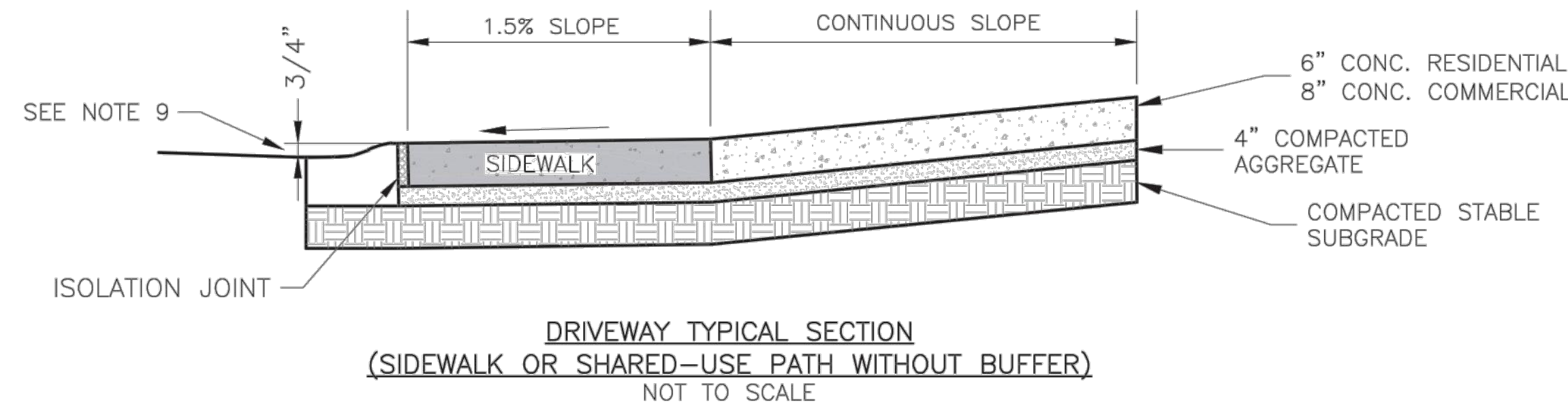
1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-3B, SIDEWALK/SHARED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



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



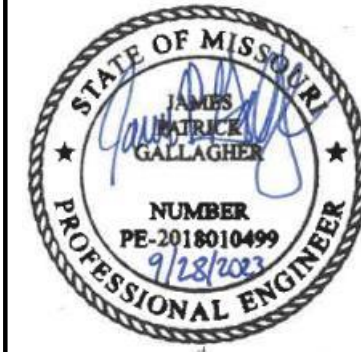
DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITHOUT BUFFER)
NOT TO SCALE

LEE'S SUMMIT
MISSOURI

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

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

GEN-1

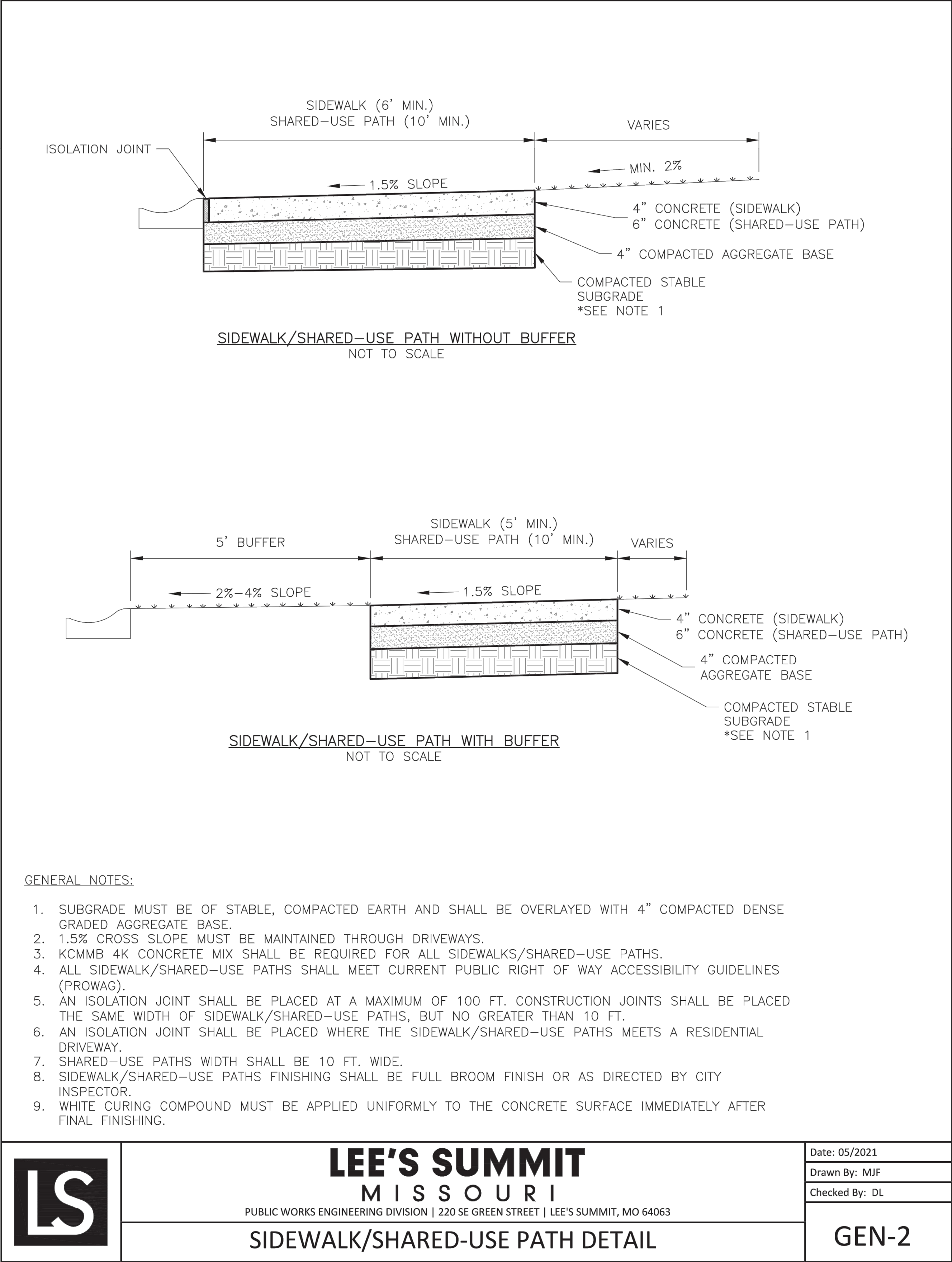


REV. NO.	DATE	REVISIONS DESCRIPTION

STANDARD 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.: T_DET01_02104643
date: 7/14/2023

DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_DET01_02104643.dwg
DATE: Sep 28, 2023 4:15pm
USER: kwilliams2
XREFS: T_PTBLK_002104643



olsson

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

STATE OF MISSOURI
JAMES M. GALLAGHER
NUMBER
PE-2018010499
9/18/2023
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION

REVISIONS

STANDARD DETAILS

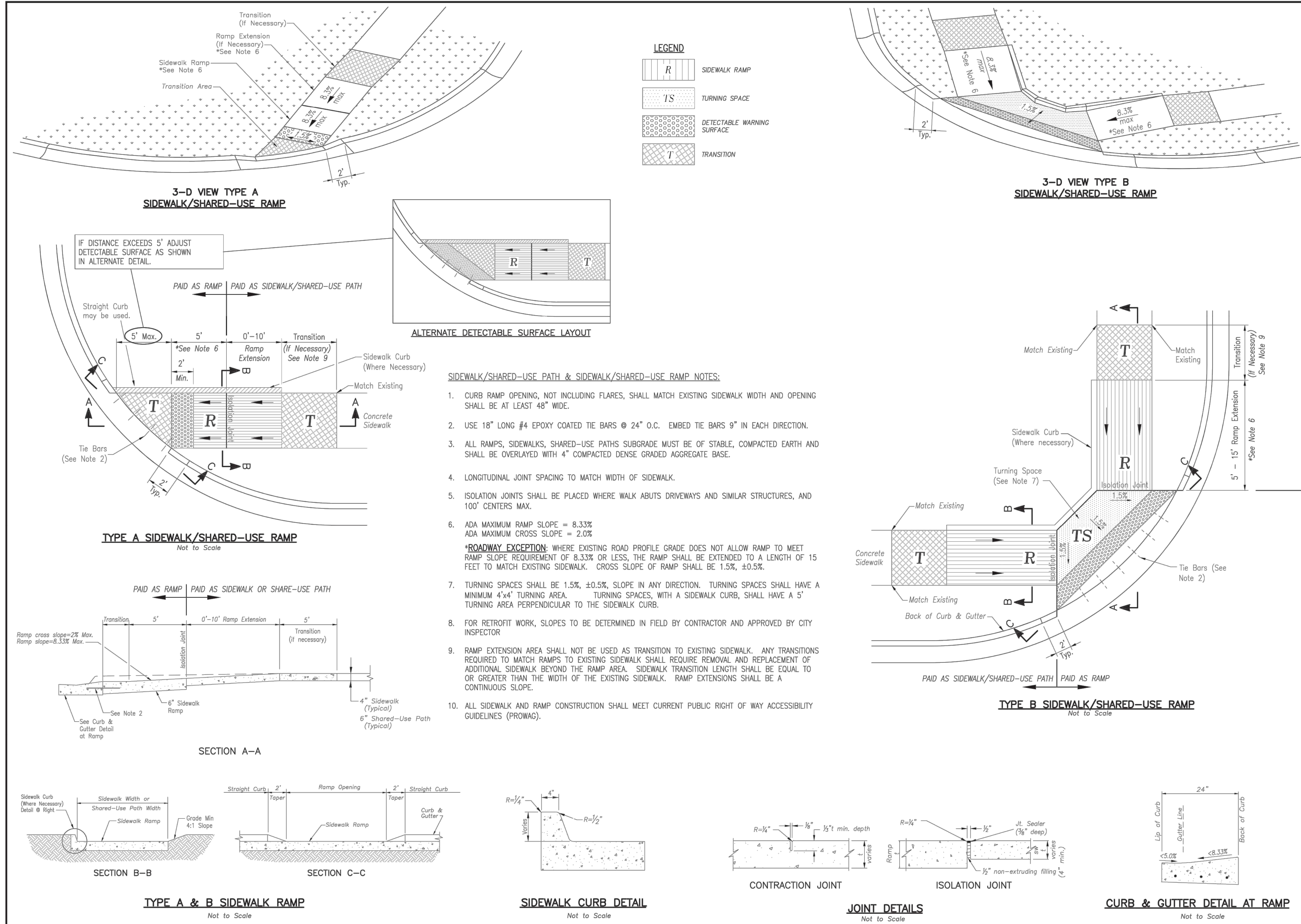
THE VILLAGE AT DISCOVERY PARK
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2023

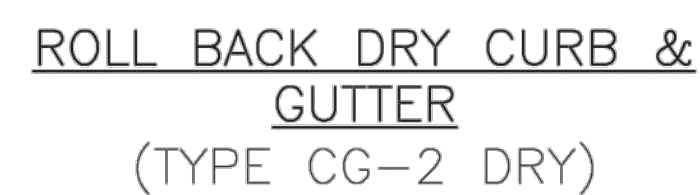
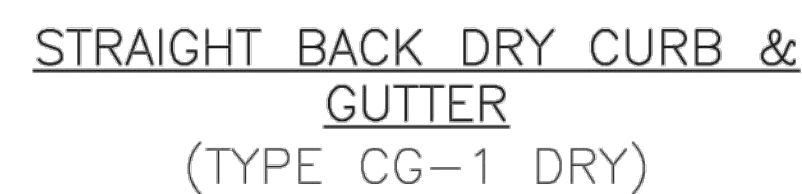
drawn by: BJW
checked by: KLV
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: T_DET01_02104643
date: 7/14/2023

SHEET
29 OF 86





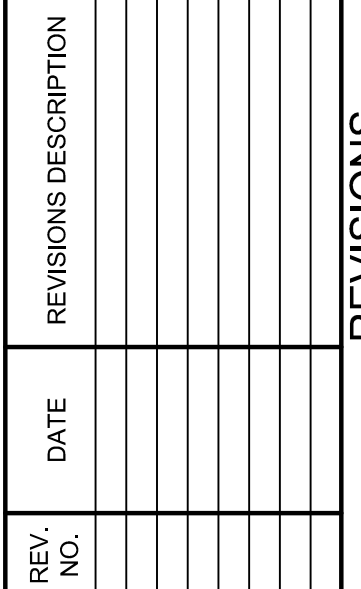
1. 3/4" ISOLATION JOINTS WITH 3' 2"-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS 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.



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

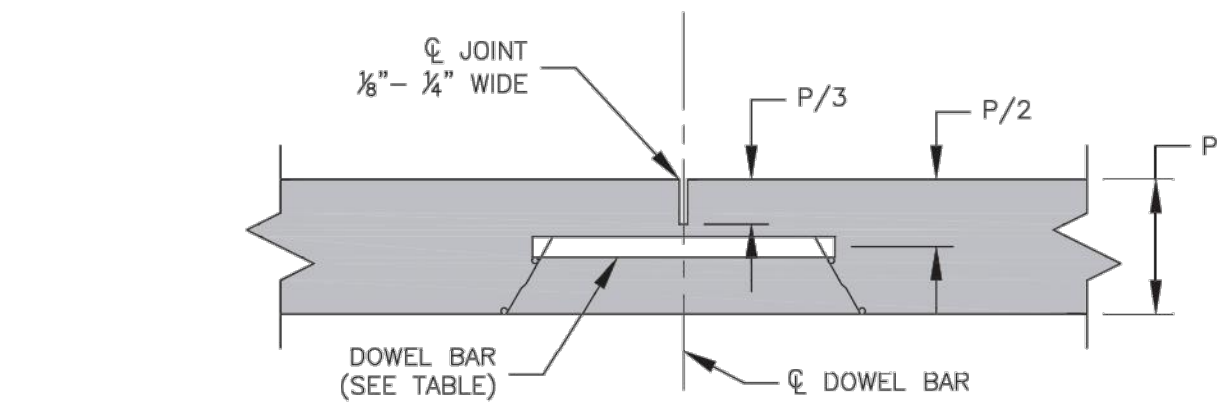
CURB & GUTTER DETAIL

GEN-4



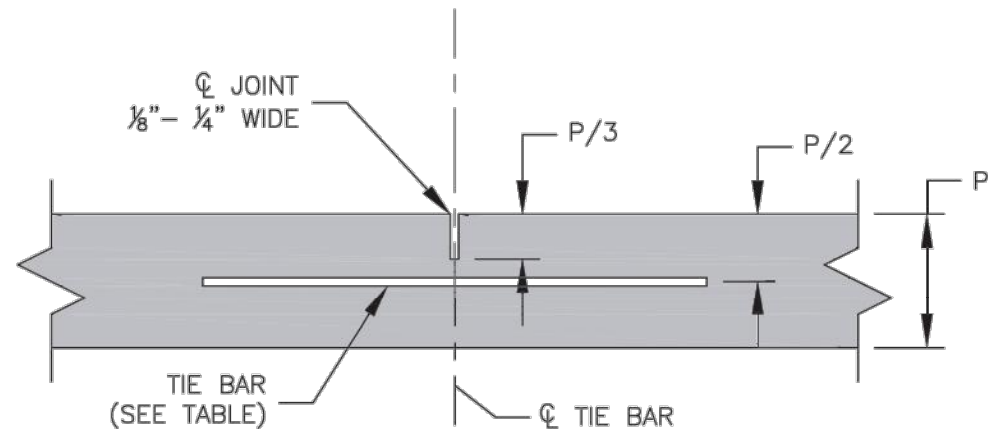
THE VILLAGE AT DISCOVERY PARK COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	2022
E'S SUMMIT, MISSOURI	

SHEET
32 OF 86

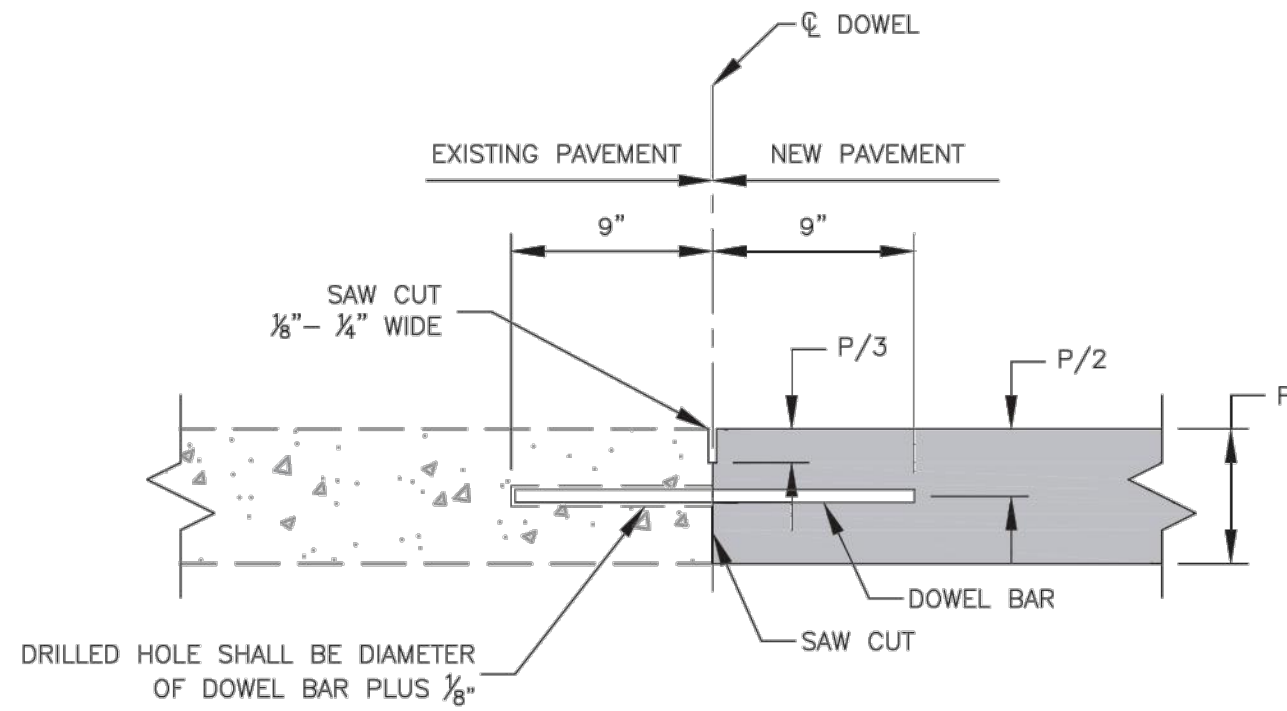


NOTE:
TRANSVERSE CONTRACTION JOINTS FOR CONCRETE PAVEMENT
OR BASE WIDENING SHALL MATCH EXISTING JOINTS.

1 TRANSVERSE CONTRACTION JOINT

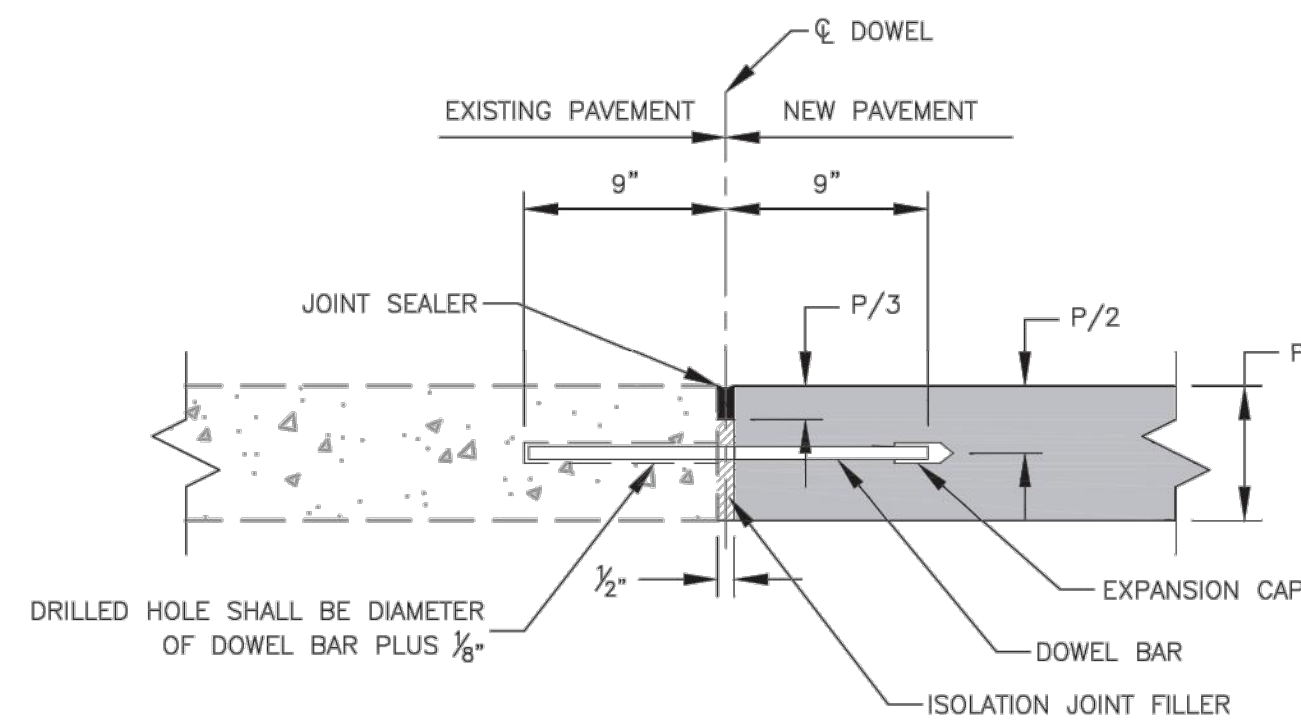


2 LONG. CONTRACTION/CONSTRUCTION JOINT



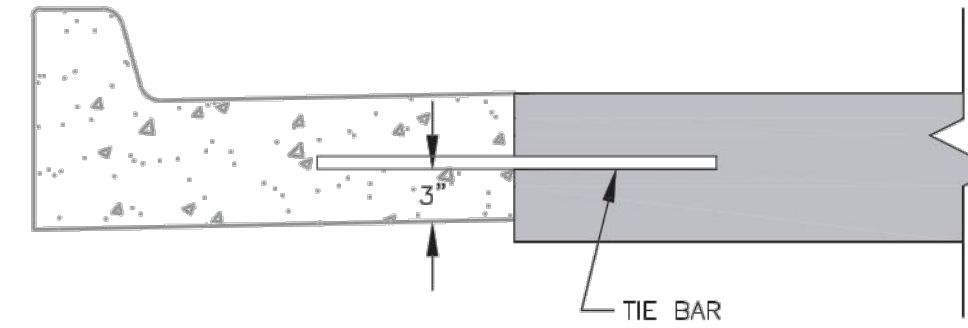
NOTES:
- DOWEL BARS SHALL BE SMOOTH REINFORCING BARS.
- DOWEL BARS SHALL BE BONDED INTO THE EXISTING PAVEMENT.
- BONDING FOR DOWEL BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS.
- THE PORTION OF THE DOWEL OUTSIDE THE HOLE SHALL BE COATED WITH AN APPROVED LUBRICANT.

3 TRANSVERSE CONSTRUCTION JOINT



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.

4 TRANSVERSE ISOLATION JOINT

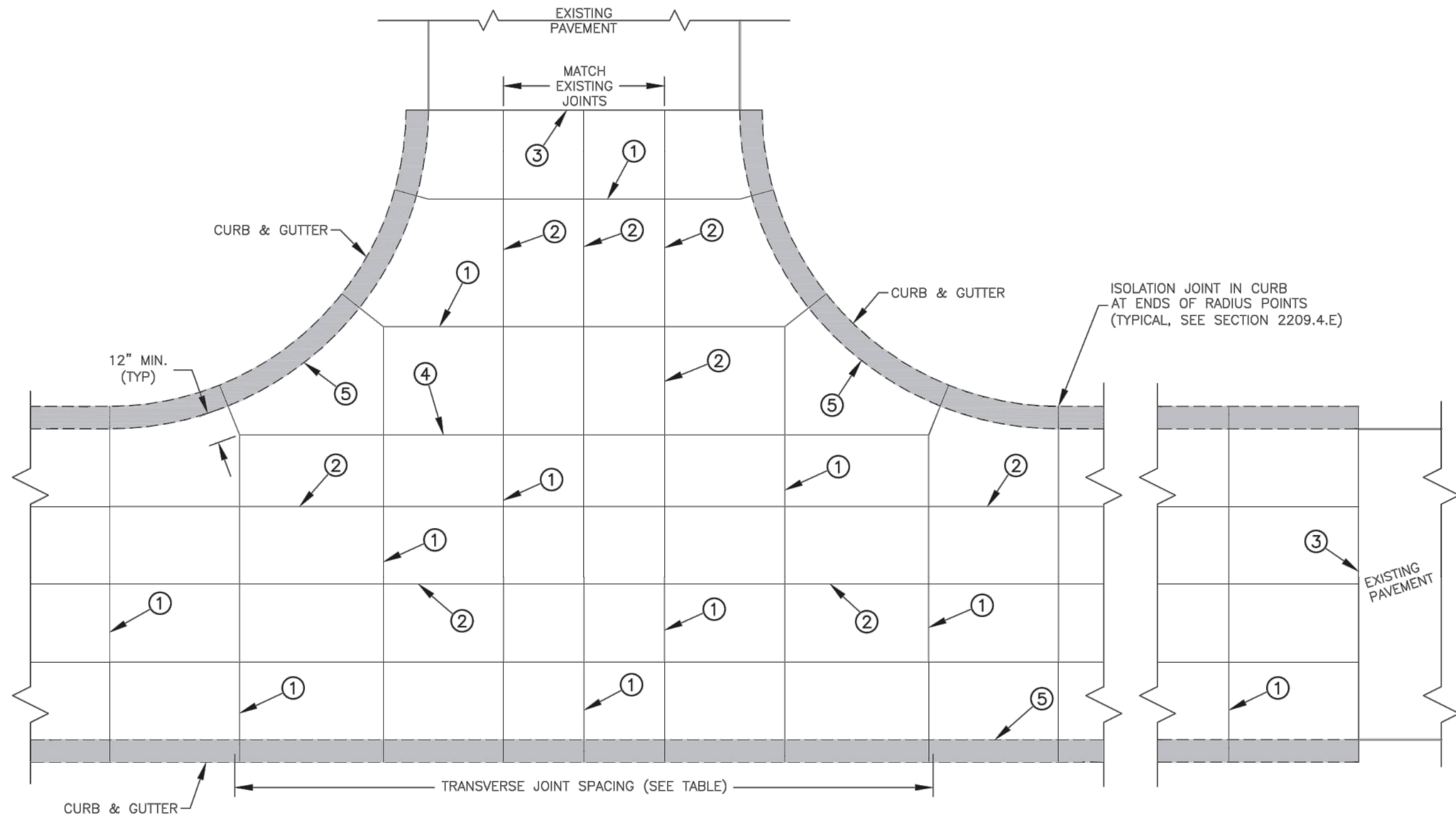


NOTE:
- JOINT NOT NEEDED IF CURB & GUTTER IS MONOLITHICALLY POURED.

5 LONG. CONSTRUCTION JOINT (CURB & GUTTER)

TABLE						
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.



JOINT SPACING/INTERSECTION DETAIL

LEE'S SUMMIT
MISSOURI

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

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

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

GEN-9



REVISIONS DESCRIPTION

DATE

REV. NO.

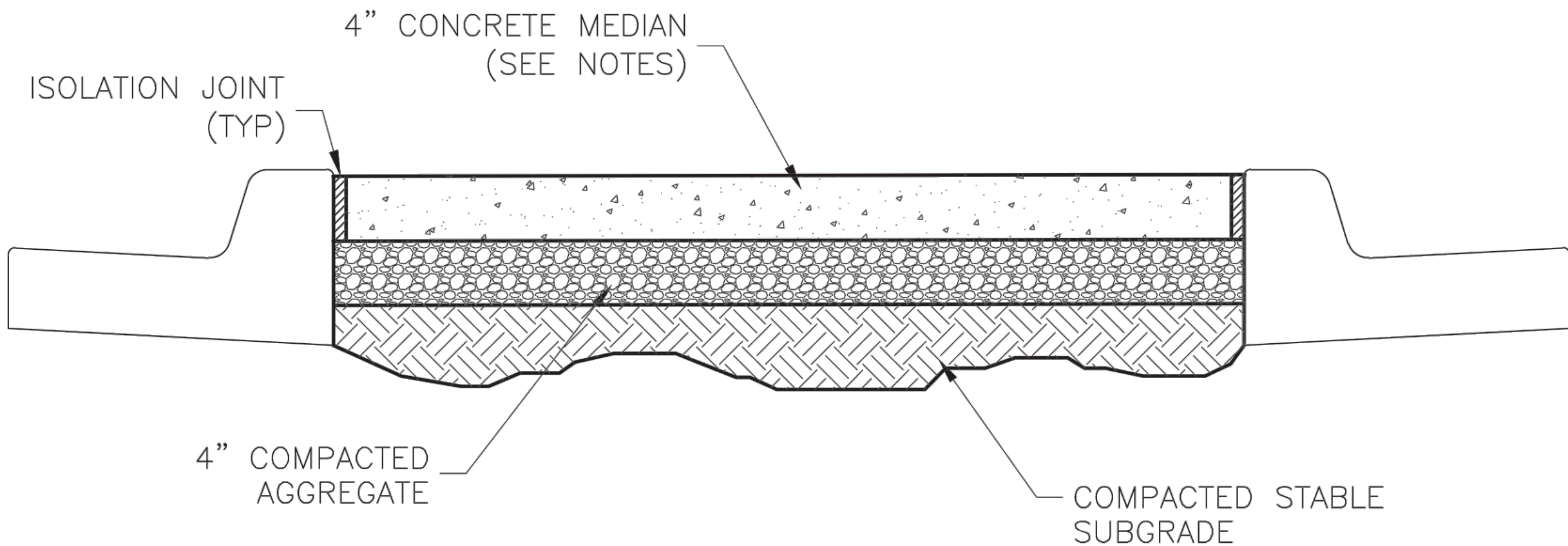
STANDARD DETAILS

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

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

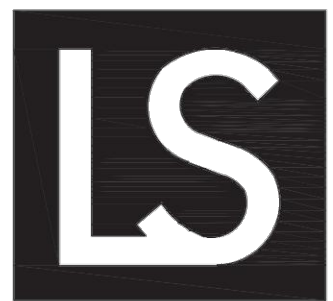
SHEET
33 OF 86

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



GENERAL NOTES

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



LEE'S SUMMIT
MISSOURI

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

MEDIAN REPLACEMENT DETAIL

Date: 05/2021

Drawn By: MJF

Checked By: MP

GEN-10



REVISIONS DESCRIPTION

DATE

REV. NO.

REVISIONS

STANDARD DETAILS

THE VILLAGE AT DISCOVERY PARK

COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2023

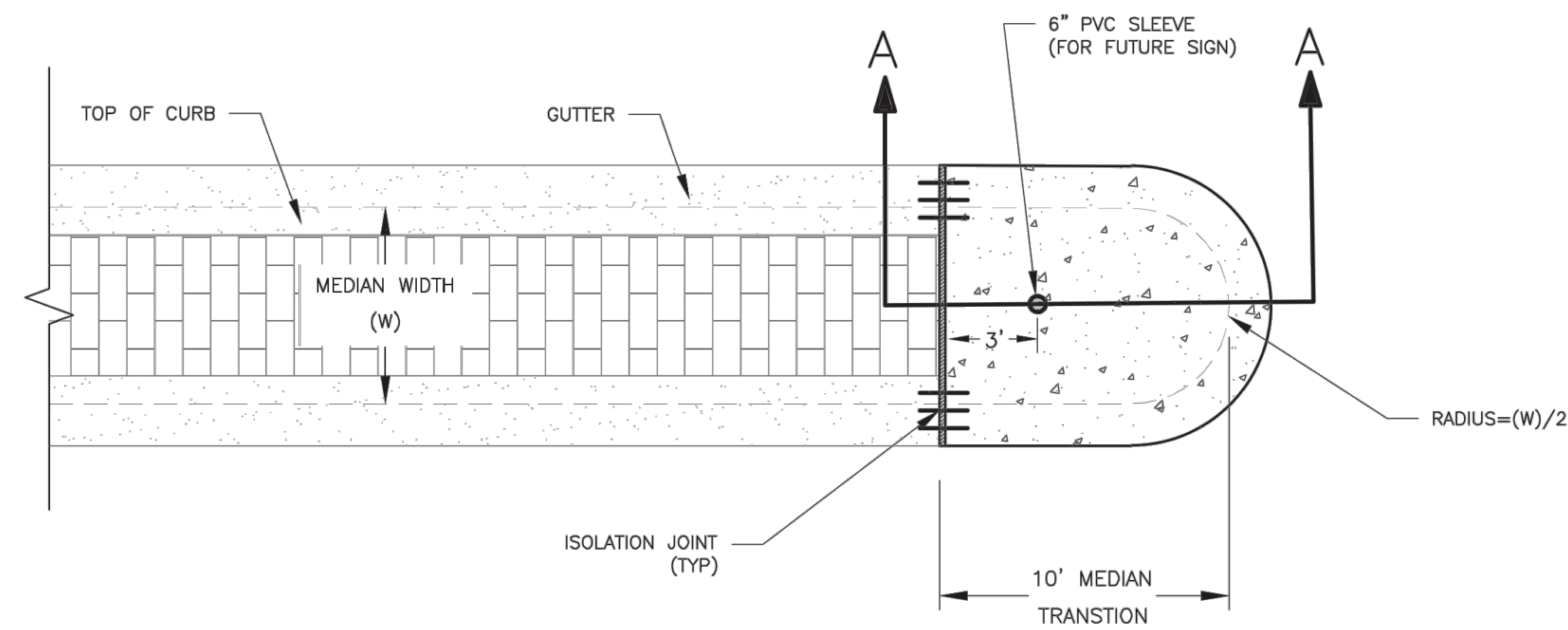
drawn by: BJW
checked by: KLV
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: T_DET01_02104643
date: 7/14/2023

SHEET

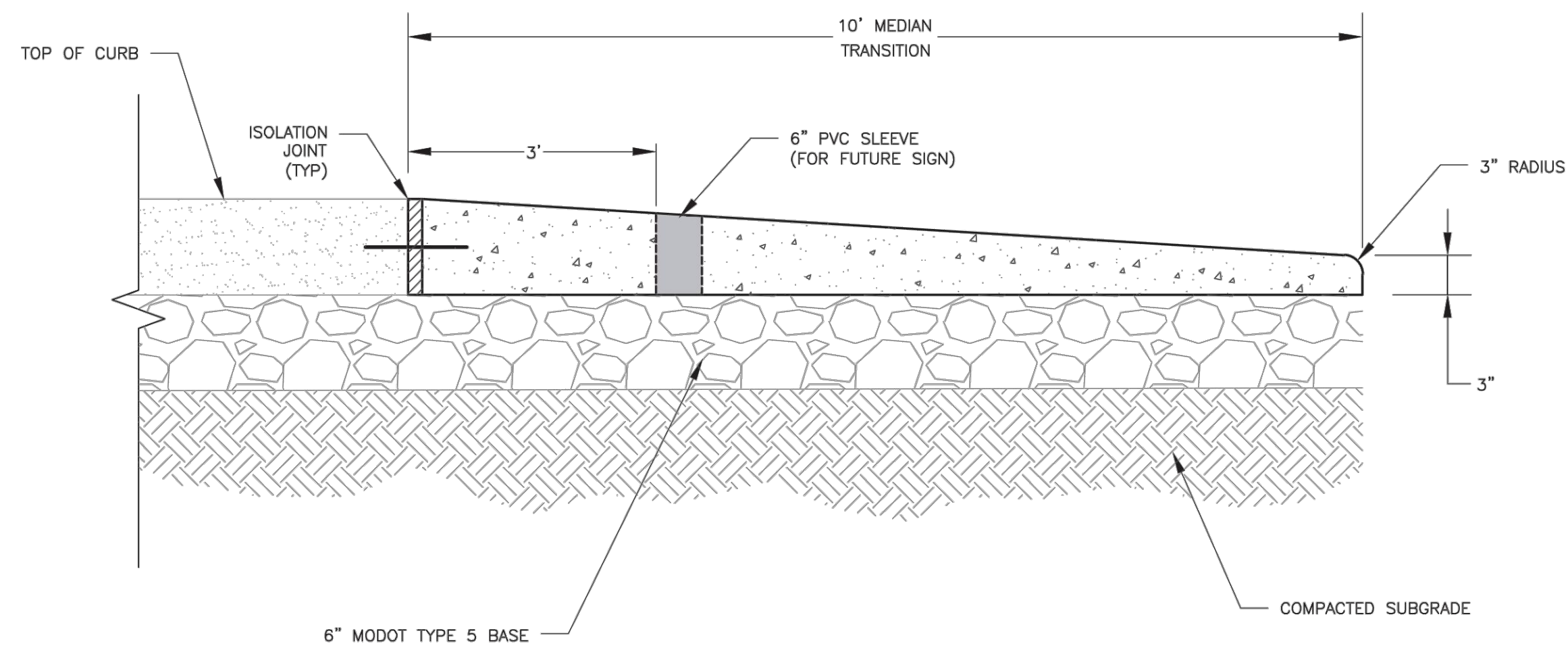
34 OF 86

olsson

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



MEDIAN TRANSITION
PLAN VIEW



MEDIAN TRANSITION
SECTION A-A

NOTES:

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



LEE'S SUMMIT

MISSOURI

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

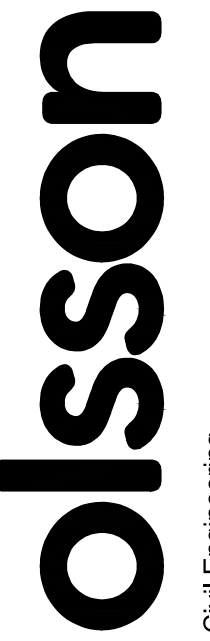
MEDIAN TRANSITION DETAIL

Date: 05/2021

Drawn By: MJF

Checked By: MP

GEN-11



Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116 TEL 8

[illegible]

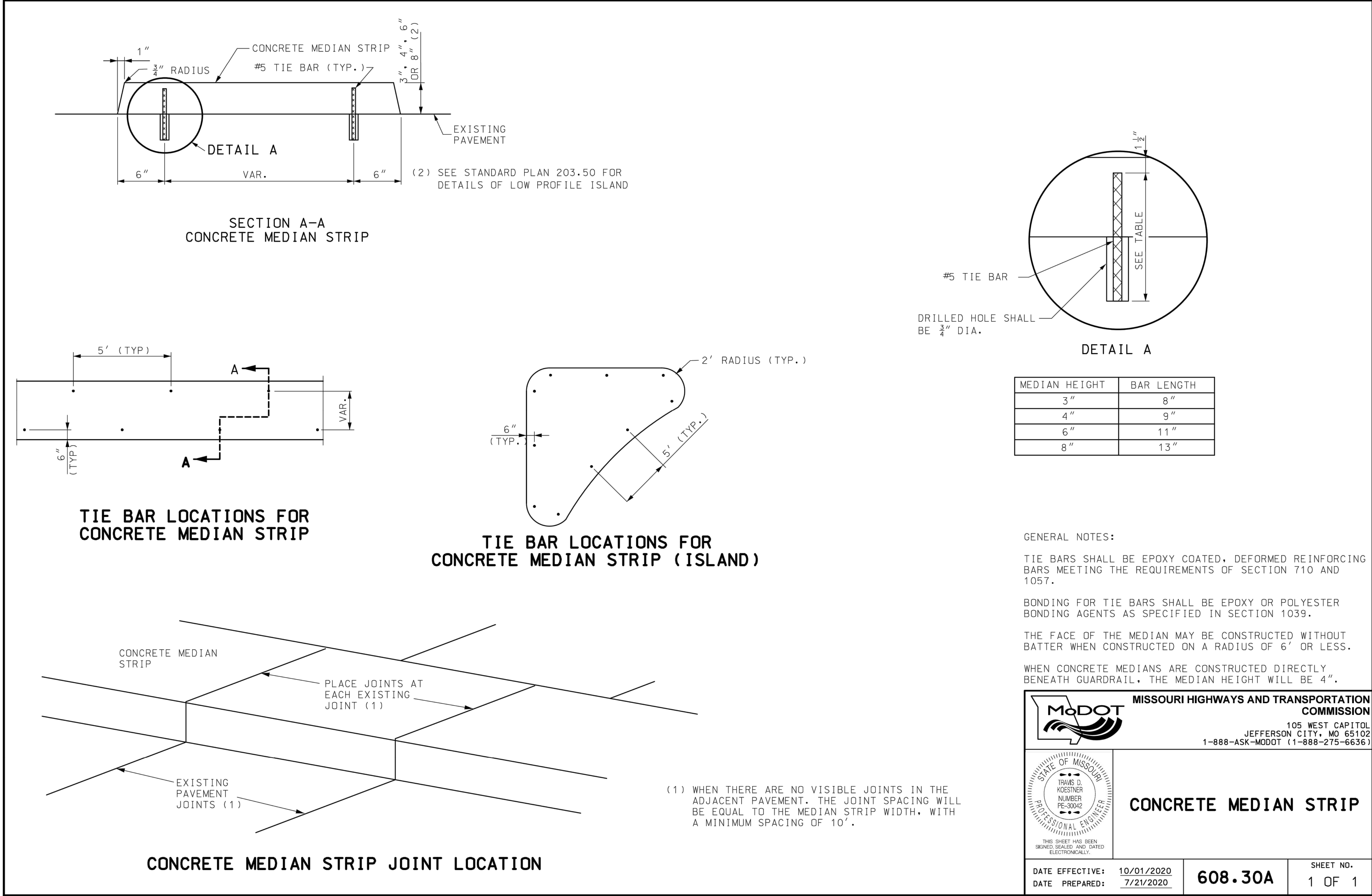
STANDARD DETAILS

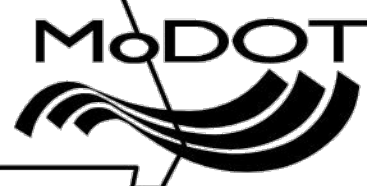
THE VILLAGE AT DISCOVERY PARK COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

Drawn by: BJW
 Checked by: KLW
 Approved by: JPG
 A/QC by: JJW
 Project no.: 021-04643
 Drawing no.: T DET01 02104643
 Date: 7/14/2023

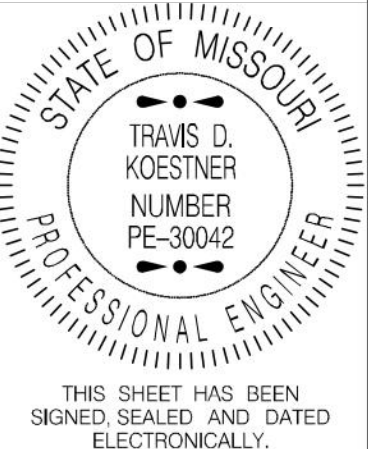
DWG: F:\2021\04501-05000\021-04843-D\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_DET01_02104643.dwg
DATE: Sep 28, 2023 4:16pm
XREFS: T_PTBULK_002104643
USER: kwilliams2





MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



STATE OF MISSOURI
TRAVIS D. KOESTNER
NUMBER PE-30042
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

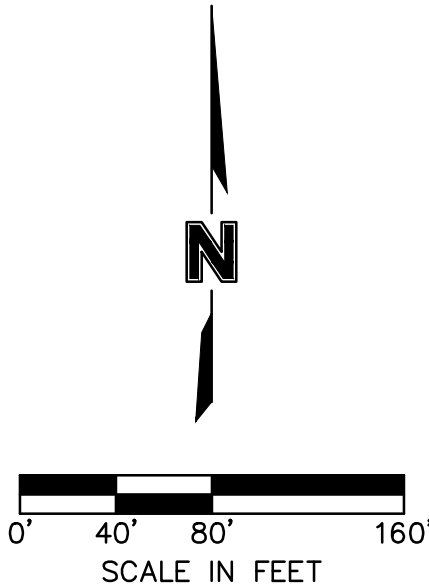
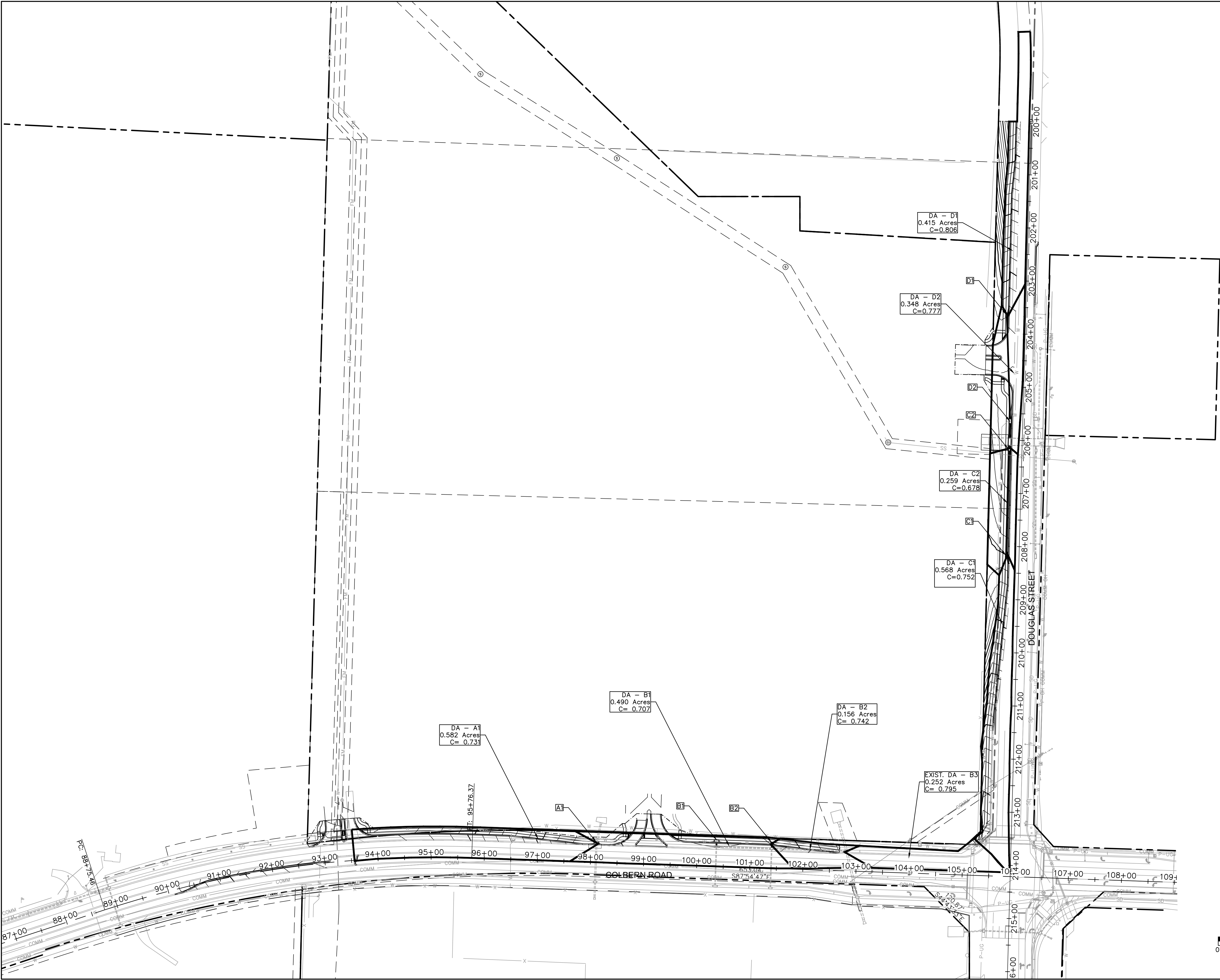
CONCRETE MEDIAN STRIP

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

SHEET NO. 1 OF 1

608.30A

DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_DRN01_D02104643.dwg
DATE: Sep 28, 2023 4:17pm XREFS: T_PSTRM_D02104643 T_PBASE_D02104643 C_XALTA_B2104643 C_FROAD_D2104643 L_PTBLK_D2104643 I_PTBLK_D02104643 USER: twilliams2



DRAINAGE AREA MAP

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

LEE'S SUMMIT, MISSOURI

drawn by: BJW
checked by: KLV
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: T_DRN01_D02104643
date: 9/14/2023

37 OF 86

STATE OF MISSOURI
JAMES M. GALLAGHER
NUMBER
PE-2018010499
9/18/2023
PROFESSIONAL ENGINEER

REVISIONS DESCRIPTION
DATE
REV. NO.

2023

olsson

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

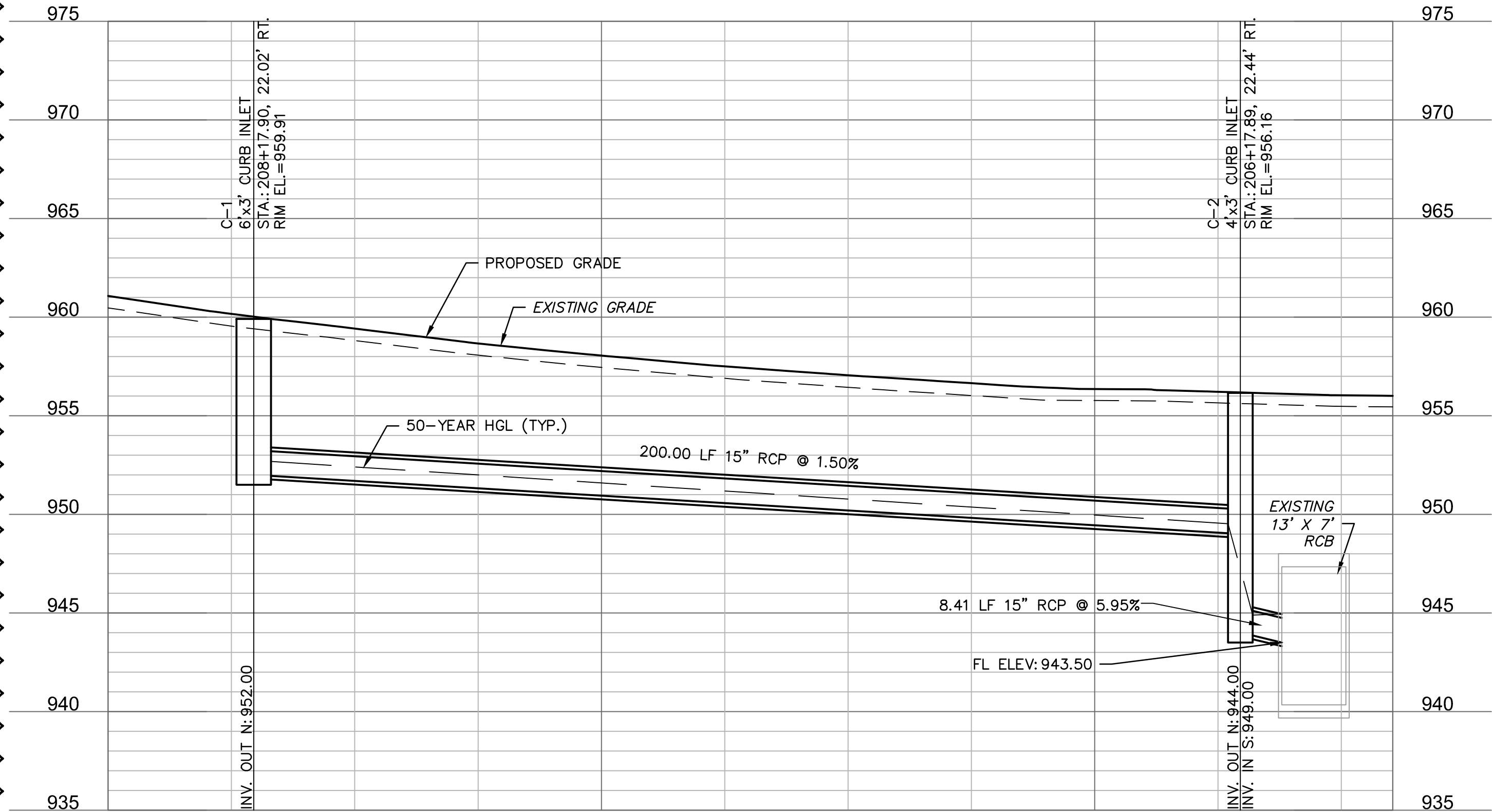
1

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

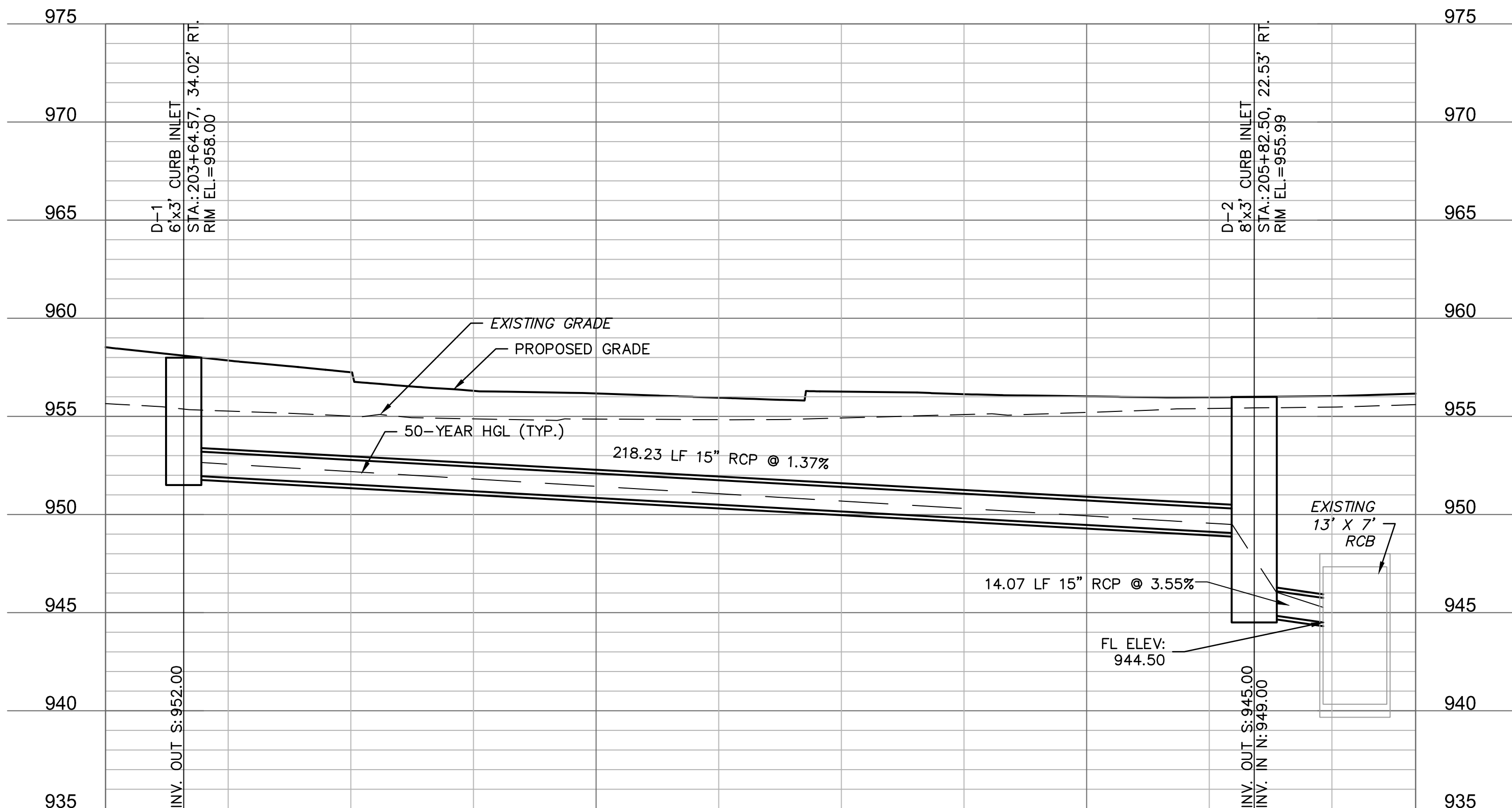
50-YEAR STORM PIPE CALCULATIONS																									
Label	Start Node	Stop Node	Upstream Inlet Area (acres)	Upstream Inlet C	Upstream Inlet Tc (min)	System CA (acres)	Time (Pipe Flow) (min)	System Flow Time (min)	System Rational Flow (cfs)	Invert (Start) (ft)	Invert (Stop) (ft)	Slope (Calculated)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

DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final_Plans\Sheets\RDV\T_STM01_D02104643.dwg
DATE: Oct 20, 2023 2:50pm
XREFS: T_PBASE_D02104643 T_PBLK_D02104643 T_PSTRM_D02104643 T_PSTRMPROF_D02104643
USER: kwilliams2

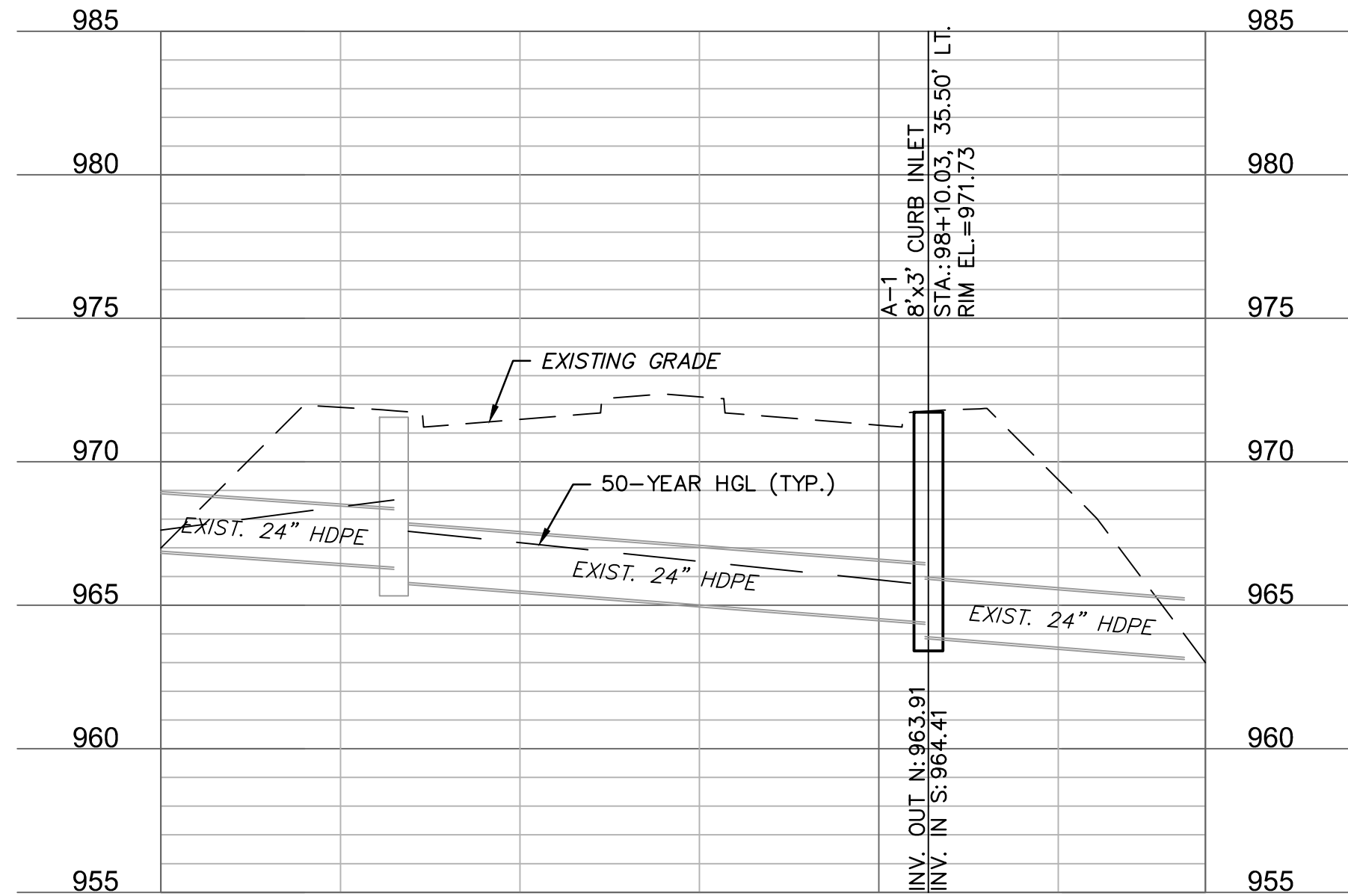
STORMLINE C



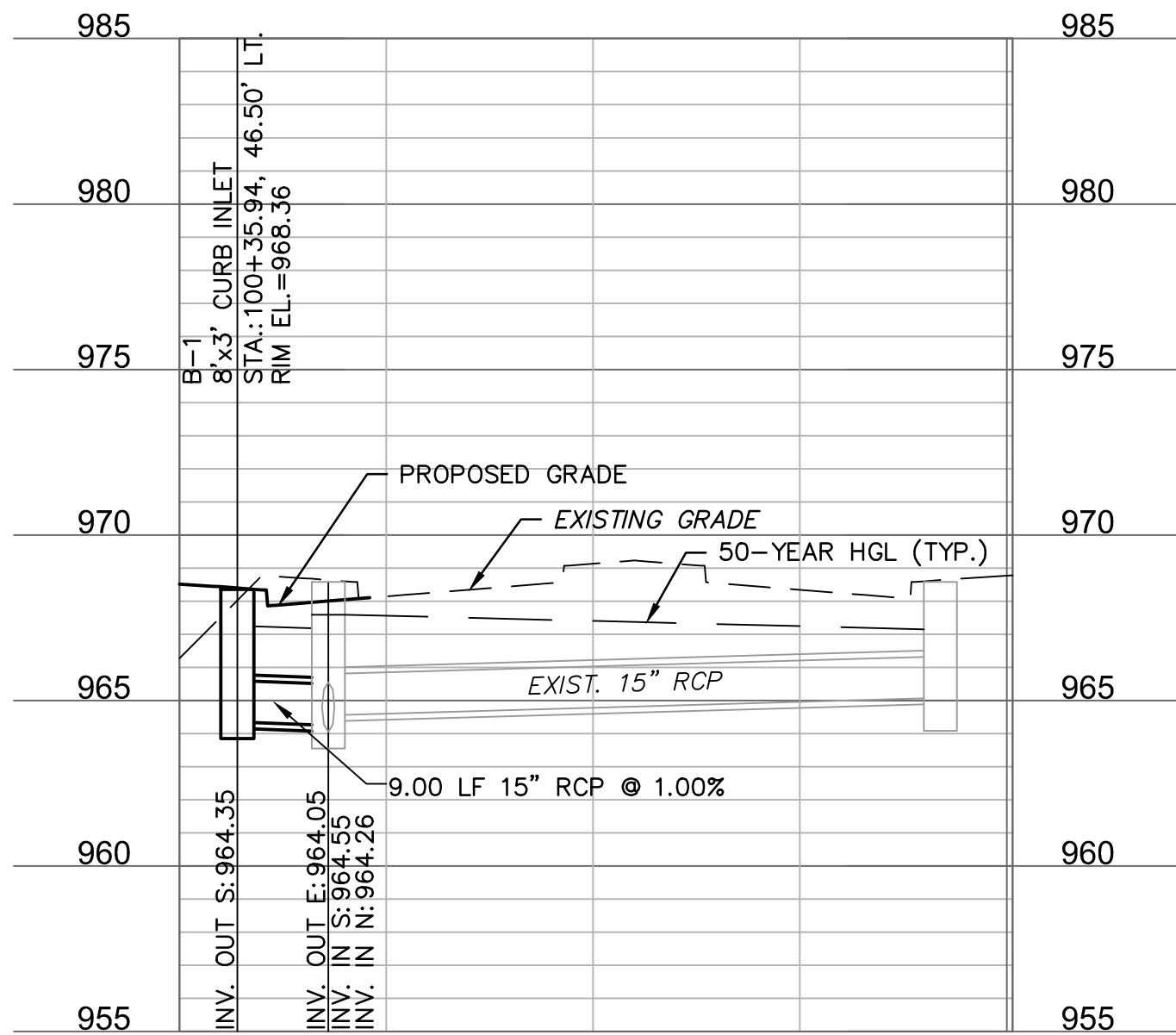
STORMLINE D



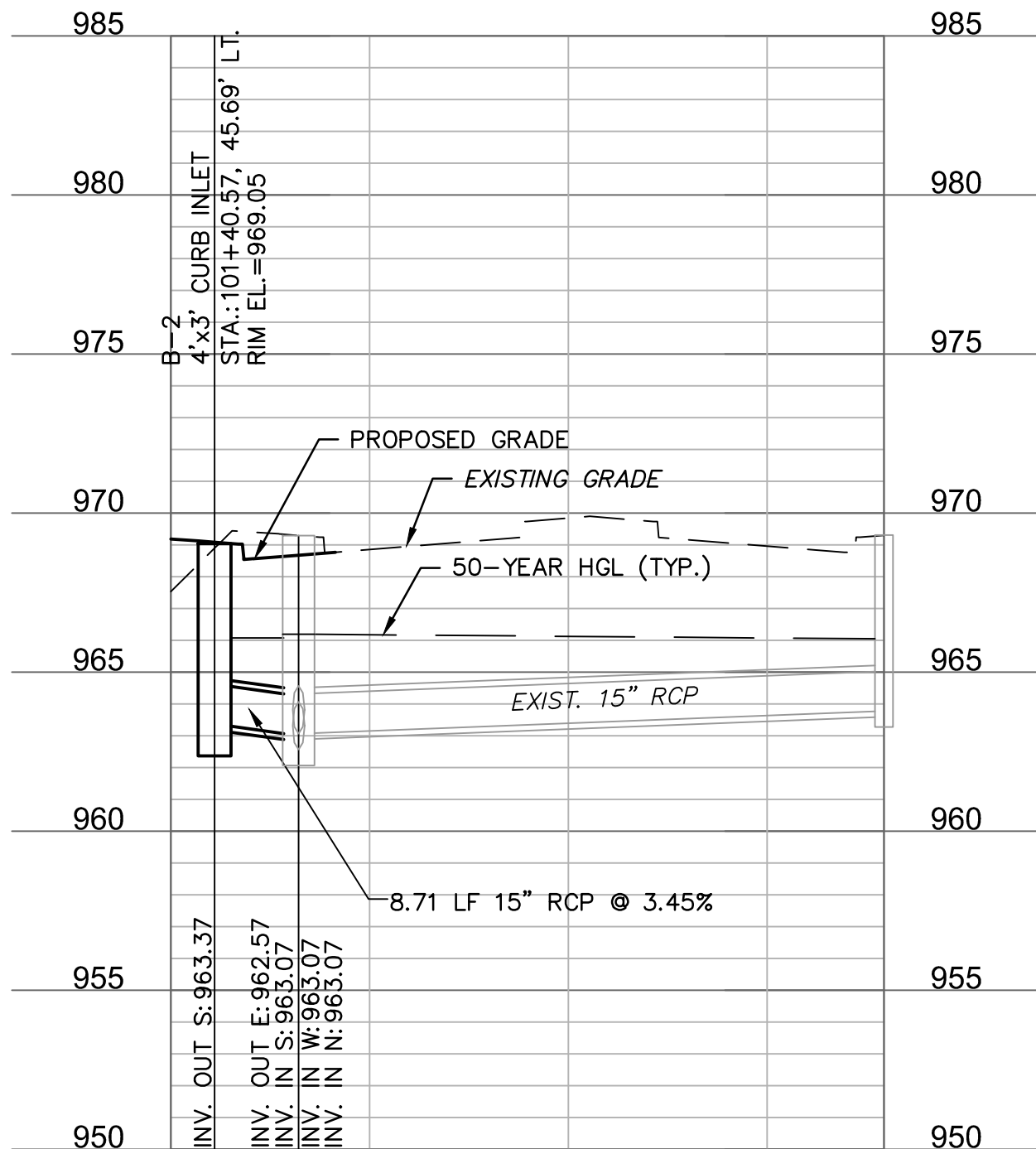
STORMLINE A



STORMLINE B1



STORMLINE B2



STORM SEWER PLAN AND PROFILE

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

drawn by: BJW
checked by: KLW
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: STM01_D02104643
date: 7/14/2023

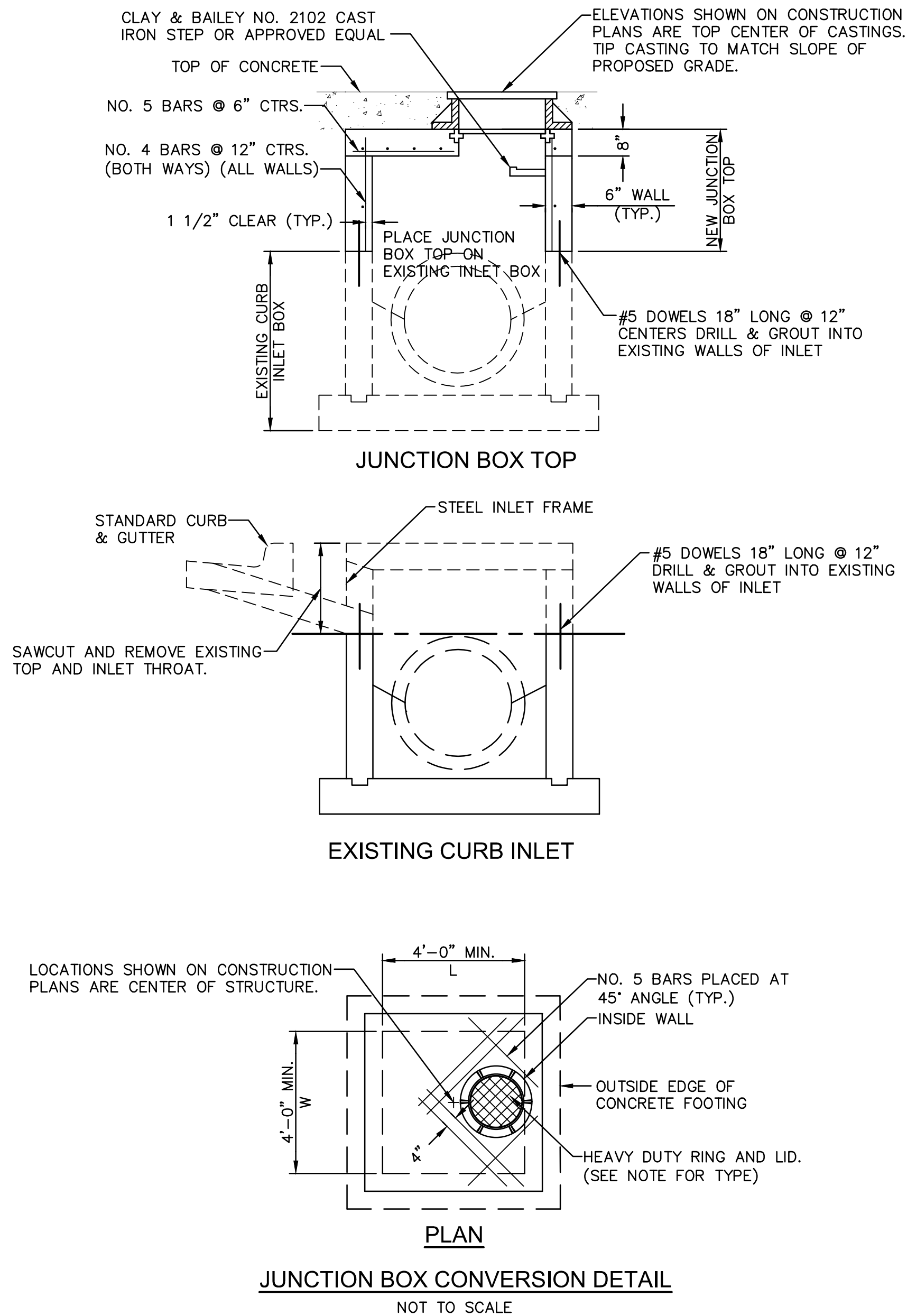
SHEET
39 OF 86



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

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



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

olsson

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

STATE OF MISSOURI
JAMES M. GALLAGHER
NUMBER
PE-2018010499
9/18/2023
PROFESSIONAL ENGINEER

REVISIONS DESCRIPTION

DATE

REV. NO.

REVISIONS

STORM SEWER DETAILS

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

LEE'S SUMMIT, MISSOURI

drawn by: BJW
checked by: KLV
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: STMD01_D02104643
date: 7/14/2023

SHEET

40 OF 86

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.

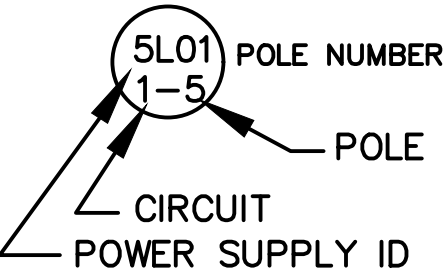
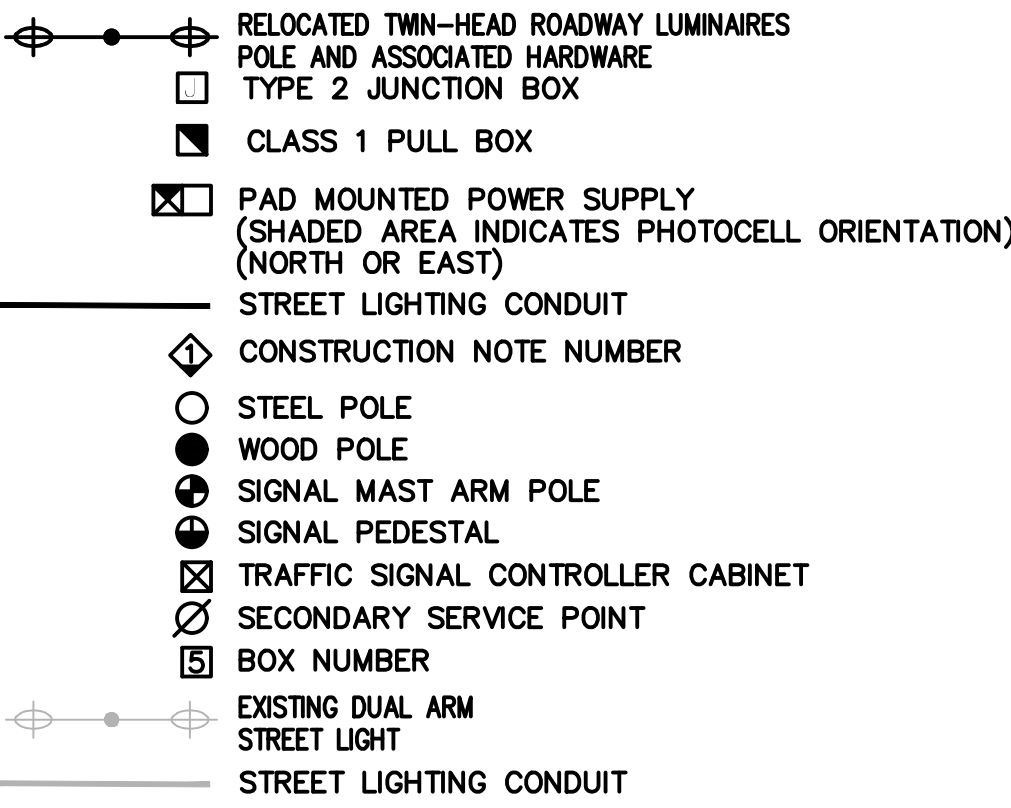
RECAPITULATION OF QUANTITIES

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.

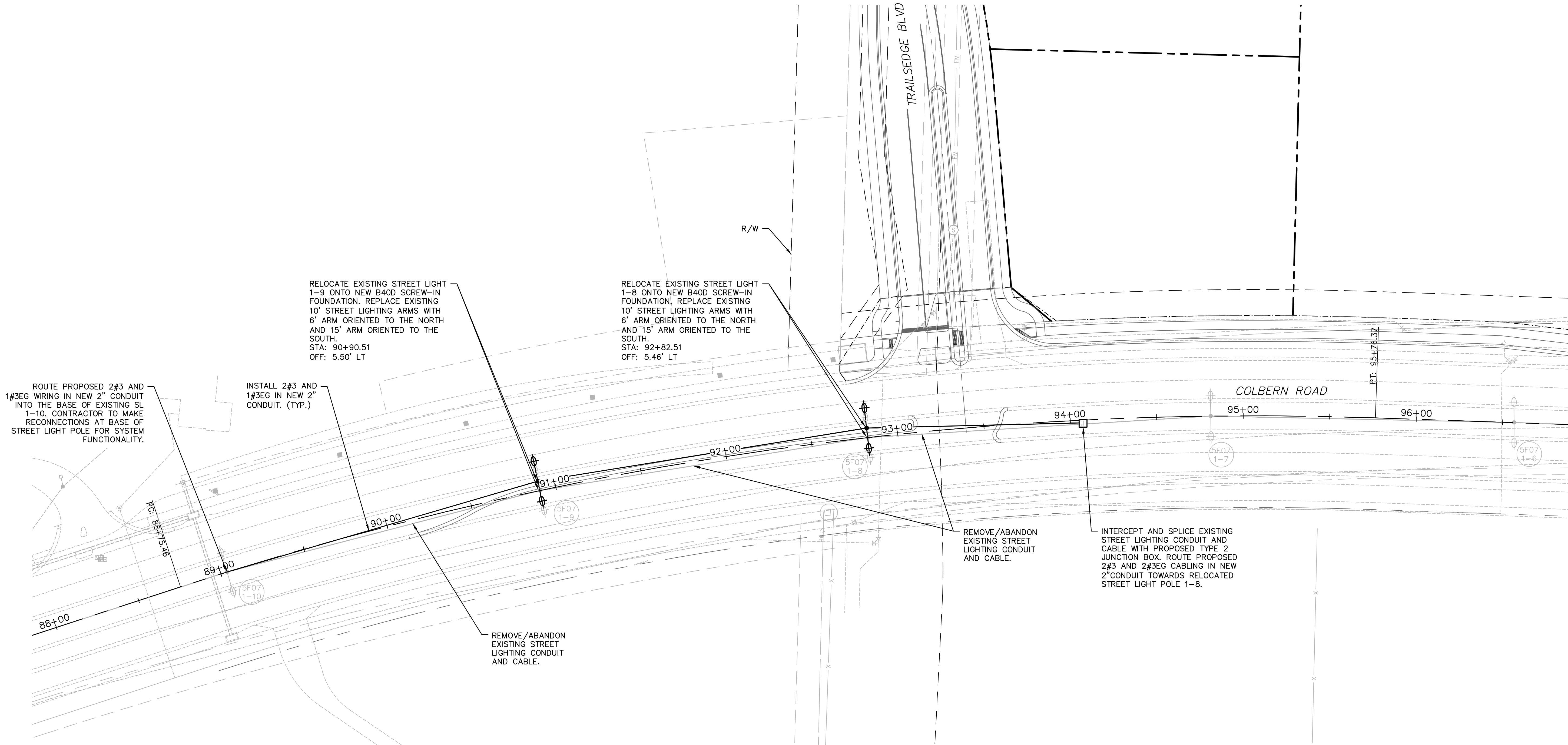
STREET LIGHT LEGEND



WIRING DIAGRAM

[illegible]

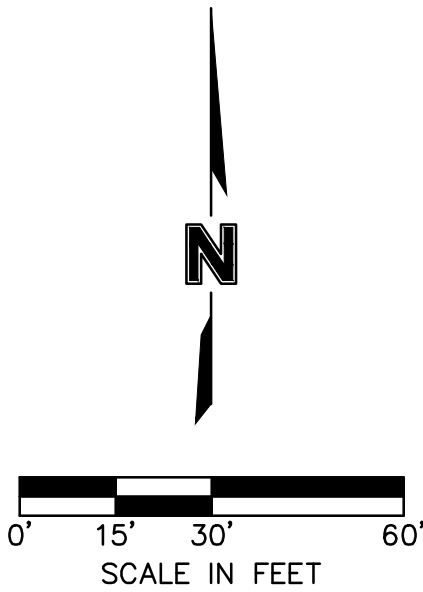
DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final Plans\Sheets\JTTC\LIGHTING PLAN\F_LGT_D2104643.dwg
DATE: Sep 27, 2023 4:53pm
XREFS: T_PSTRM_D02104643 C_PBASE_D02104643 C_PBN DY_D2104643 C_XALTA_B2104643 F_PBASE_D2104643 F_PBASE_D2104643 I_PBASE_D02104643 T_PBASE_D2104643 F_PTBLK_D02104643 C_FROAD_D2104643 F_LTG-DTLS_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.olsosn.com

STATE OF MISSOURI

JOSHUA PUDLOWSKI

NUMBER

FE-2021009515

PROFESSIONAL ENGINEER

REV. NO.

DATE

REVISIONS DESCRIPTION

LIGHTING RELOCATION
COLBERN ROAD

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

LEE'S SUMMIT, MISSOURI

drawn by: SRH

checked by: JSC

approved by: JSS

QA/QC by: SLT

project no.: 021-04643

drawing no.: 1 OF 3

date: 8/27/2023

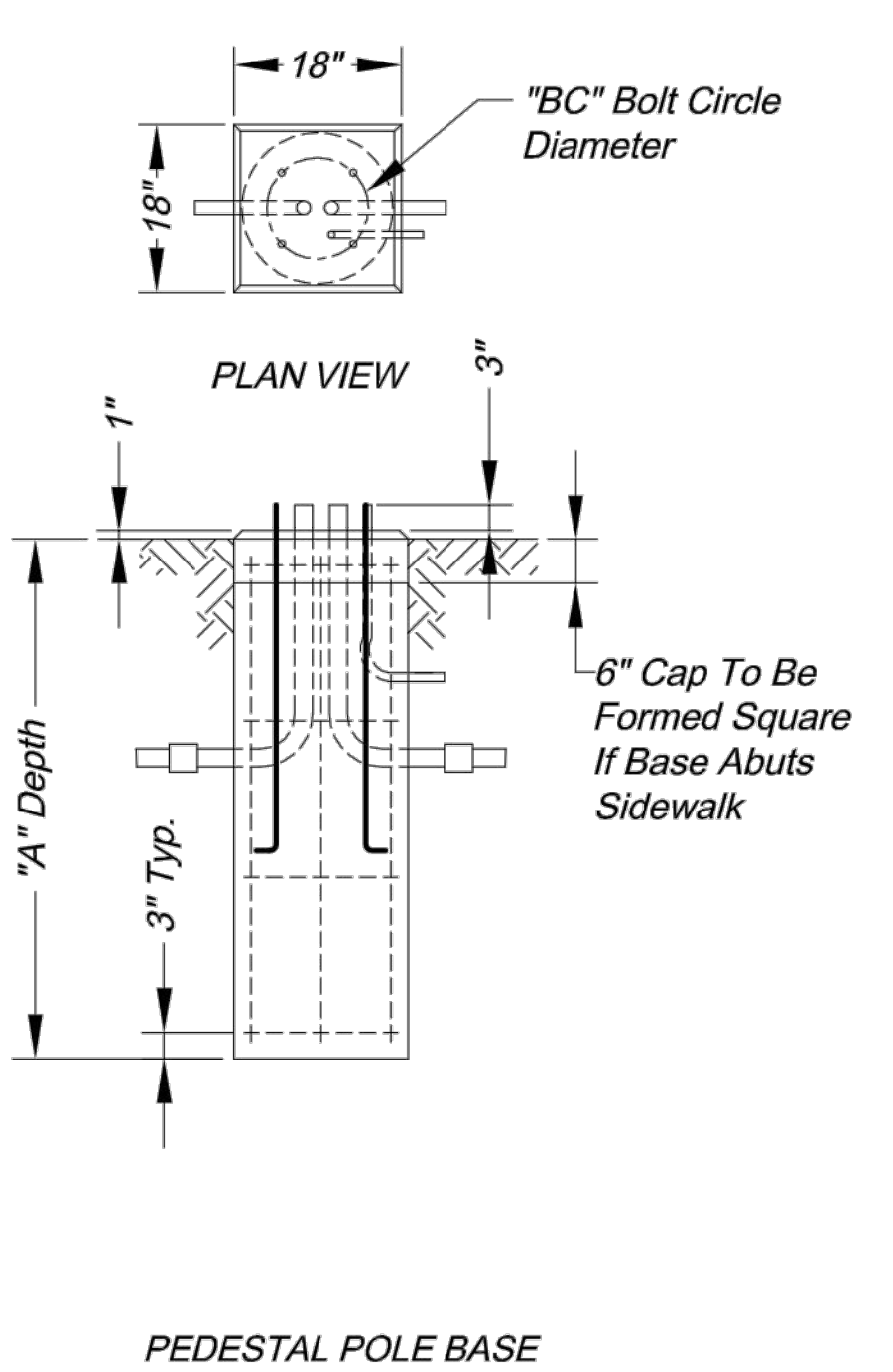
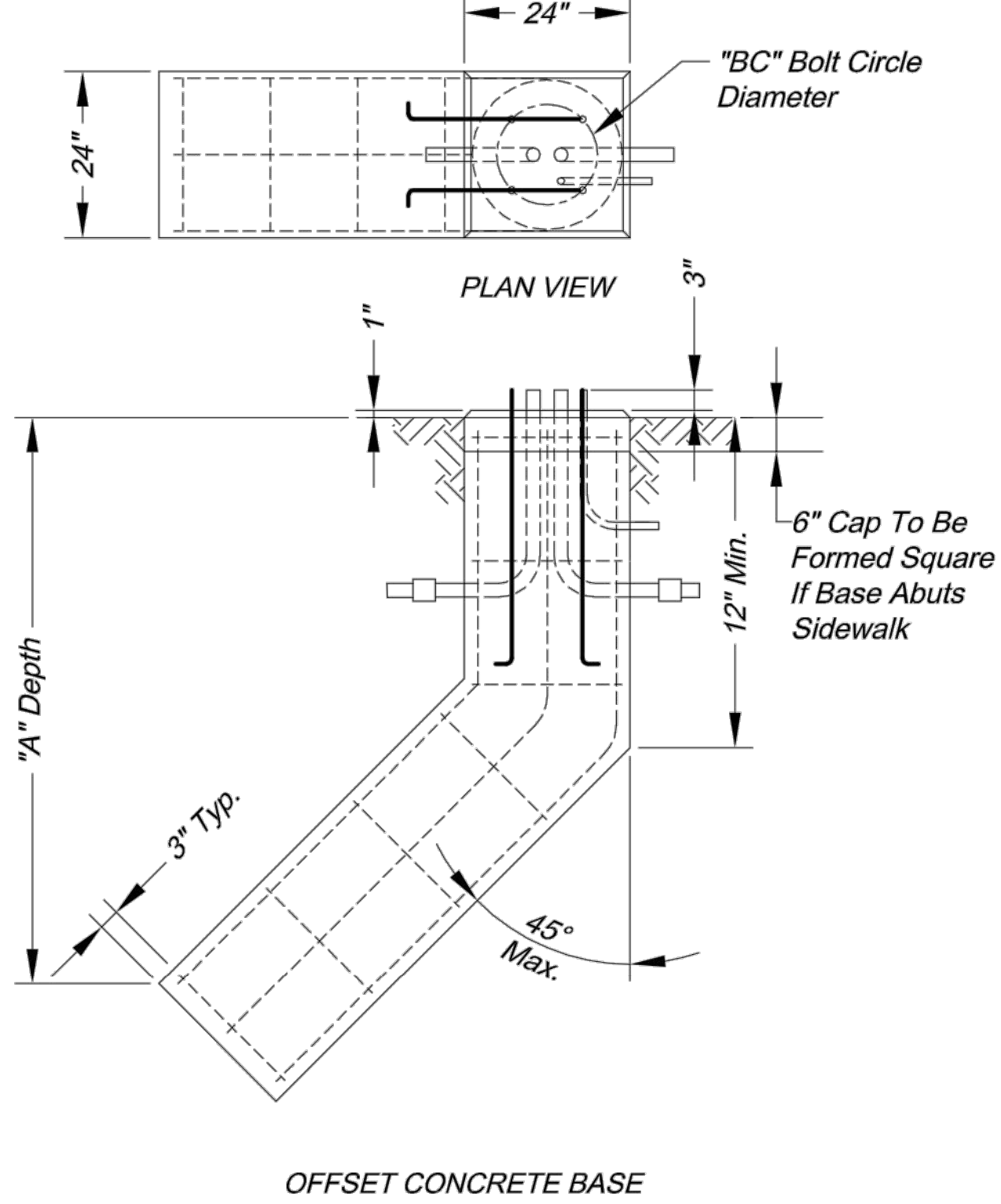
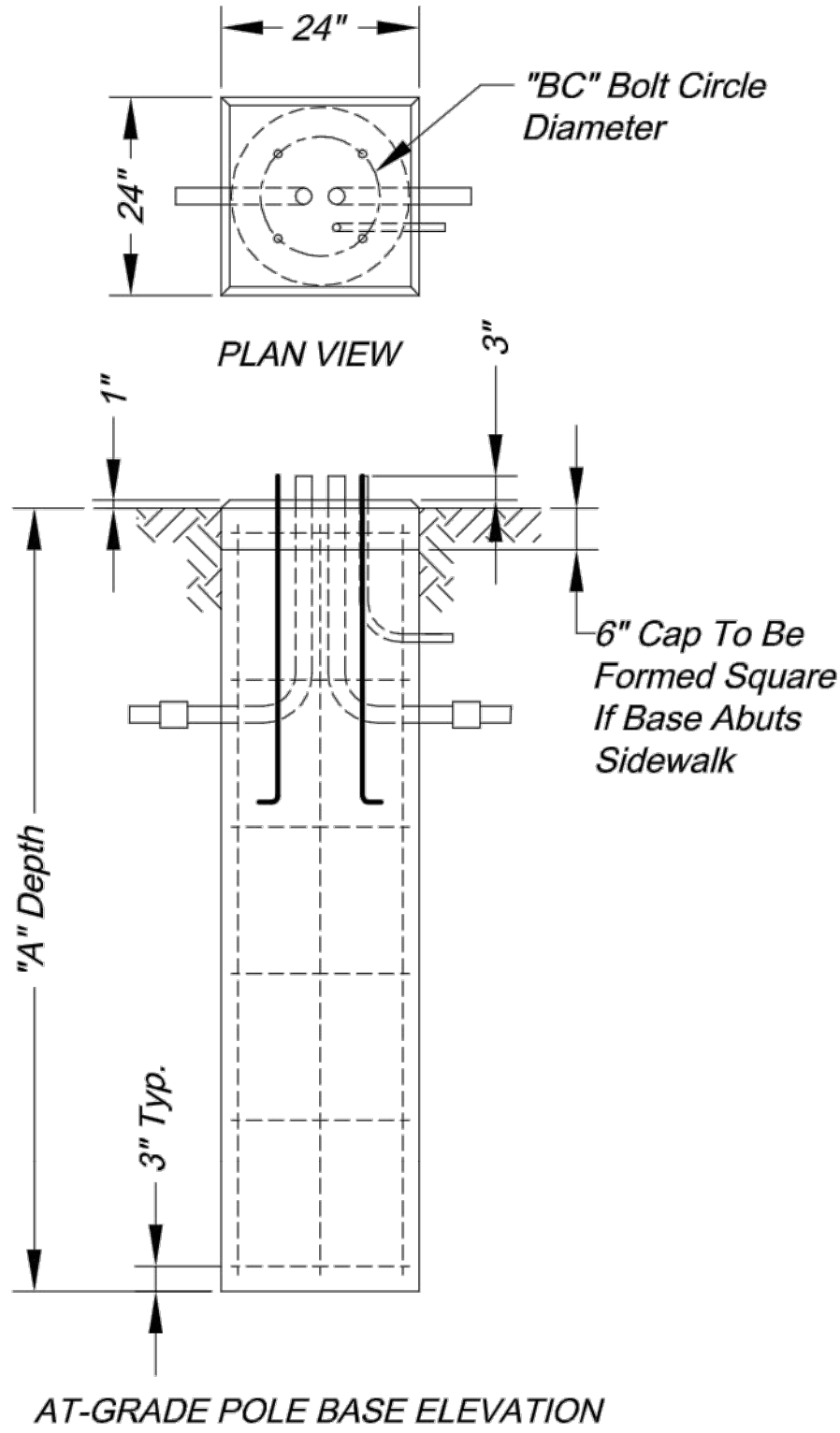
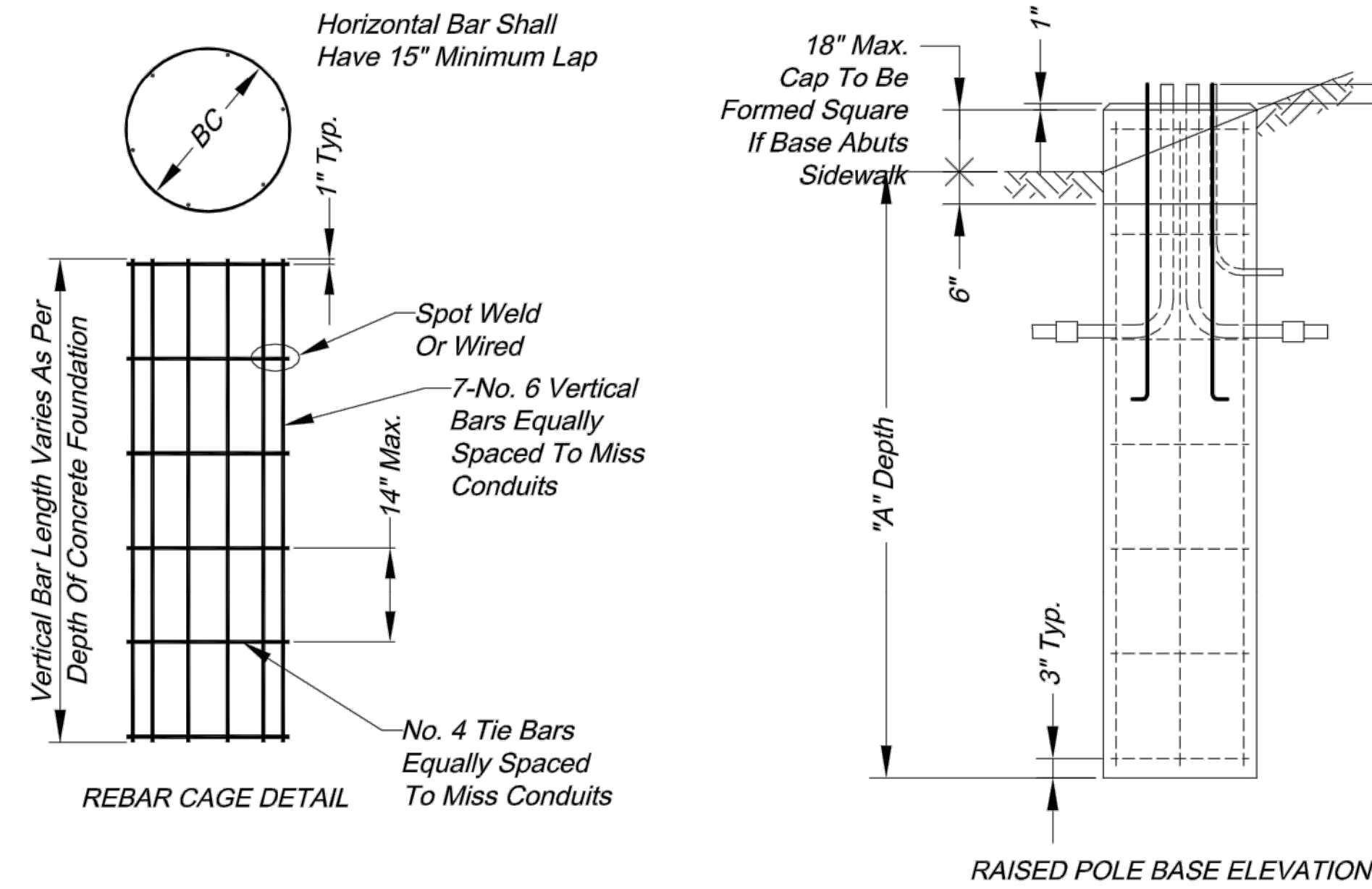
SHEET

43 OF 86

2023

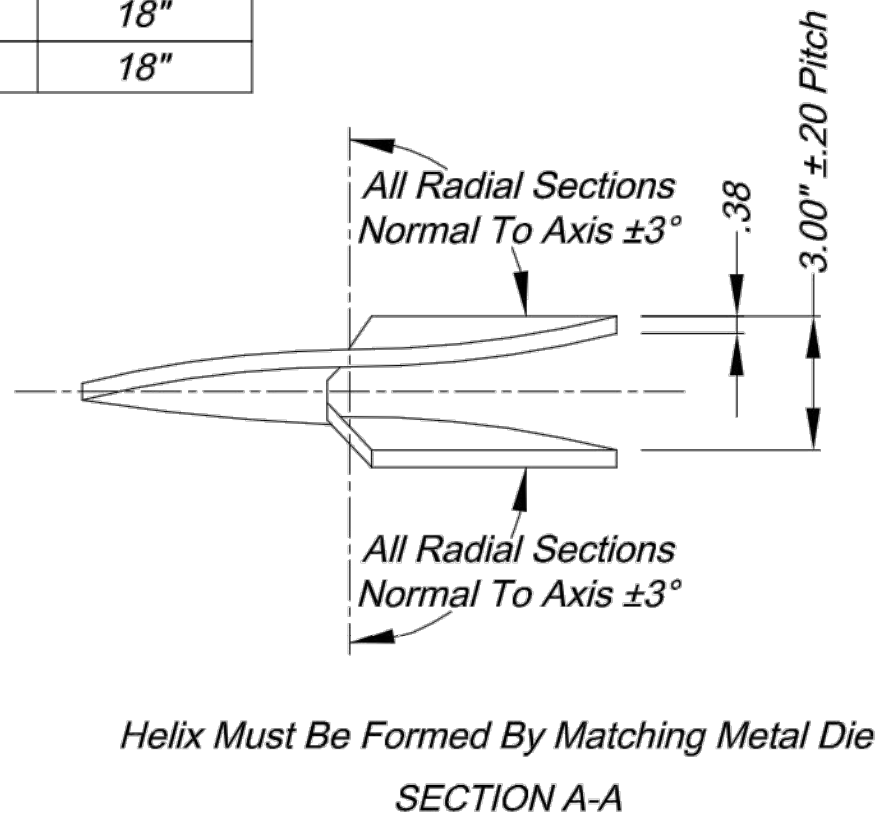
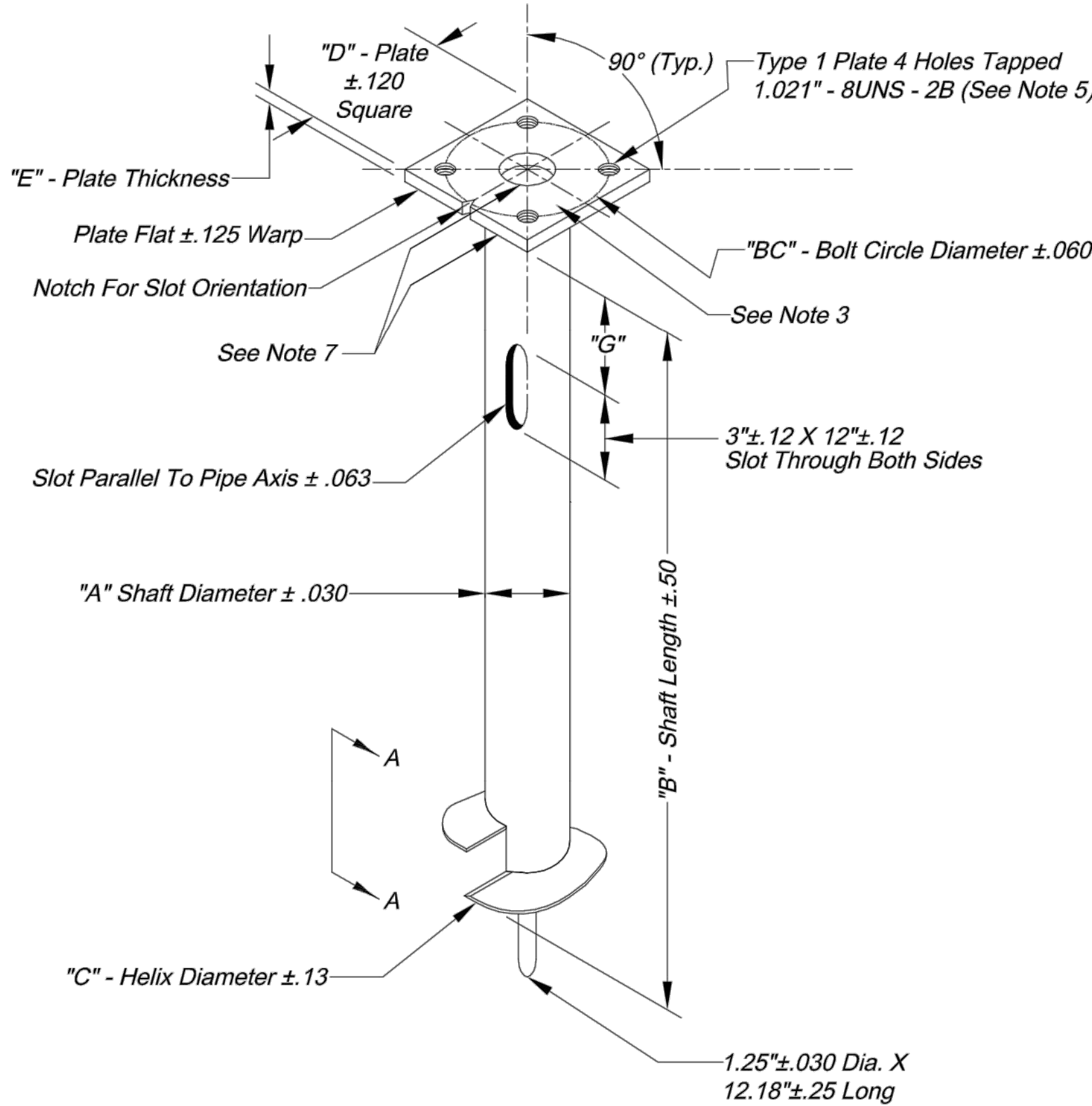
REVISIONS

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"

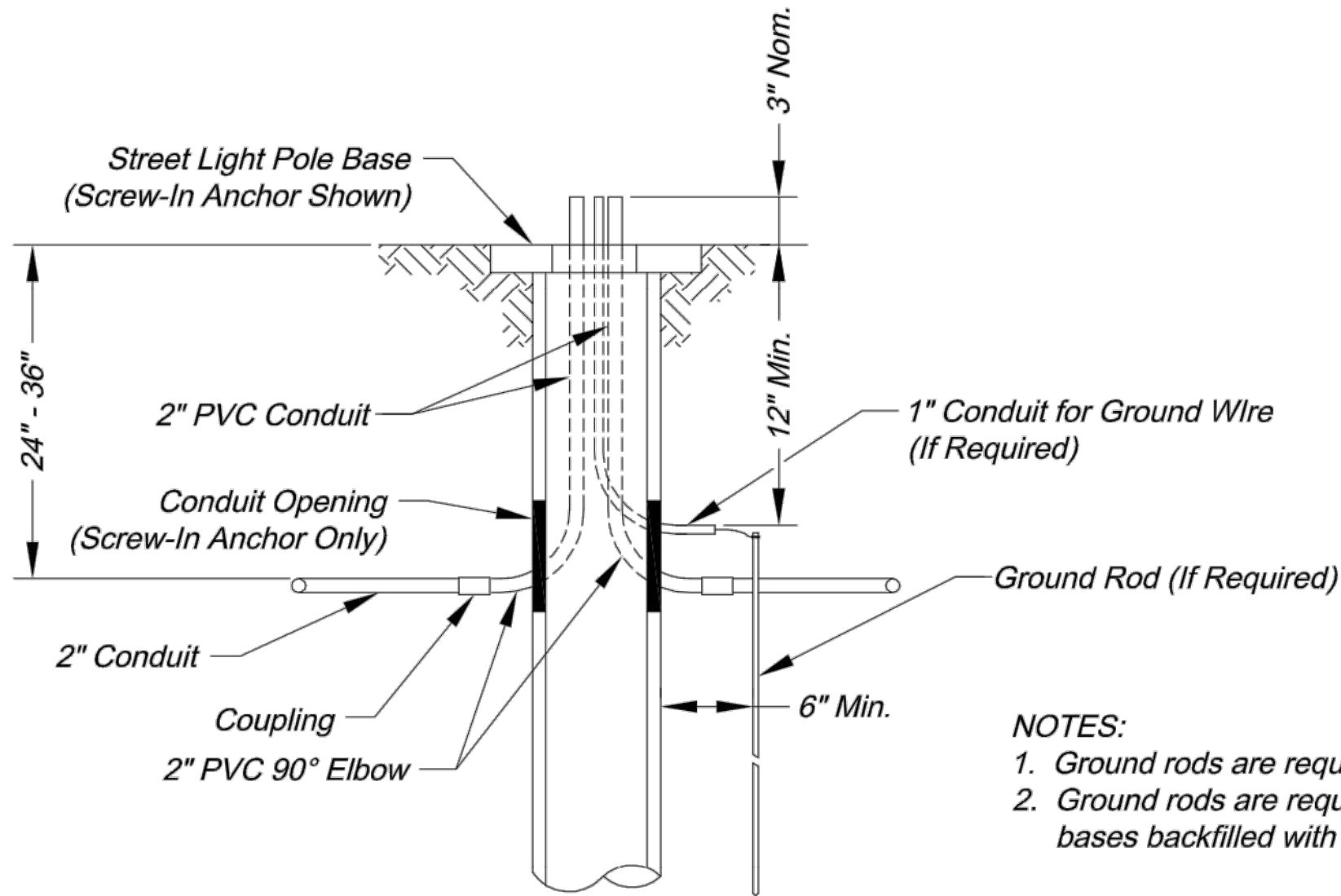


CONCRETE BASE DETAILS

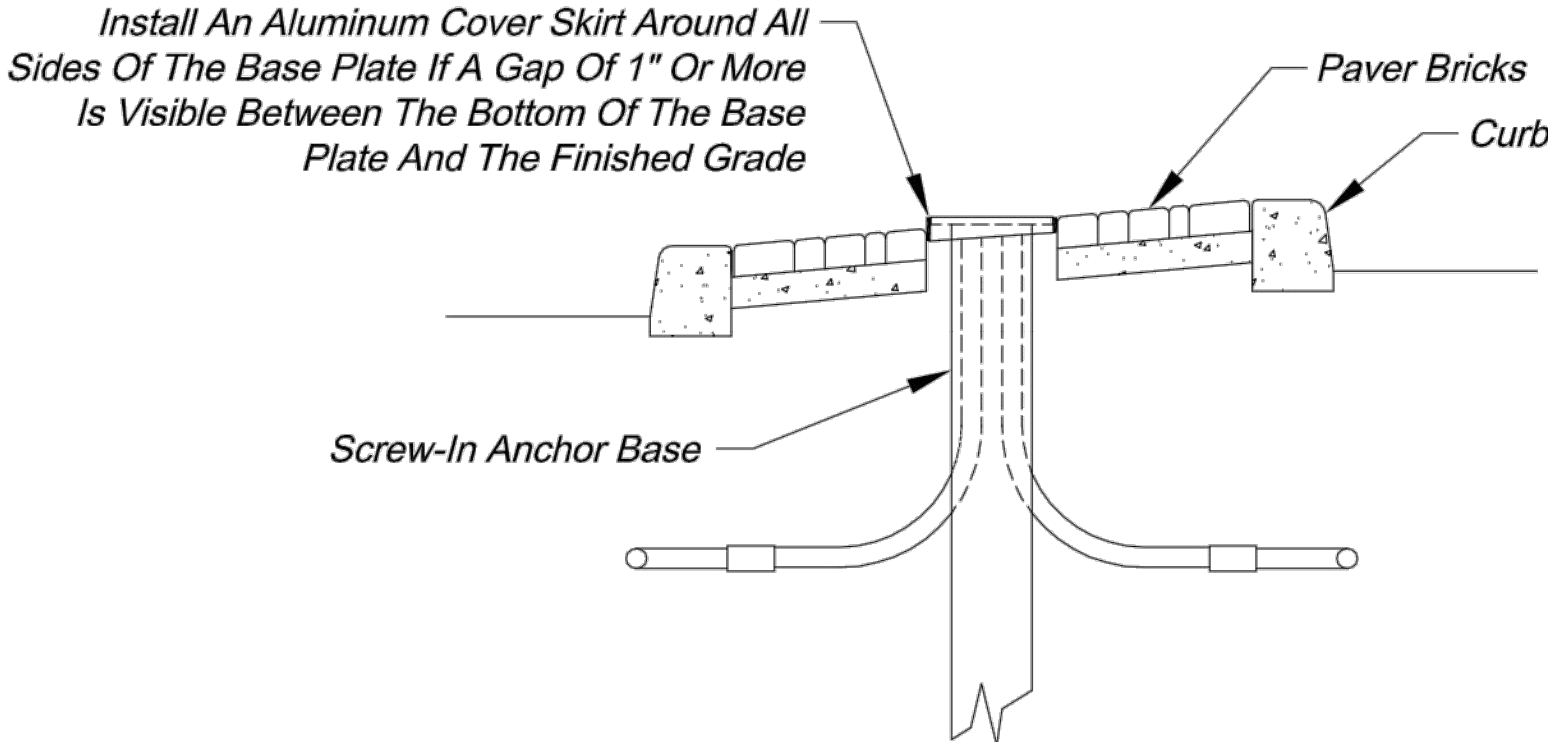
BASE TYPE	POLE TYPE	MINIMUM TORQUE RATING (lbs. ft.)	MAXIMUM TORQUE RATING (lbs. ft.)	SHAFT DIA. (A)	SHAFT LENGTH (B)	HELIX DIA. (C)	PLATE SIZE (D)	PLATE THICKNESS (E)	BOLT CIRCLE (BC)	SLOT LOCATION (G)
B14	P14	2,000	15,000	6"	48"	12"	10"	0.75"	9.5"	12"
B30	P30S & P30D	2,000	15,000	6"	60"	12"	12"	1.0"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



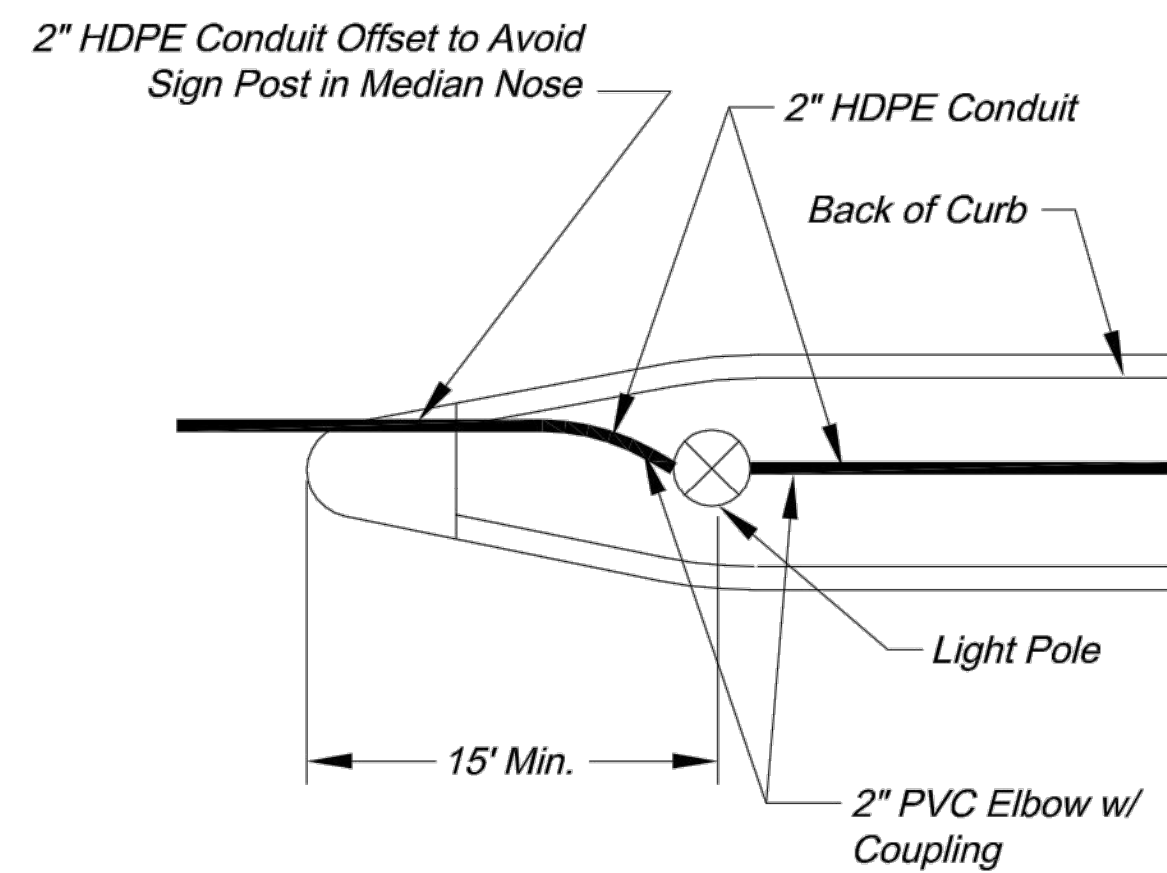
- NOTES:**
- Ground rods are required for all concrete bases.
 - Ground rods are required for screw-in anchor bases backfilled with flowable fill or concrete.



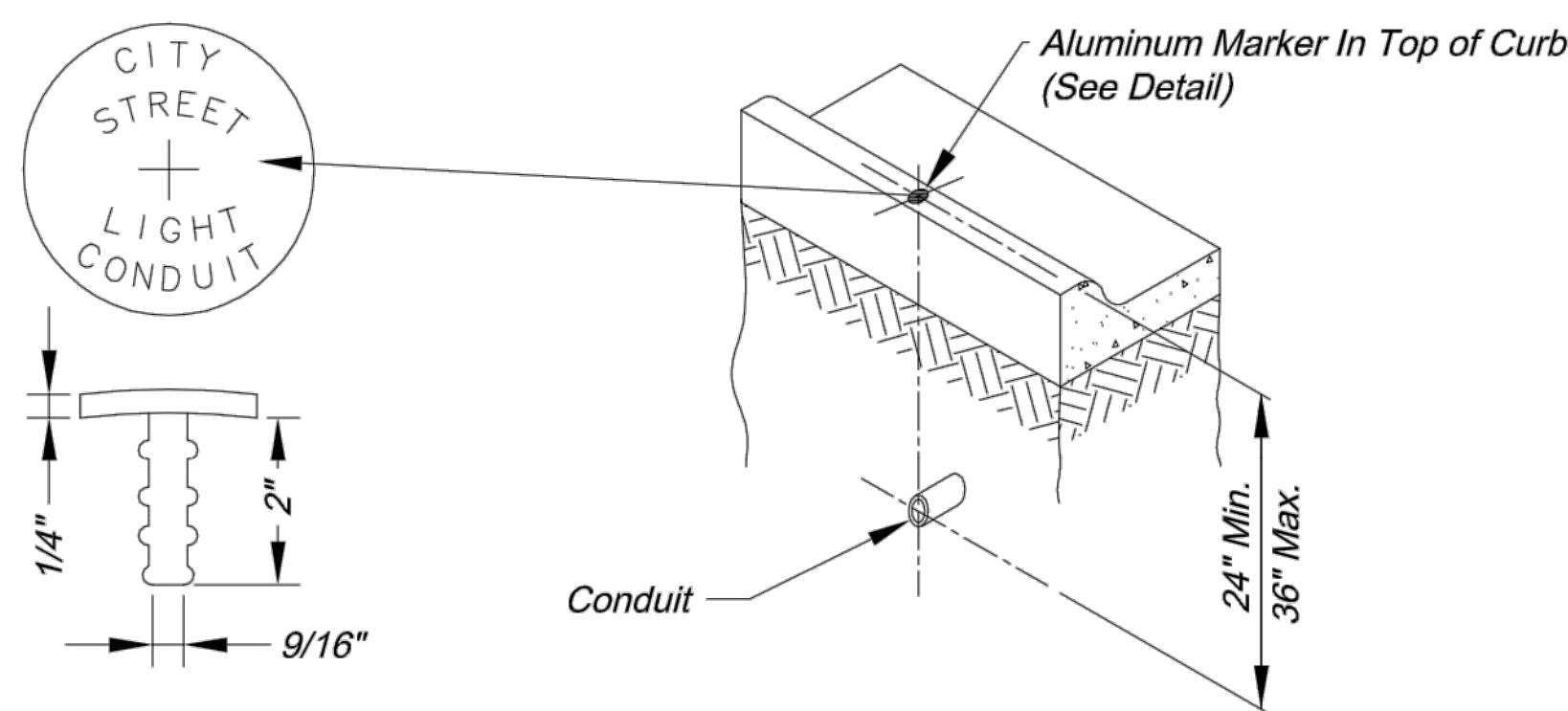
CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

COLBORN ROAD
POLE BASE DETAILS
Project:
Sheet Name: STANDARD DRAWING SL-2

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



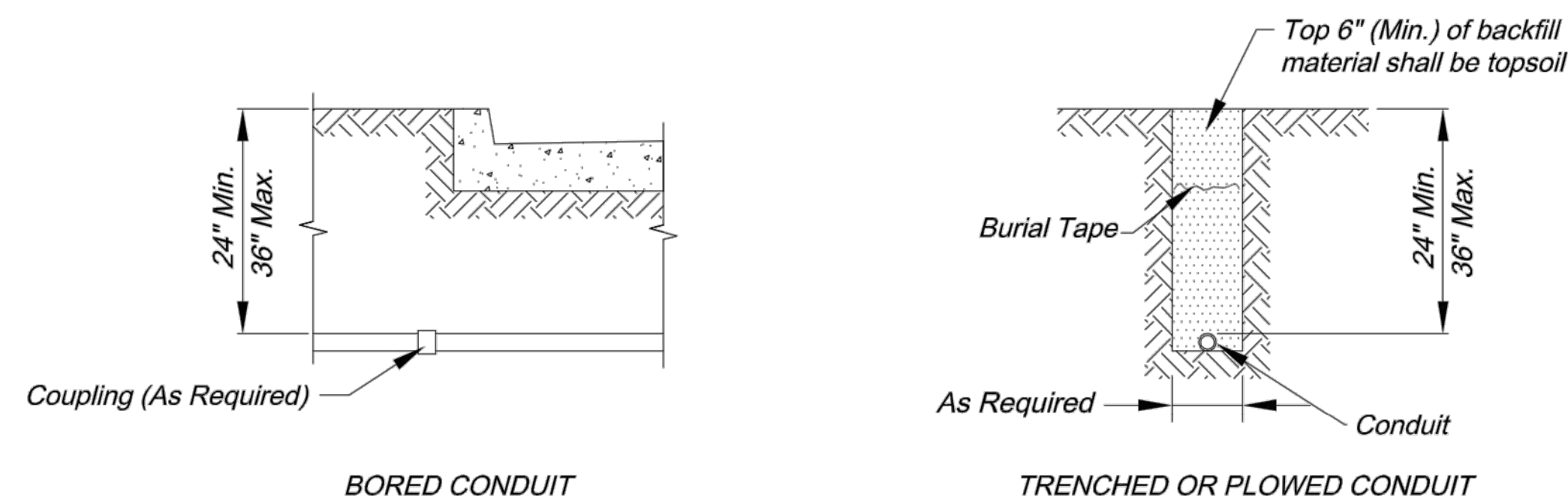
STREET LIGHT POLE IN MEDIAN



CONDUIT MARKING DETAIL

NOTES:

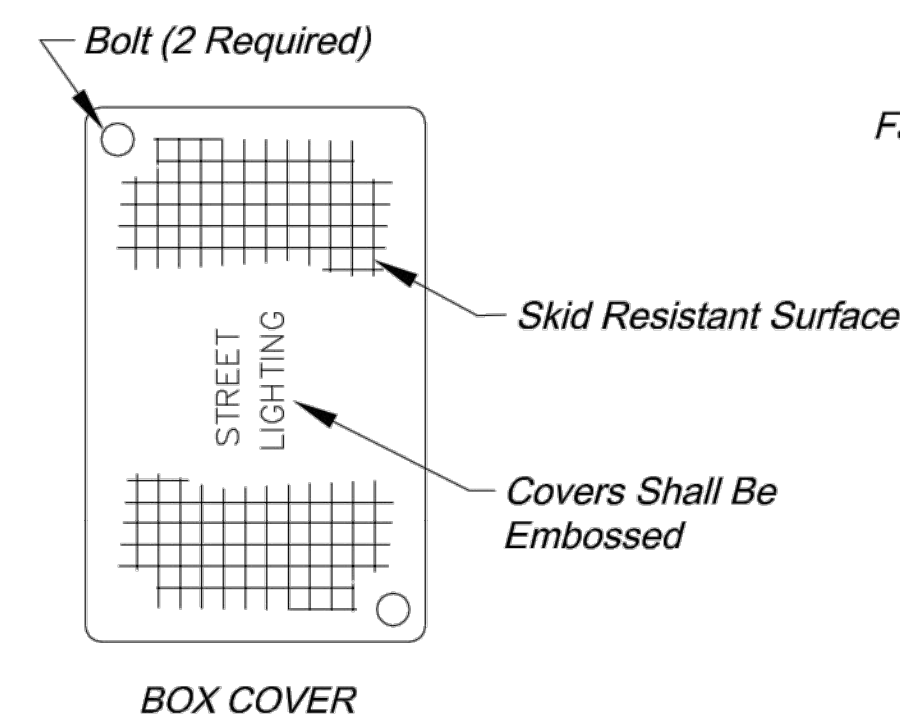
1. An aluminum marker shall be placed in the top of the curb directly over the conduit.
2. Markers shall be installed by drilling the curb and exopyxing the marker in place. If installed in a sidewalk or curb ramp, the top of the marker shall be flush with the concrete surface.
3. No direct payment shall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



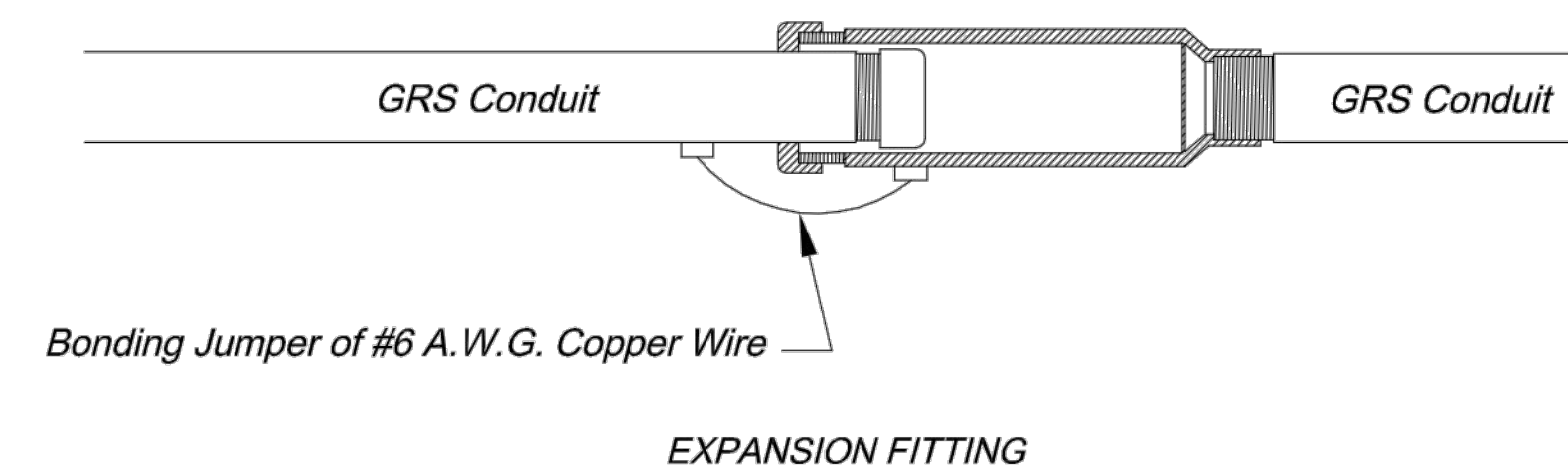
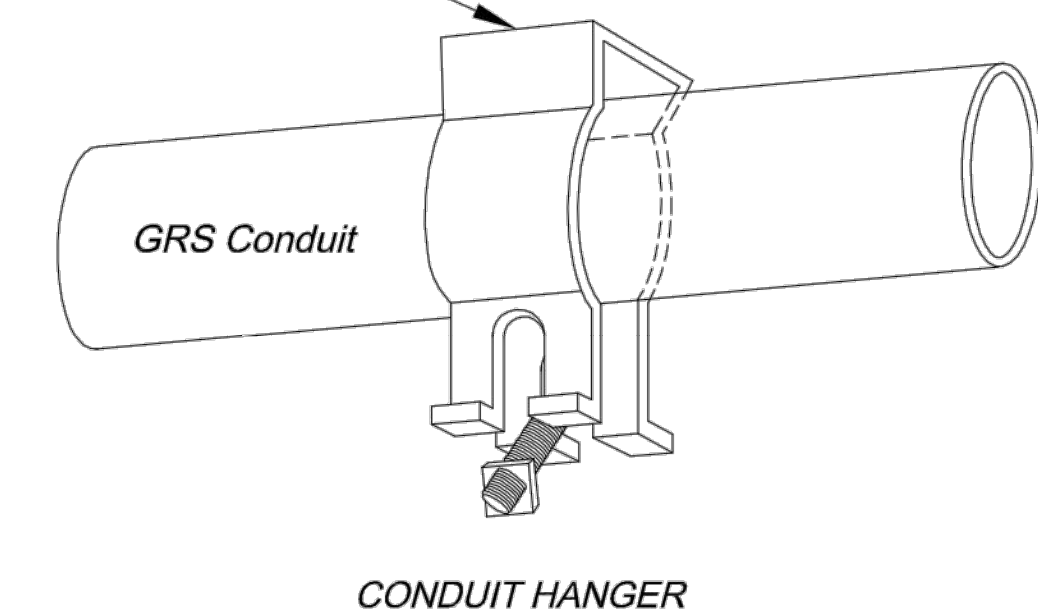
CONDUIT LOCATIONS

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.



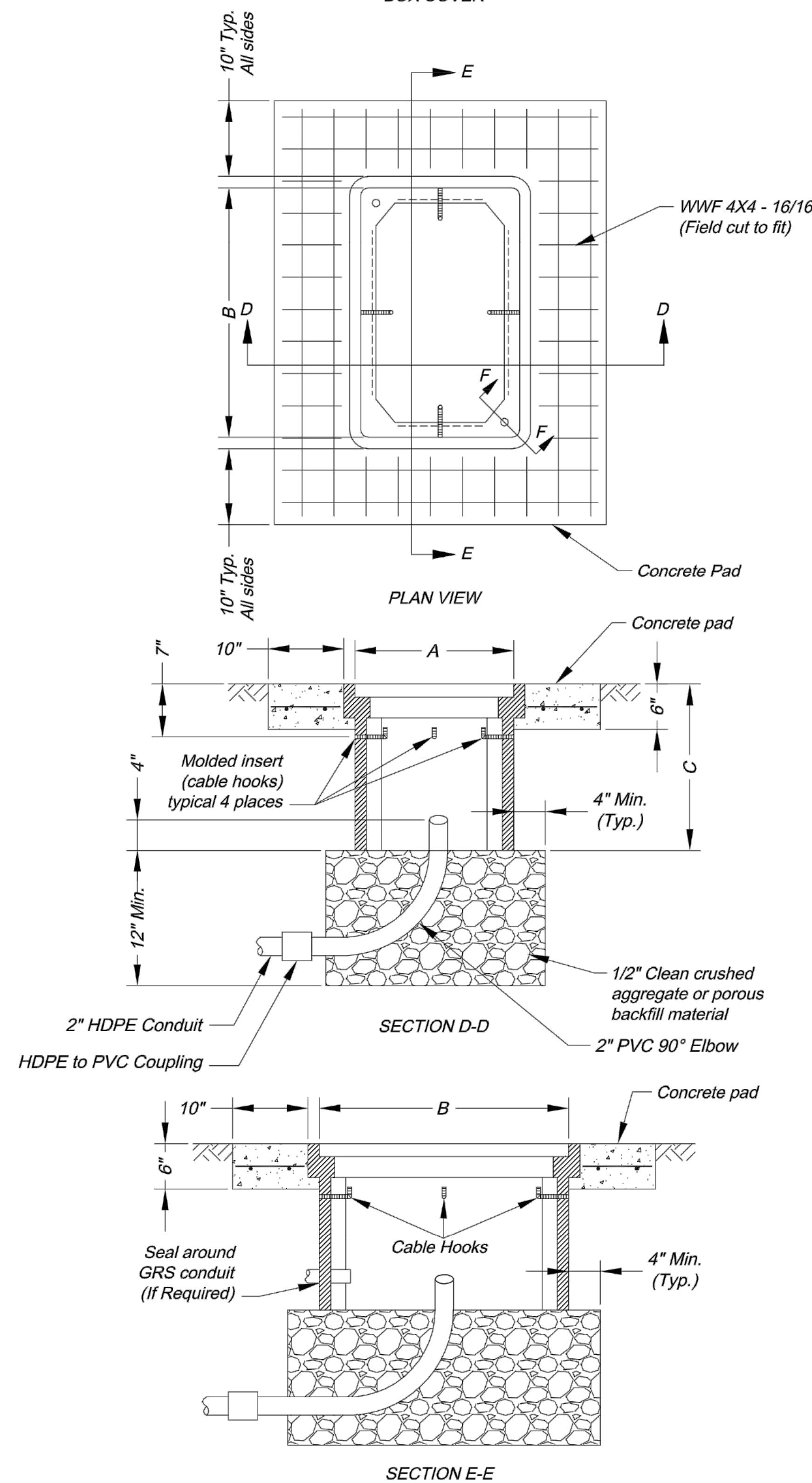
Fasten to Bridge As Recommended by the Manufacturer



GRS CONDUIT DETAILS

NOTES:

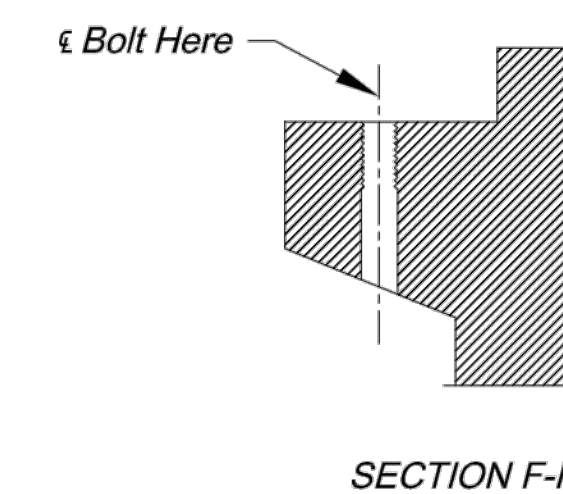
1. All conduits installed above ground shall be GRS.
2. Conduit attached to bridges shall have expansion fittings installed at each end of the bridge and at each expansion joint on the bridge.
3. All GRS conduits shall be electrically bonded by a grounding bushing and ground wire as detailed.
4. Install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



PULL OR JUNCTION BOX DETAILS

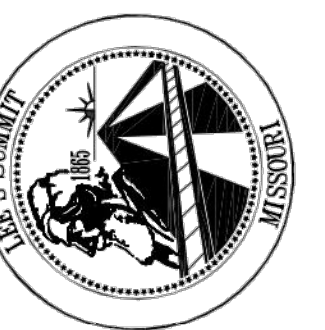
Number of Entering/Exiting Conduits	Box Type	Minimum Box Dimensions		
		A	B	C
1 - 2	Type 1 Junction Box	12"	12"	12"
3 - 4	Type 2 Junction Box	12"	18"	12"
> 4	Class 1 Pull Box	17"	30"	22"

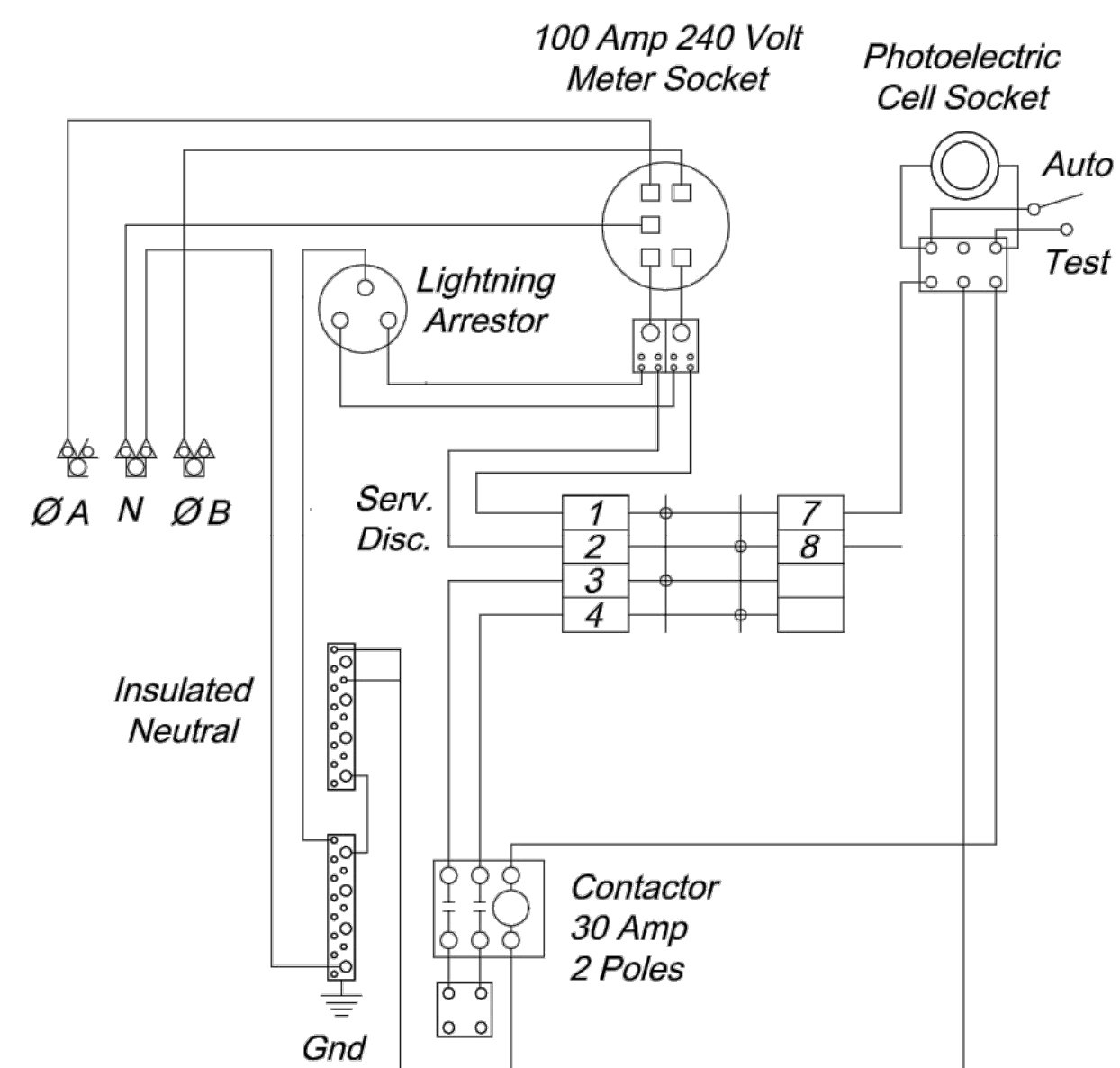
All dimensions shown are nominal



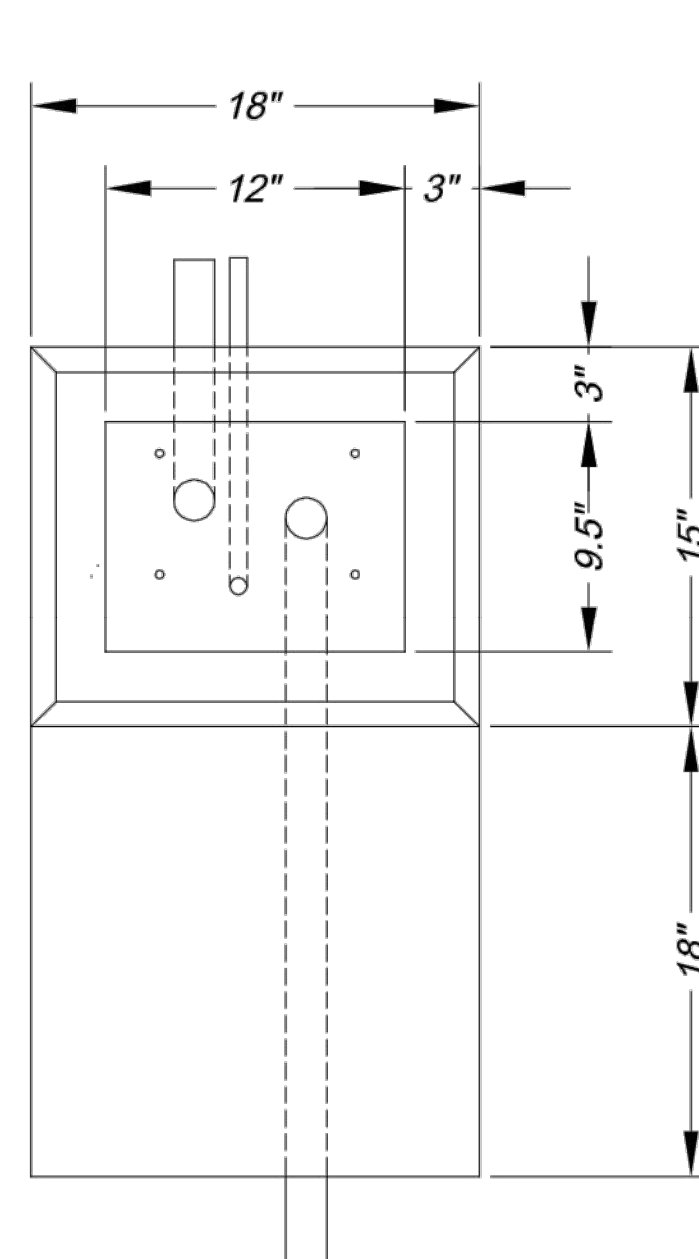
NOTES:

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.



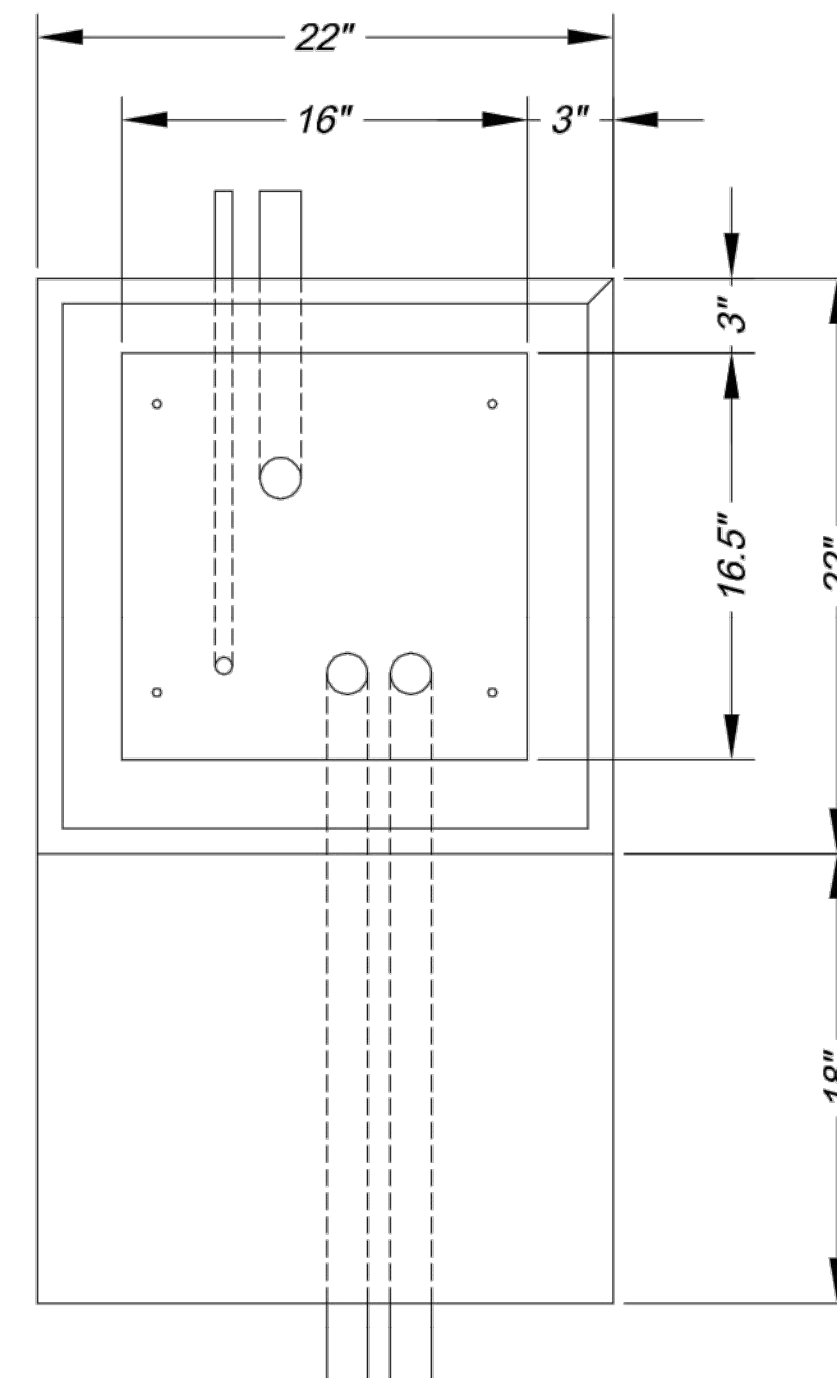


WIRING SCHEMATIC

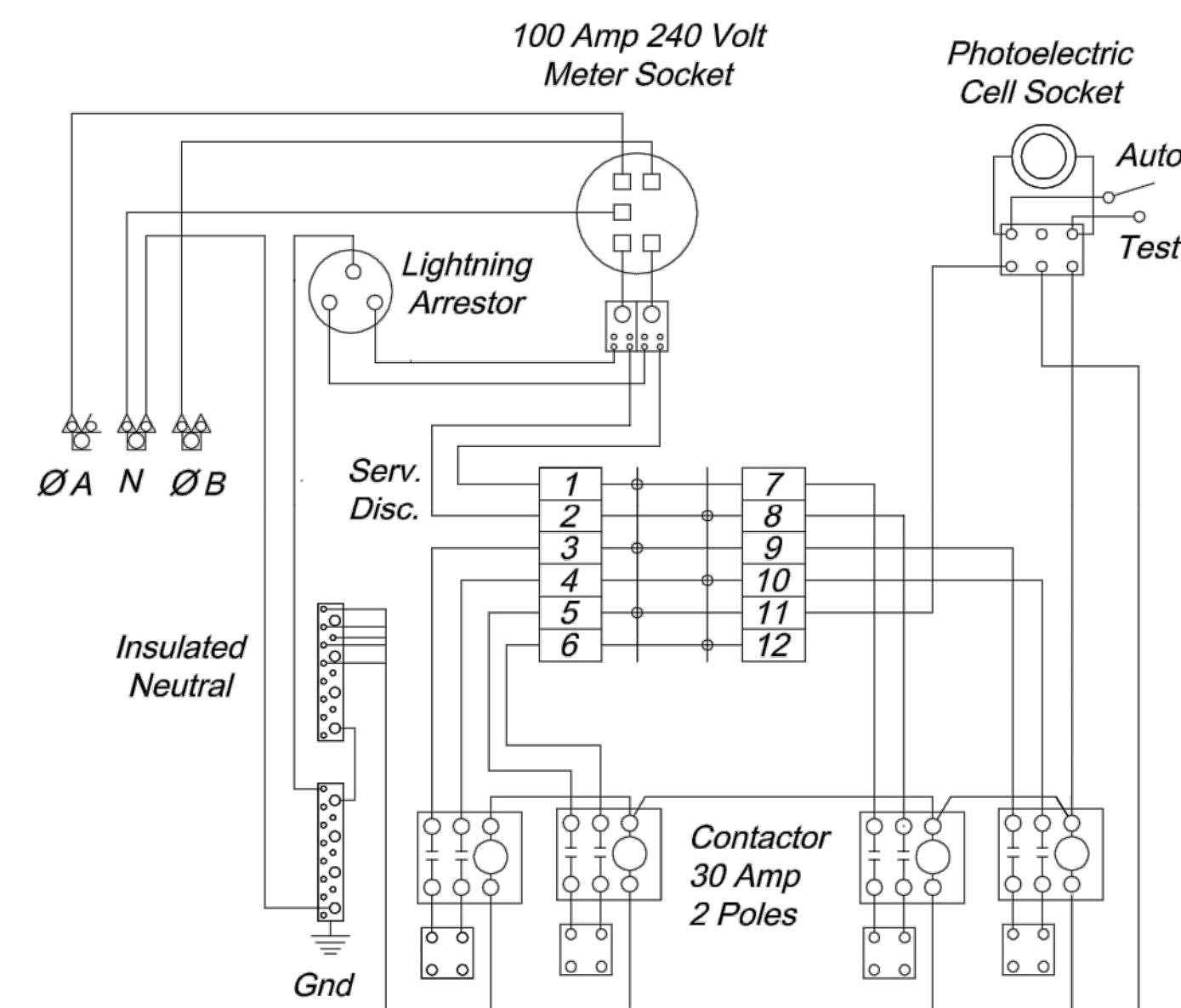


PLAN VIEW

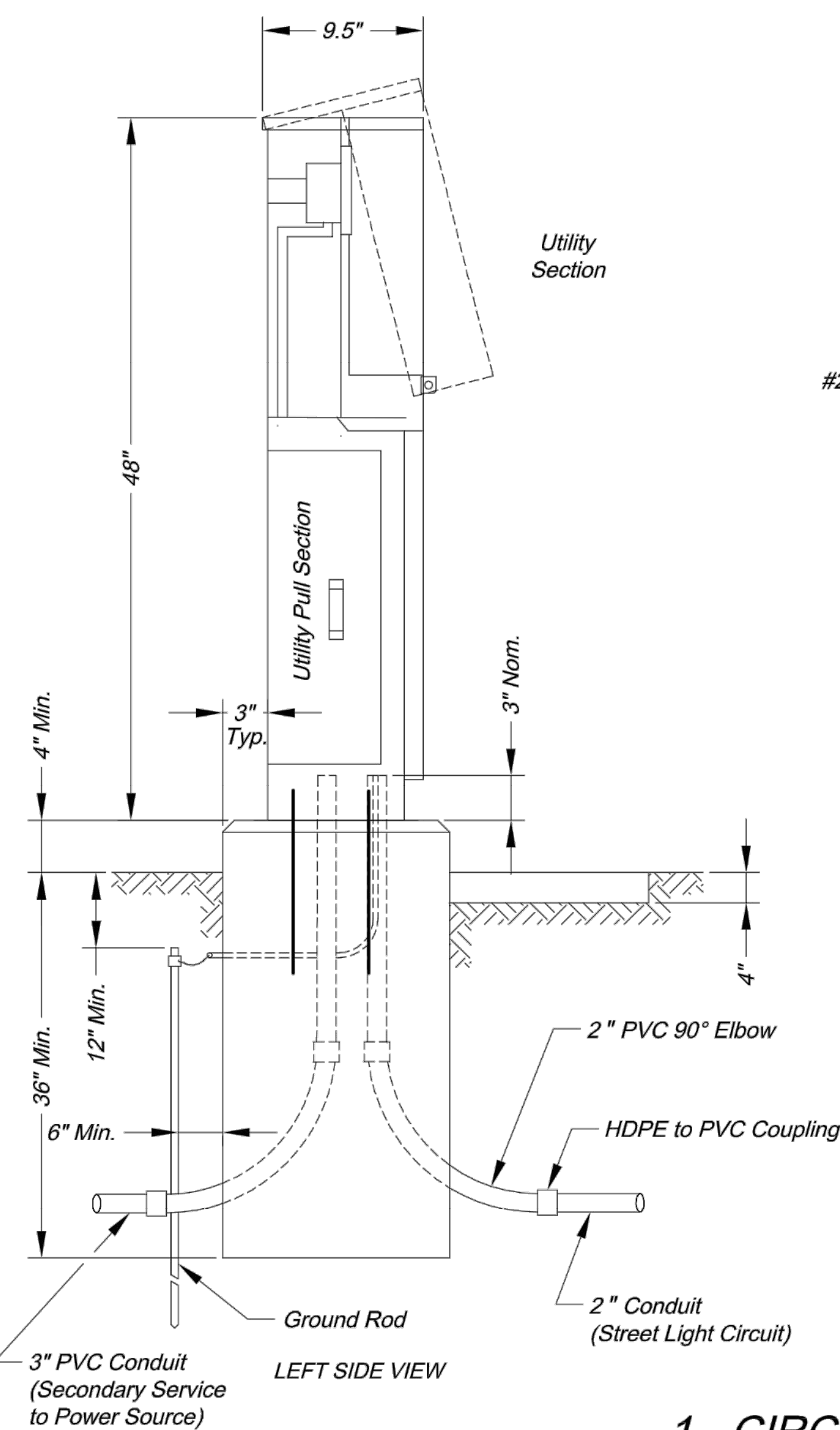
FUSED CONTACTORS
ARE NOT PERMITTED



PLAN VIEW

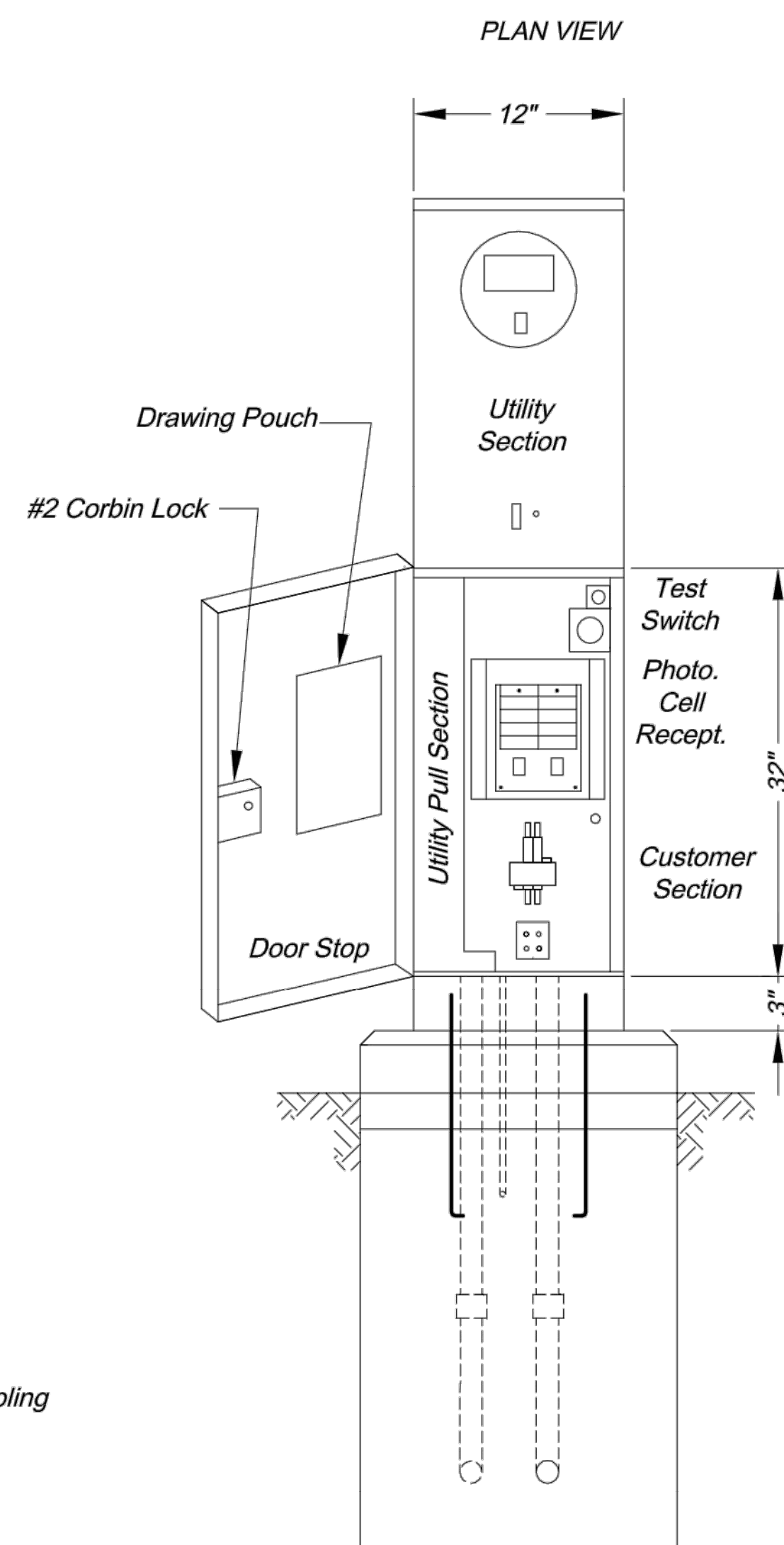


WIRING SCHEMATIC



LEFT SIDE VIEW

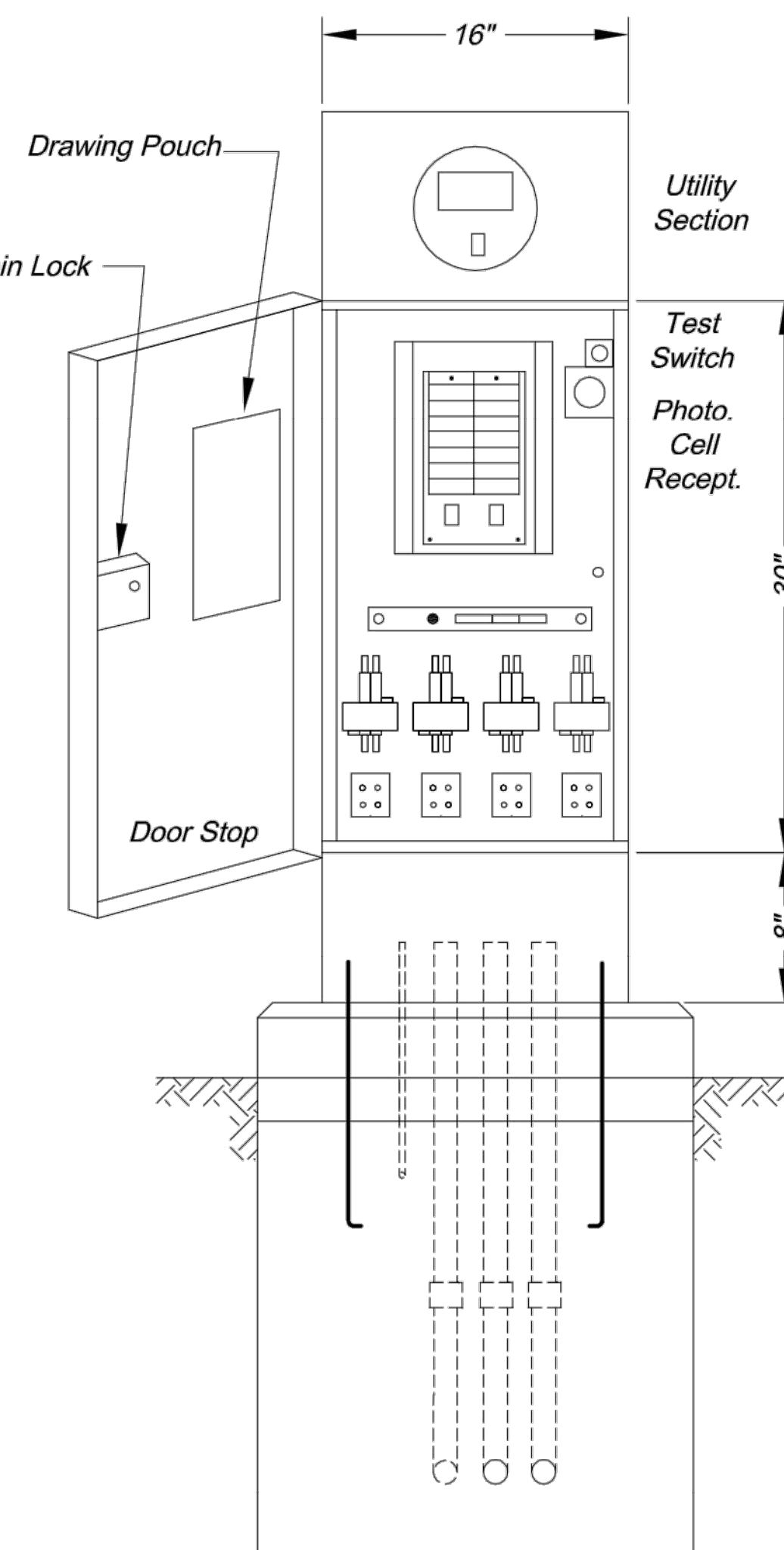
1 - CIRCUIT POWER SUPPLY



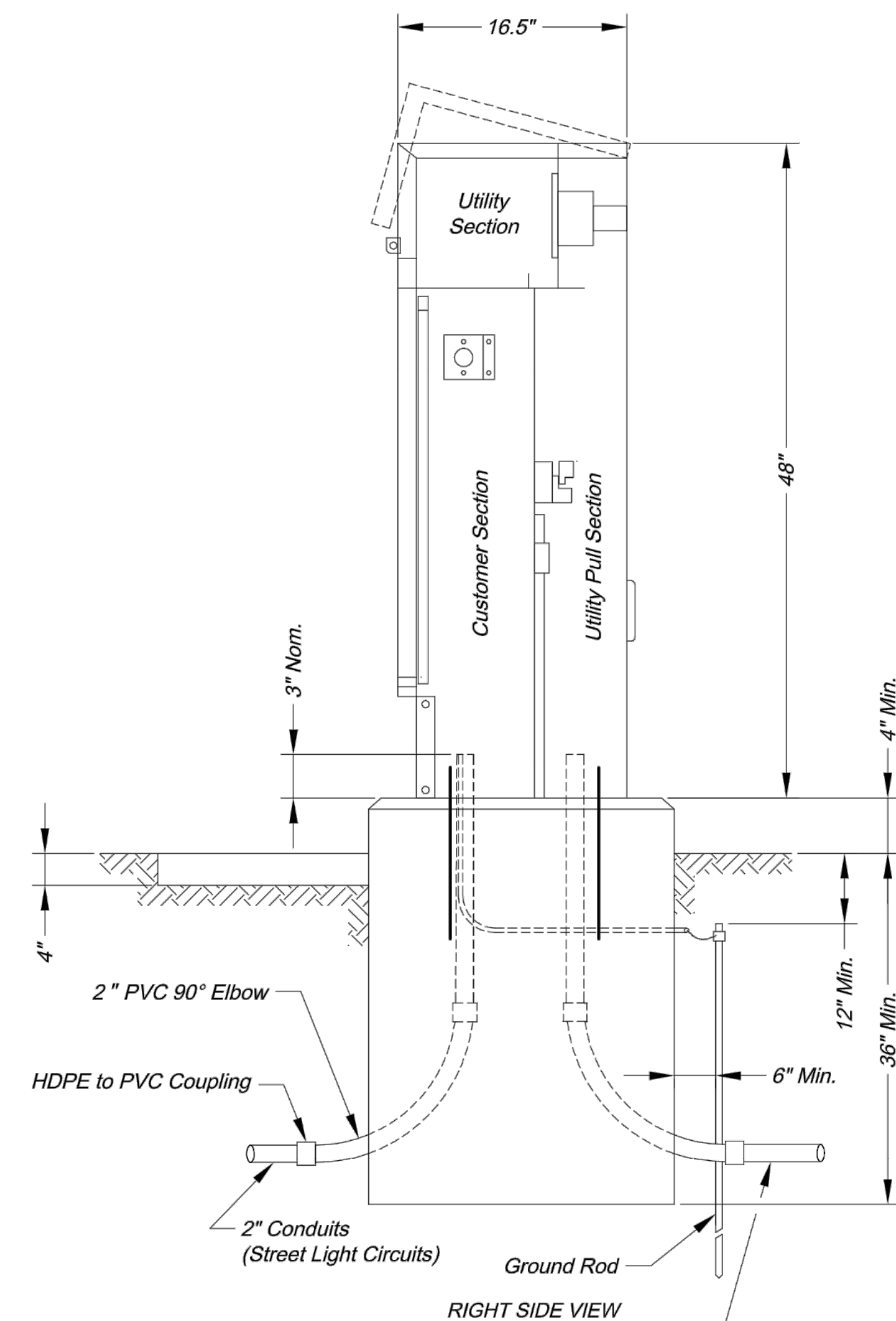
FRONT VIEW

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

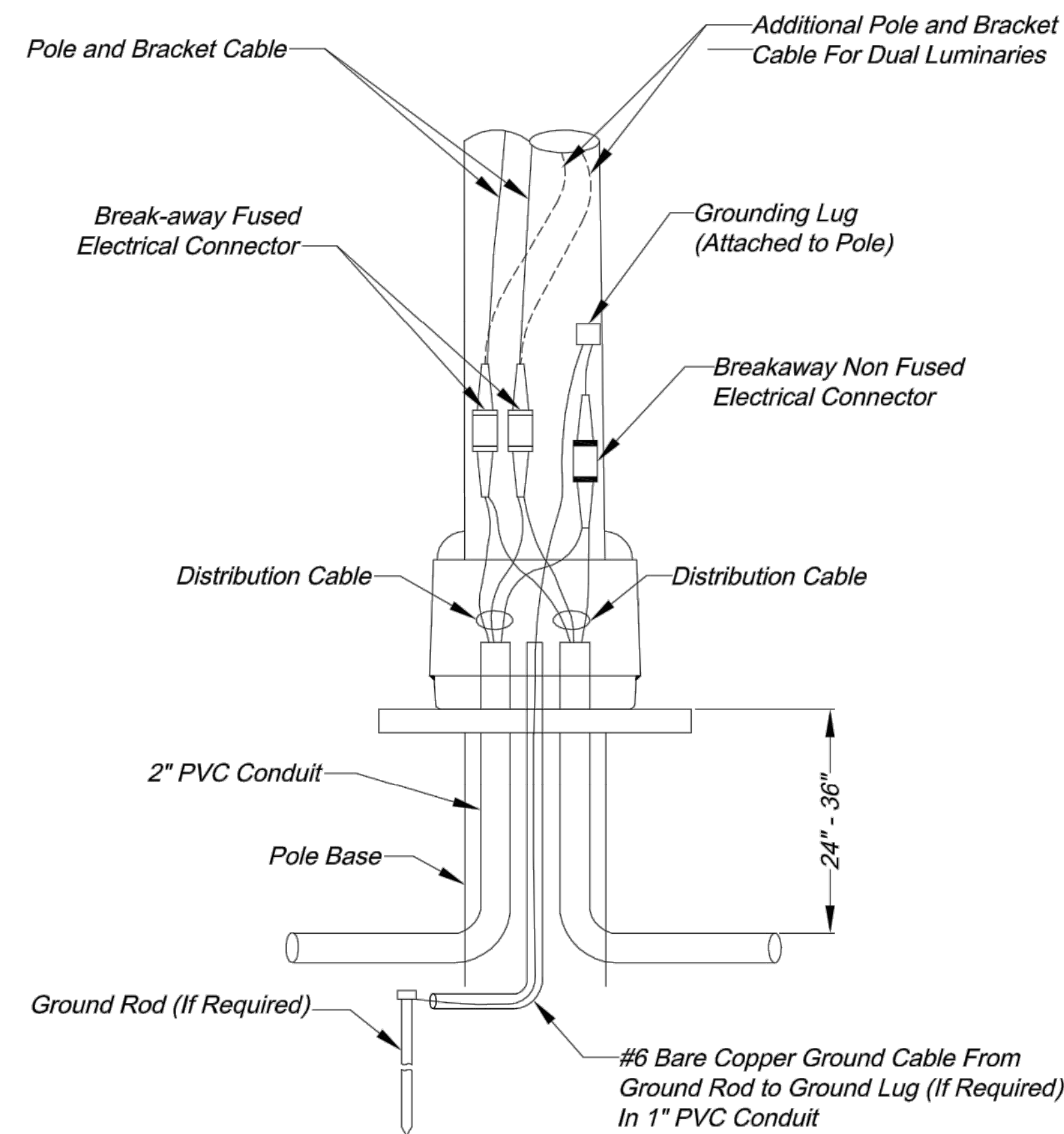
POWER SUPPLY DETAILS

Sheet Name: STANDARD DRAWING SL-4

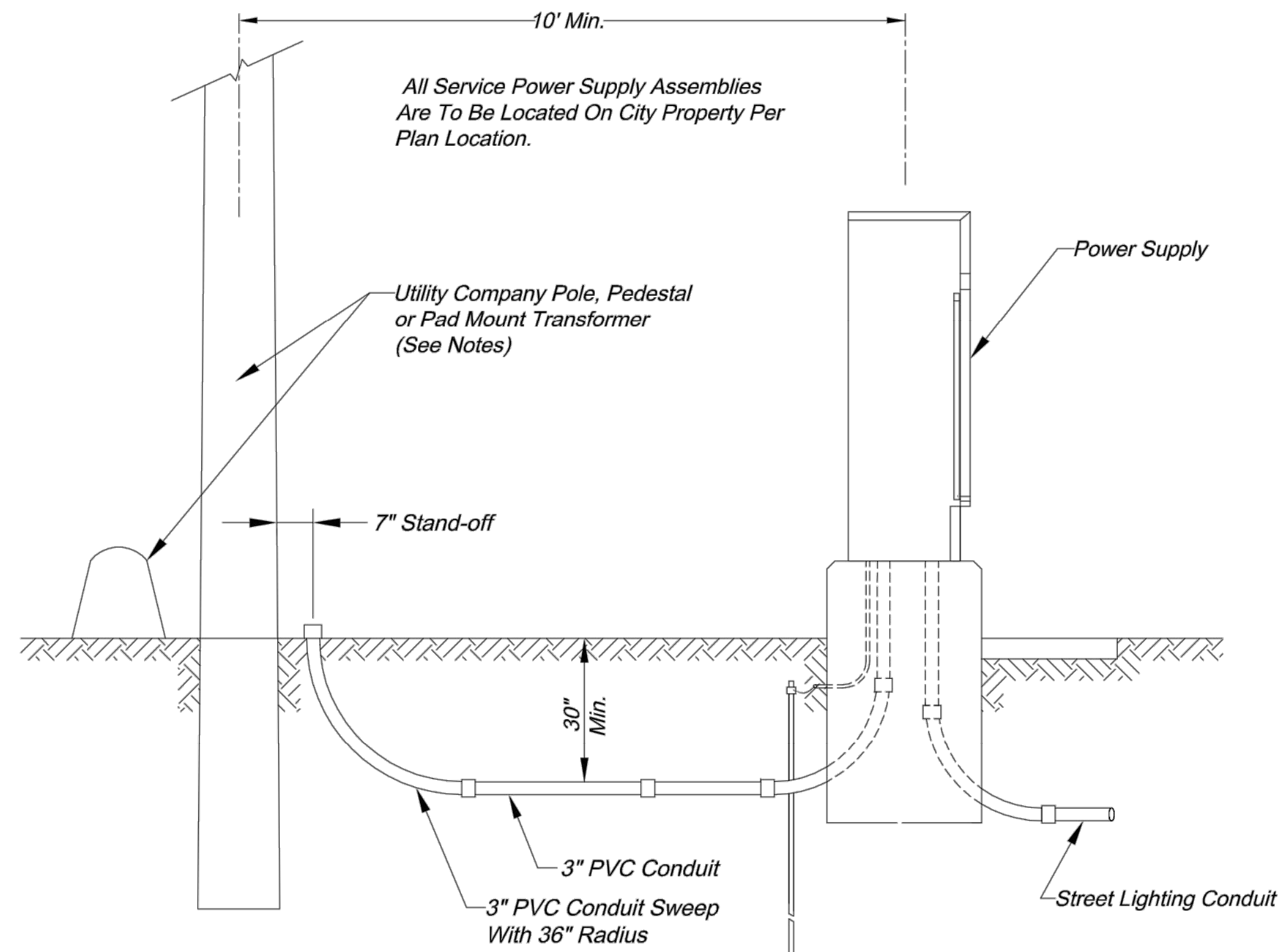
Project:

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

4 OF 5

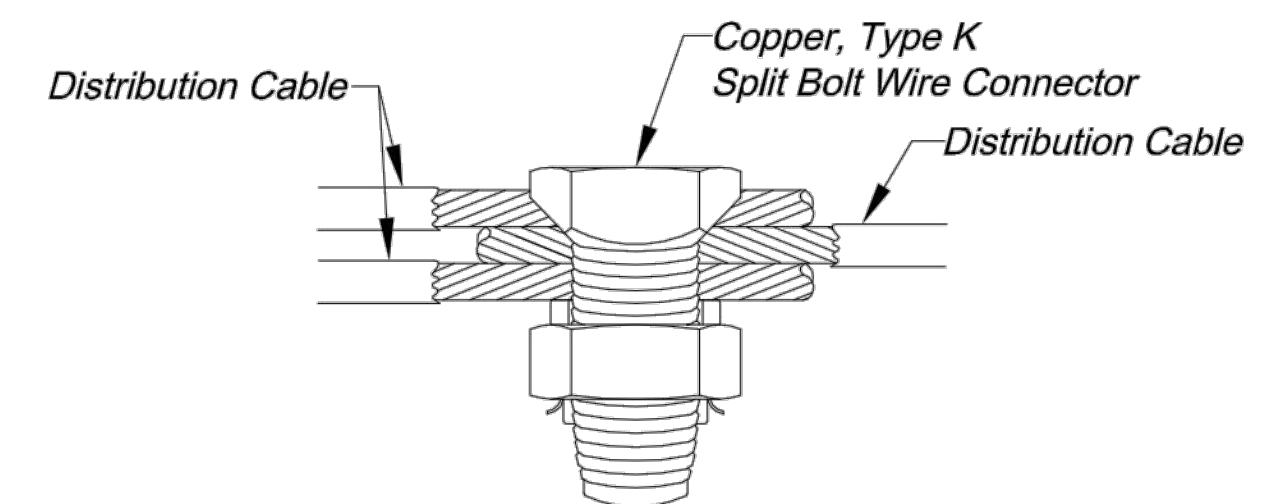


POLE WIRING DETAILS



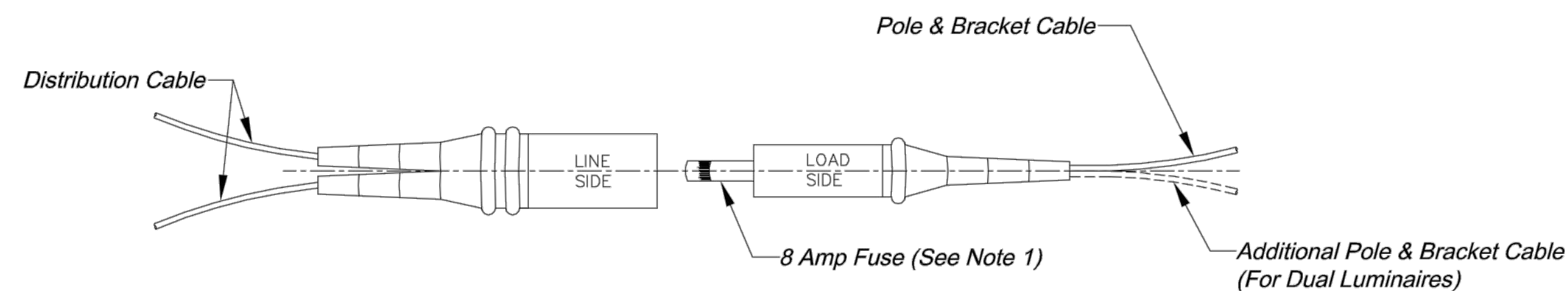
SECONDARY SERVICE CONNECTION DETAILS

- 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.

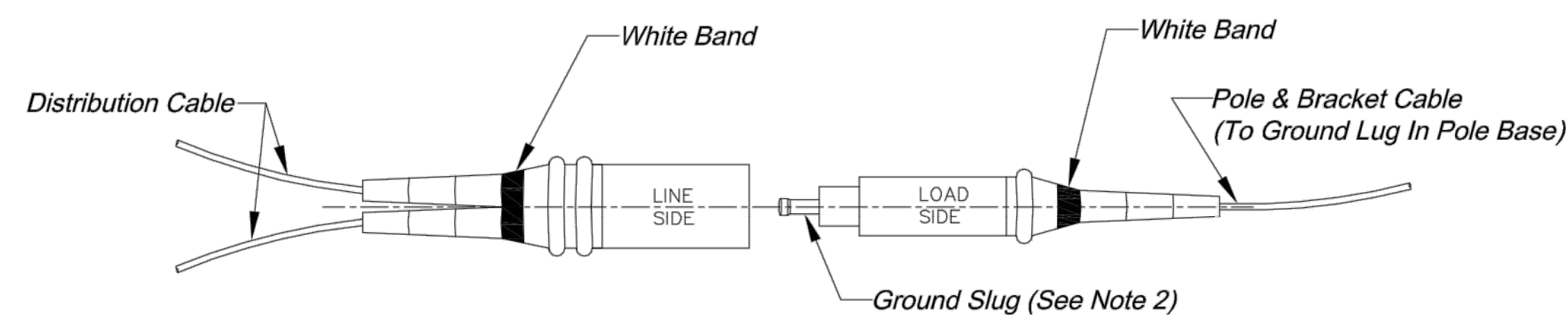


SPLICE KIT DETAILS

- 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.

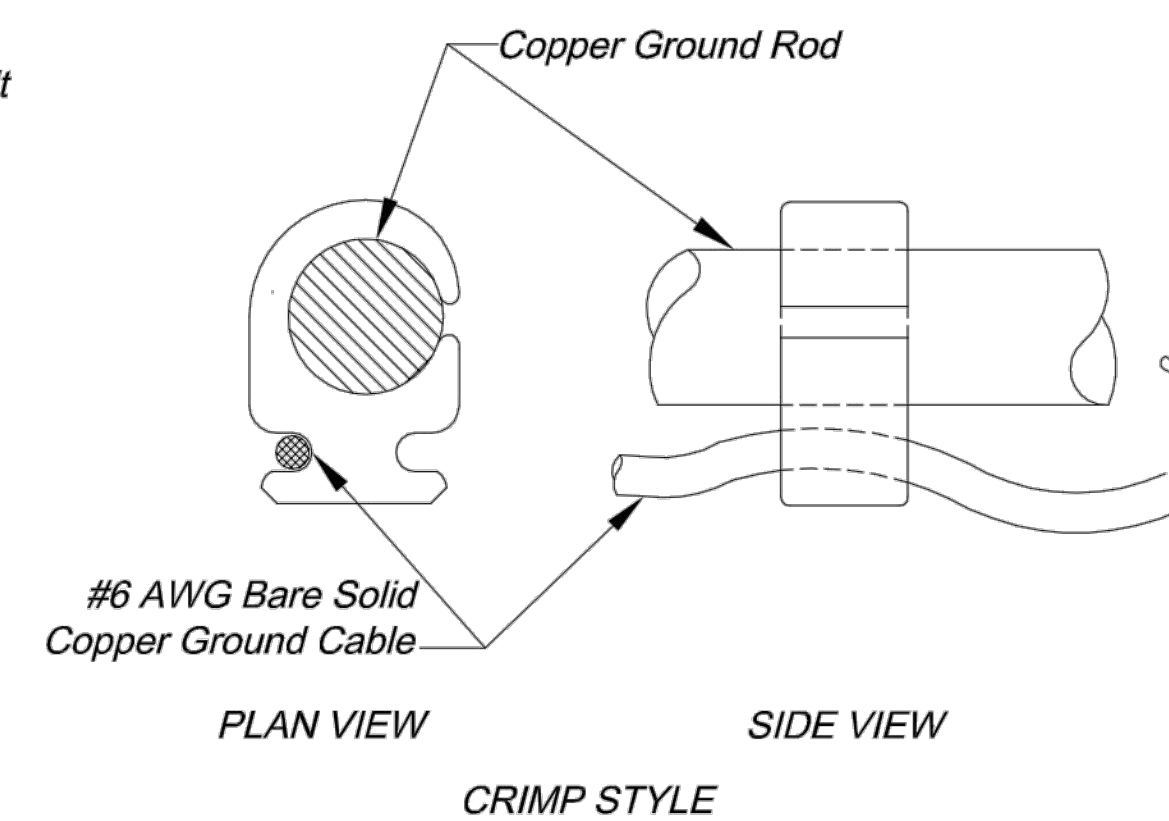
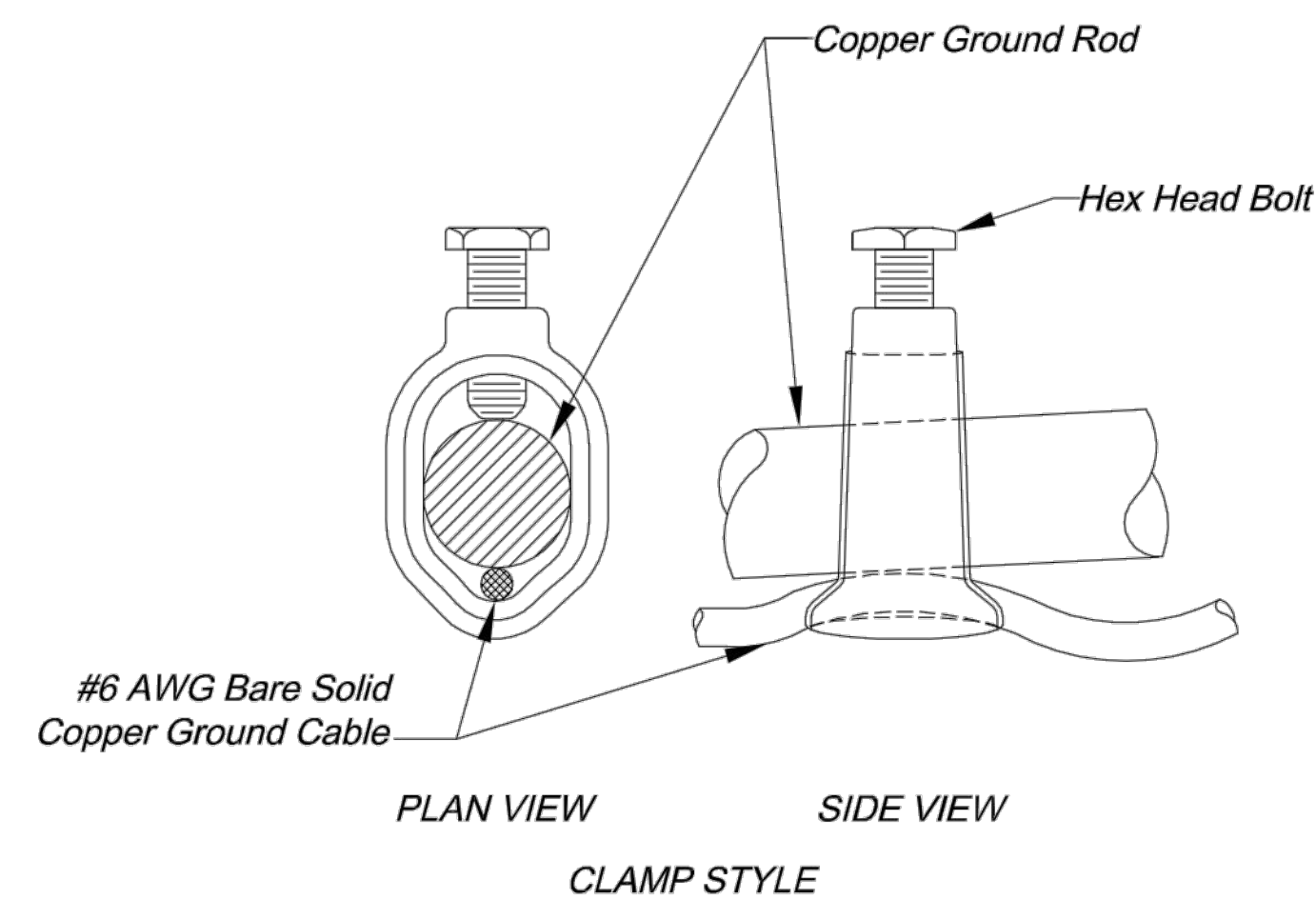


BREAK-AWAY FUSED ELECTRICAL CONNECTORS

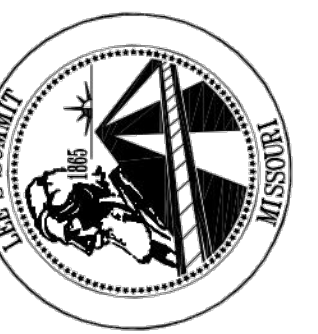


BREAK-AWAY NON FUSED ELECTRICAL CONNECTOR

- 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.

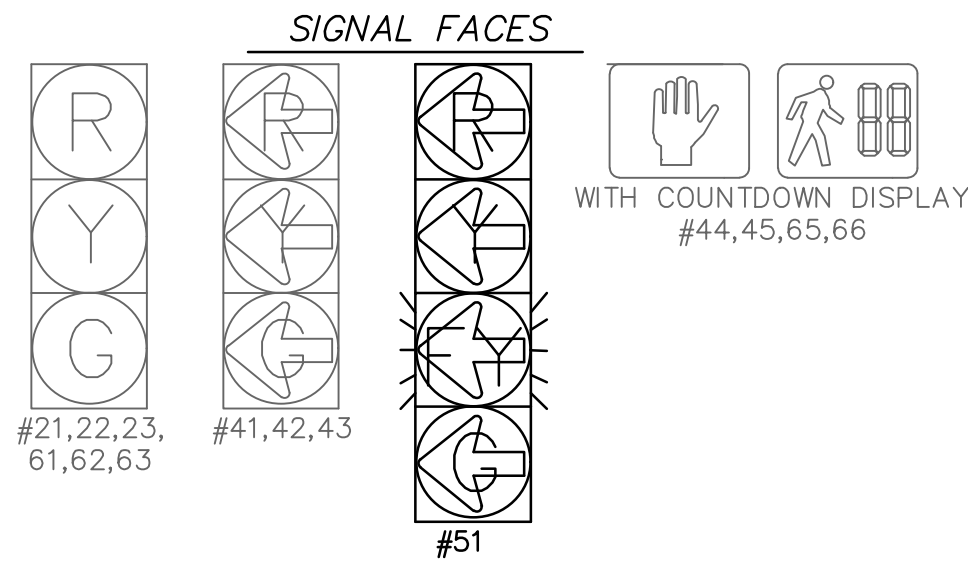


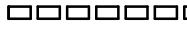
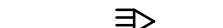
GROUND ROD CONNECTION DETAILS

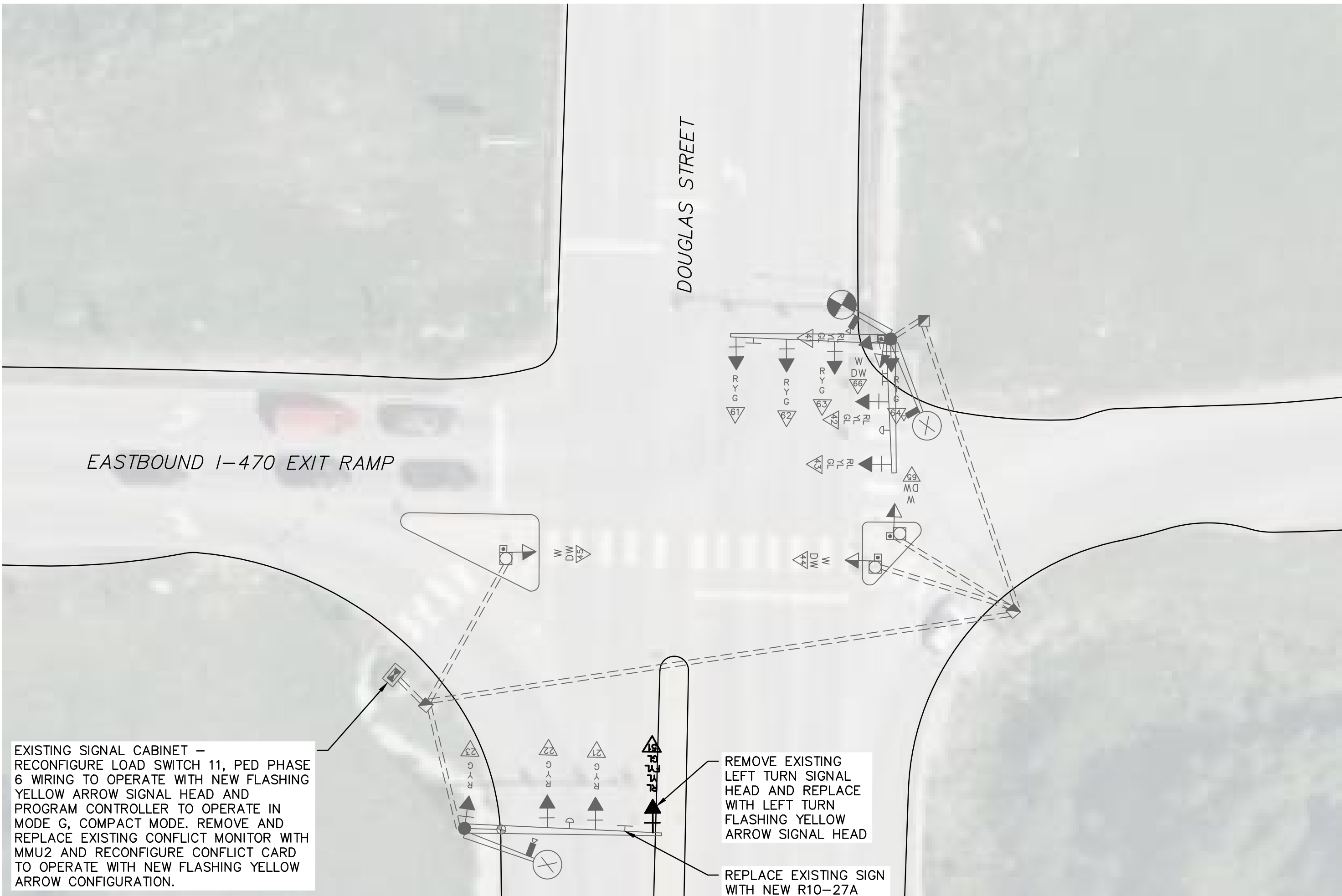


FLASHING YELLOW IMPLEMENTATION DETAILS:

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

[illegible]

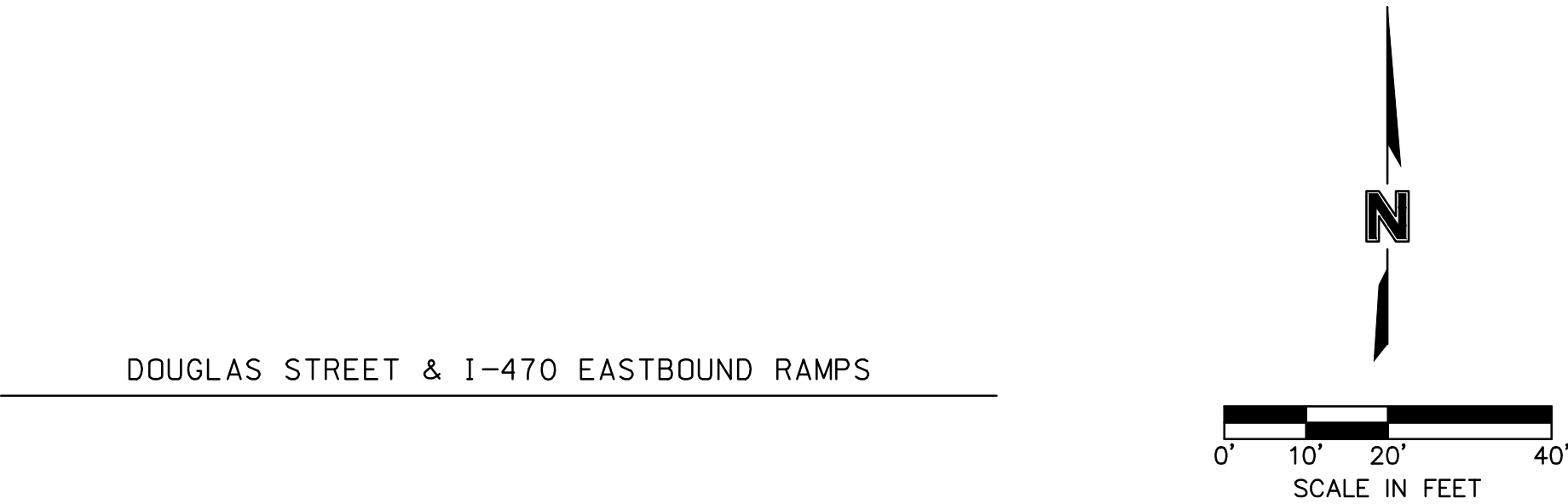
* NOTE: ALL SIGNAL INDICATIONS, VISORS, AND BRACKET ARMS SHALL BE INCLUDED IN THE LUMP SUM BID ITEM "TRAFFIC SIGNAL MODIFICATION"

GENERAL NOTES:

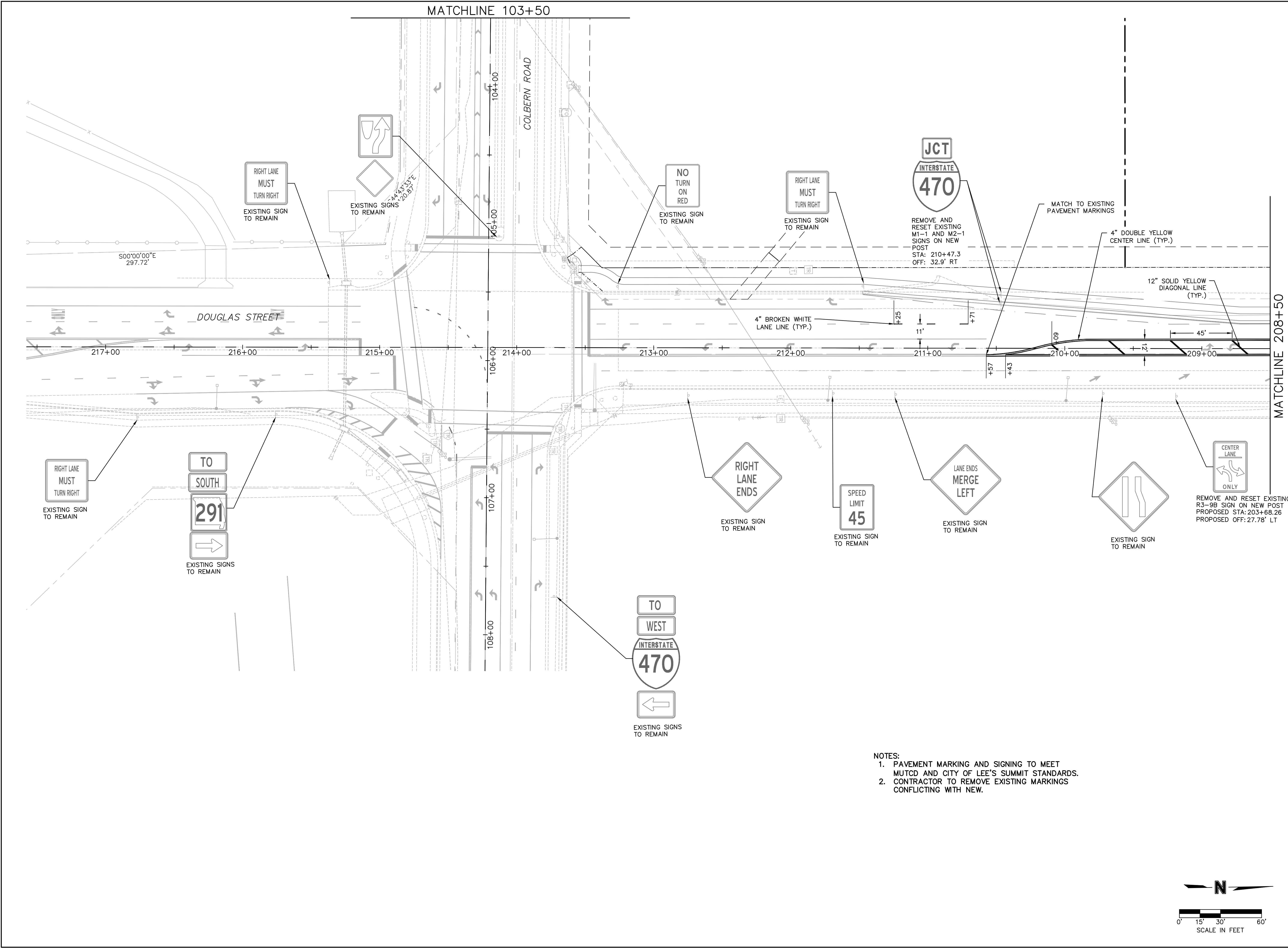
1. ALL TRAFFIC SIGNAL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE MISSOURI SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SECTION 902 (TRAFFIC SIGNALS) UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH CITY STAFF TO MINIMIZE DOWNTIME OF SIGNAL OPERATIONS AND TIME-FRAME OF CONSTRUCTION. ALL MATERIALS AND WORK DEPICTED IN THIS PLAN SHALL BE BID UNDER THE LUMP SUM ITEM "TRAFFIC SIGNAL MODIFICATION" AND CONSTITUTE ALL MATERIALS AND EQUIPMENT REQUIRED TO PERFORM THE WORK SHOWN IN THE PLAN SHEET PROVIDED.

R	RED BALL	ALL 12" LENS WITH TUNNEL VISOR
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 DW	PEDESTRIAN INDICATIONS SHALL BE LED COUNTDOWN TYPE.	

L29 PHASE 2 PED	L10 PHASE 4 PED W FDW	LS11 PHASE 6 PED W FYA FDW	LS12 PHASE 8	L13 OLA	LS14 OLB	LS15 OL C	LS16 OL D
LS1 PHASE 1	LS2 PHASE 2 R Y G	LS3 PHASE 3	LS4 PHASE 4 R Y G	LS5 PHASE 5 RL YL GL	LS6 PHASE 6 R Y G	LS7 PHASE 7	LS8 PHASE 8



DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final Plans\Sheets\JTTC\PAVEMENT MARKING AND SIGNING\F_SAS-D2104643.dwg USER: kwilliams2 F_SAS-D2104643
DATE: Sep 27, 2023 4:55pm XREFS: T_PSTRM-D02104643 C_PBASE-D2104643 C_PBNDR-D2104643 C_XALTA-B2104643 F_PBASE-D2104643 F_PTBLK-D02104643 C_FROAD-D2104643 F_SASBASE-D2104643



REVISIONS	
REV. NO.	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
REV. NO.	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

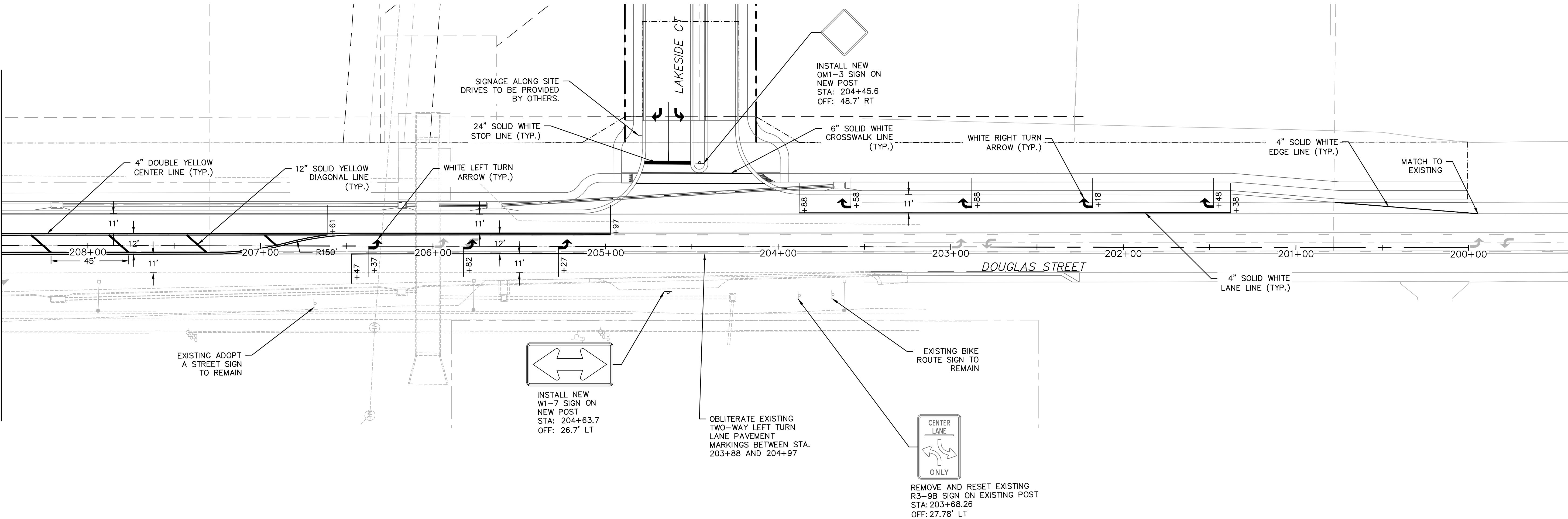
REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

REVISIONS	
DATE	DESCRIPTION

DWG: F:\2021\04501-05000\021-04643-0\40-Design\AutoCAD\Final Plans\Sheets\JTFC\PAVEMENT MARKING AND SIGNING\F_SAS_D2104643.dwg F:\2021\04501-05000\021-04643-0\40-Design\AutoCAD\Final Plans\Sheets\JTFC\PAVEMENT MARKING AND SIGNING\F_SAS_D2104643.dwg
DATE: Sep 27, 2023 4:55pm XREFS: T:\PSTRM_D02104643 C_PBASE_D02104643 C_XALTA_B2104643 C_PBASE_D02104643 T_PBASE_D02104643 F_PTBLK_D02104643 C_FROAD_D2104643 F_SASBASE_D2104643 F_SAS-DTLS.D

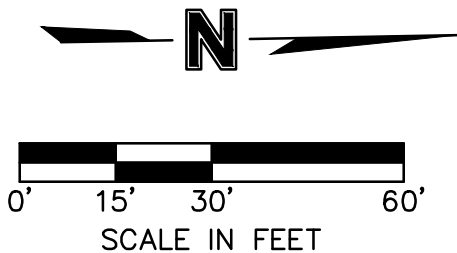
MATCHLINE 208+50



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

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

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



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

REV.	NO.	DATE	REVISIONS DESCRIPTION

PAVEMENT MARKING AND SIGNING PLAN
DOUGLAS STREET

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

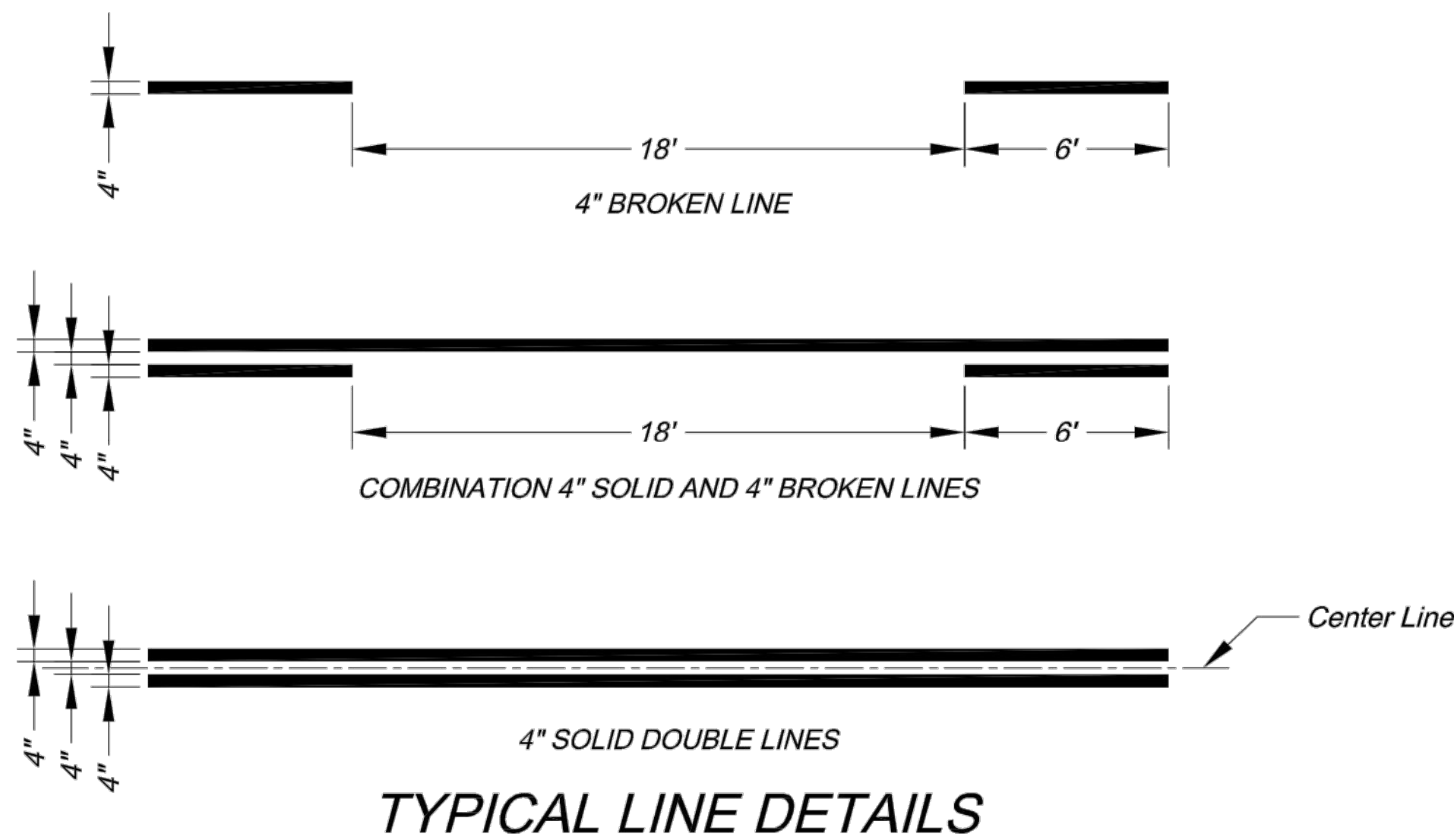
LEE'S SUMMIT, MISSOURI

drawn by: SRH
checked by: JSC
approved by: JSS
QA/QC by: SLT

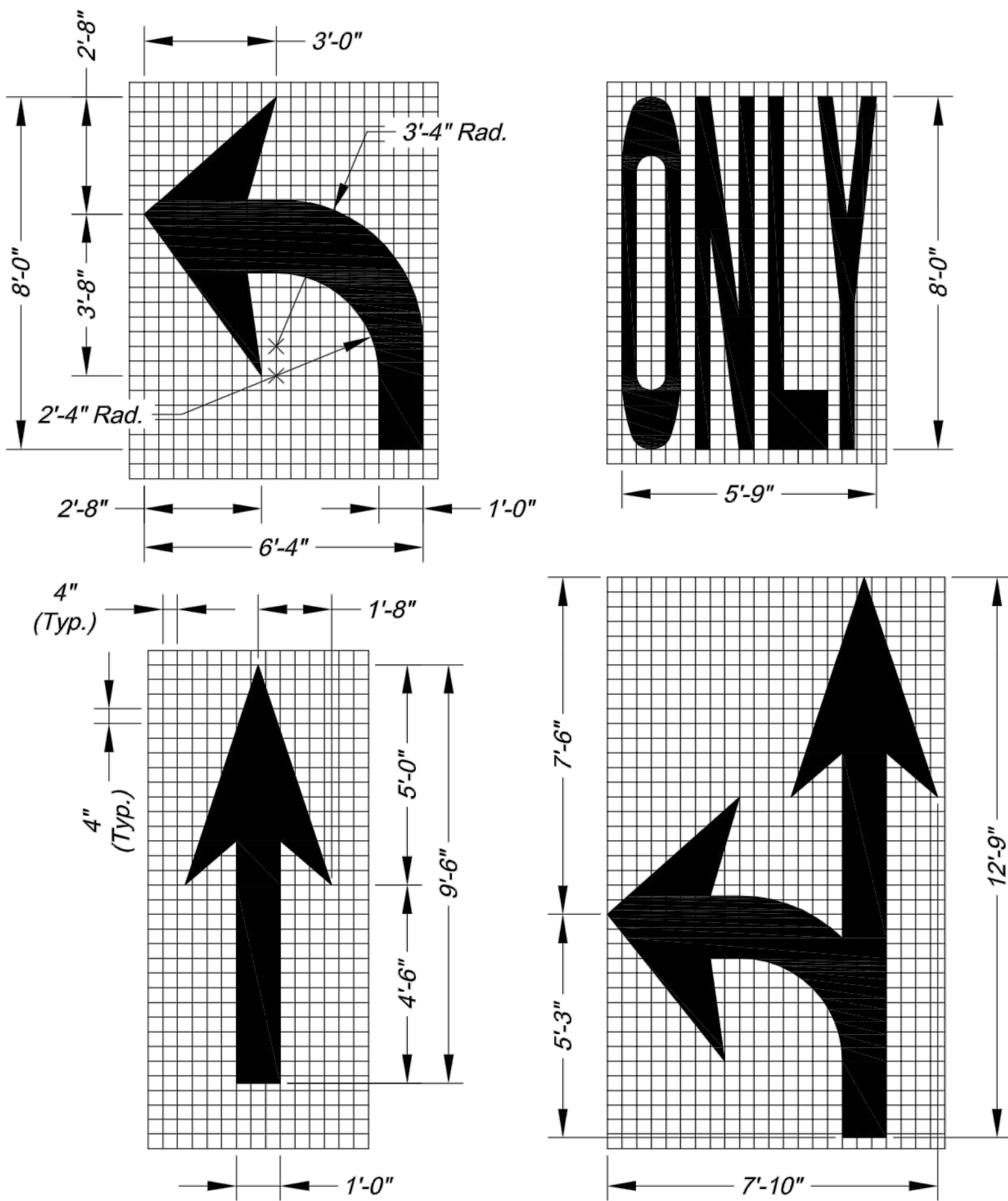
project no.: 021-04643
drawing no.: 52 OF 86
date: 8/27/2023

SHEET
52 OF 86

REVISIONS

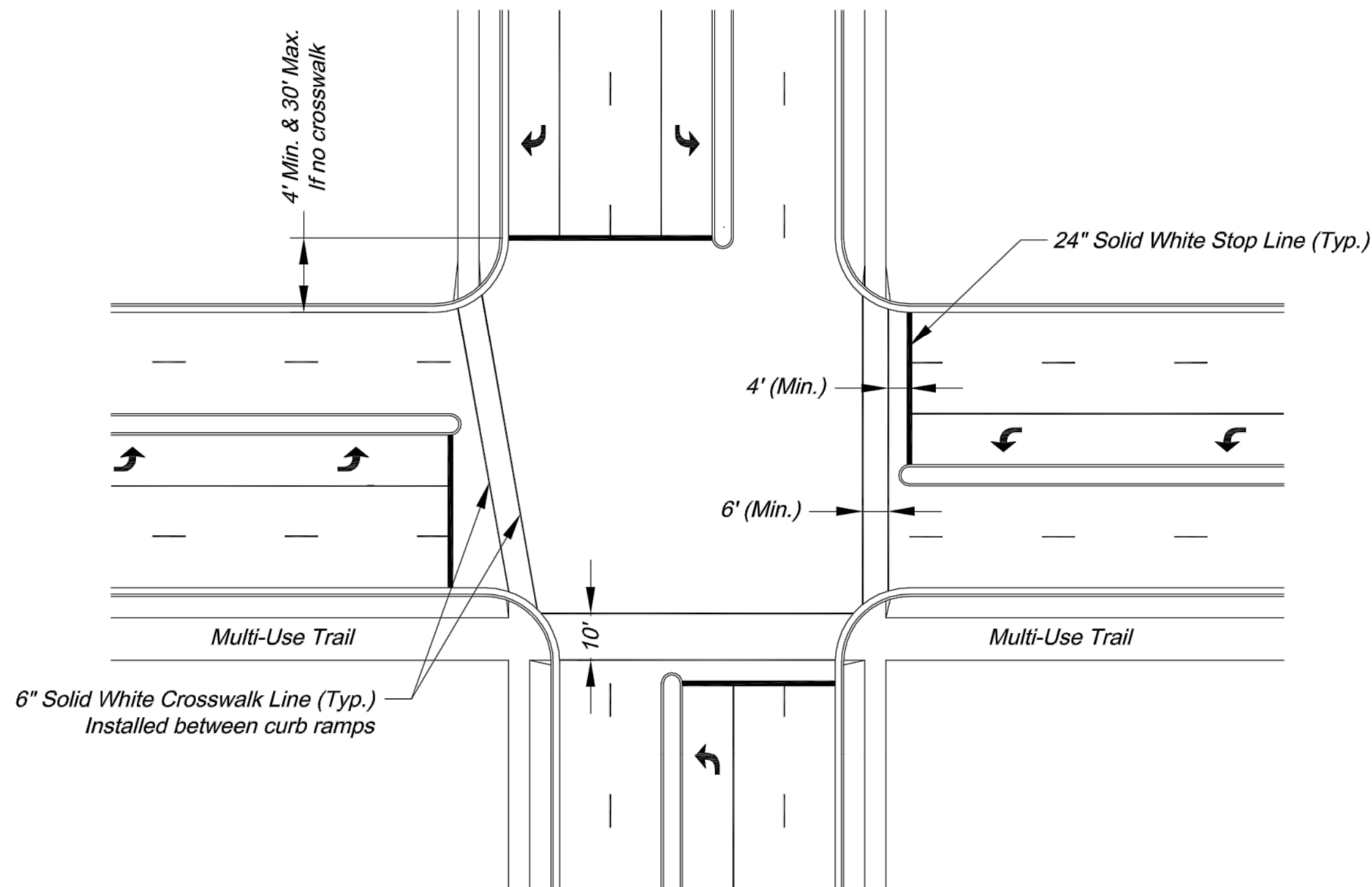


- NOTES:
1. All edge line, center line, and lane line pavement markings shall be 4" wide unless otherwise noted.
 2. Edge lines shall be continuous solid white or yellow lines. Right side edge lines shall be solid white. Median or left side edge lines on divided roadways are to be solid yellow. Edge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



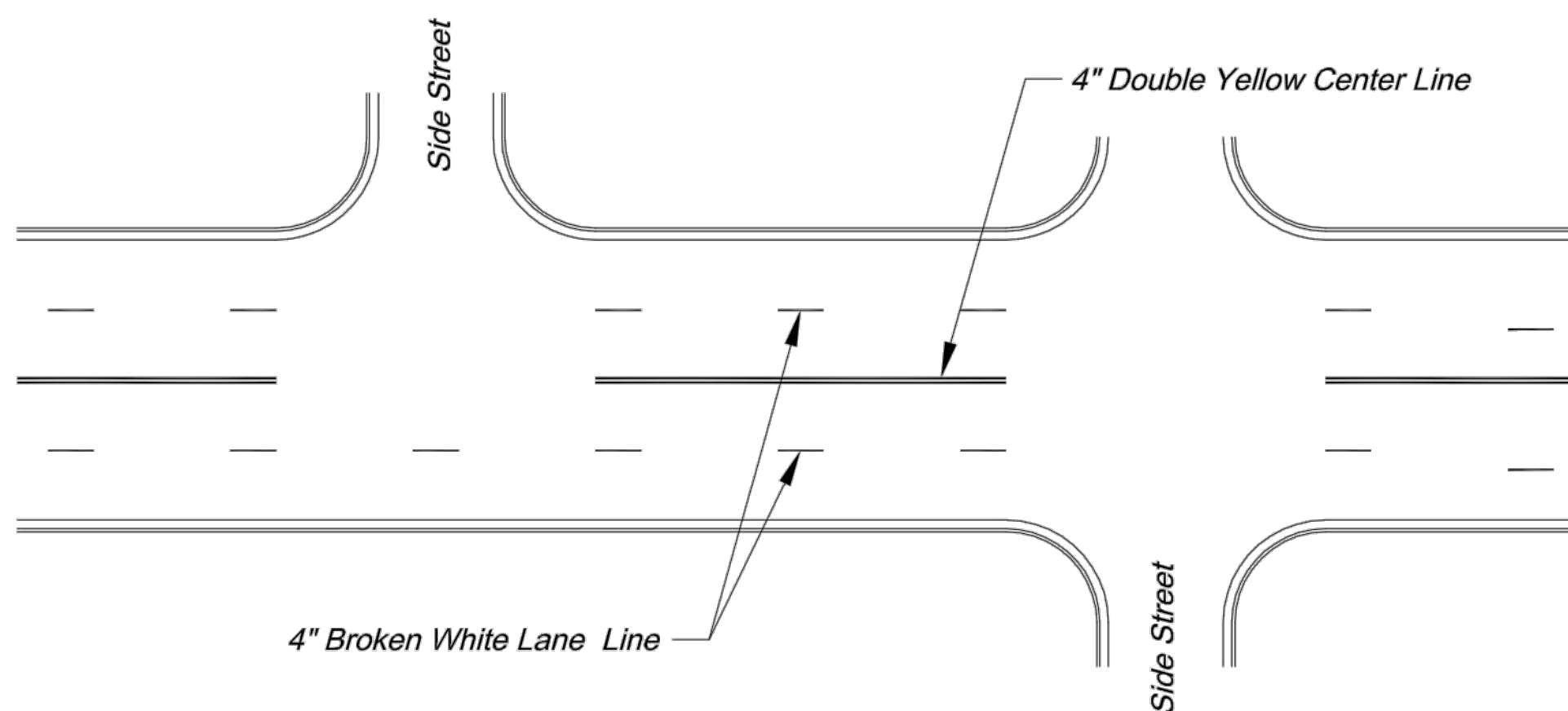
ARROW AND SYMBOL DETAILS

- 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.



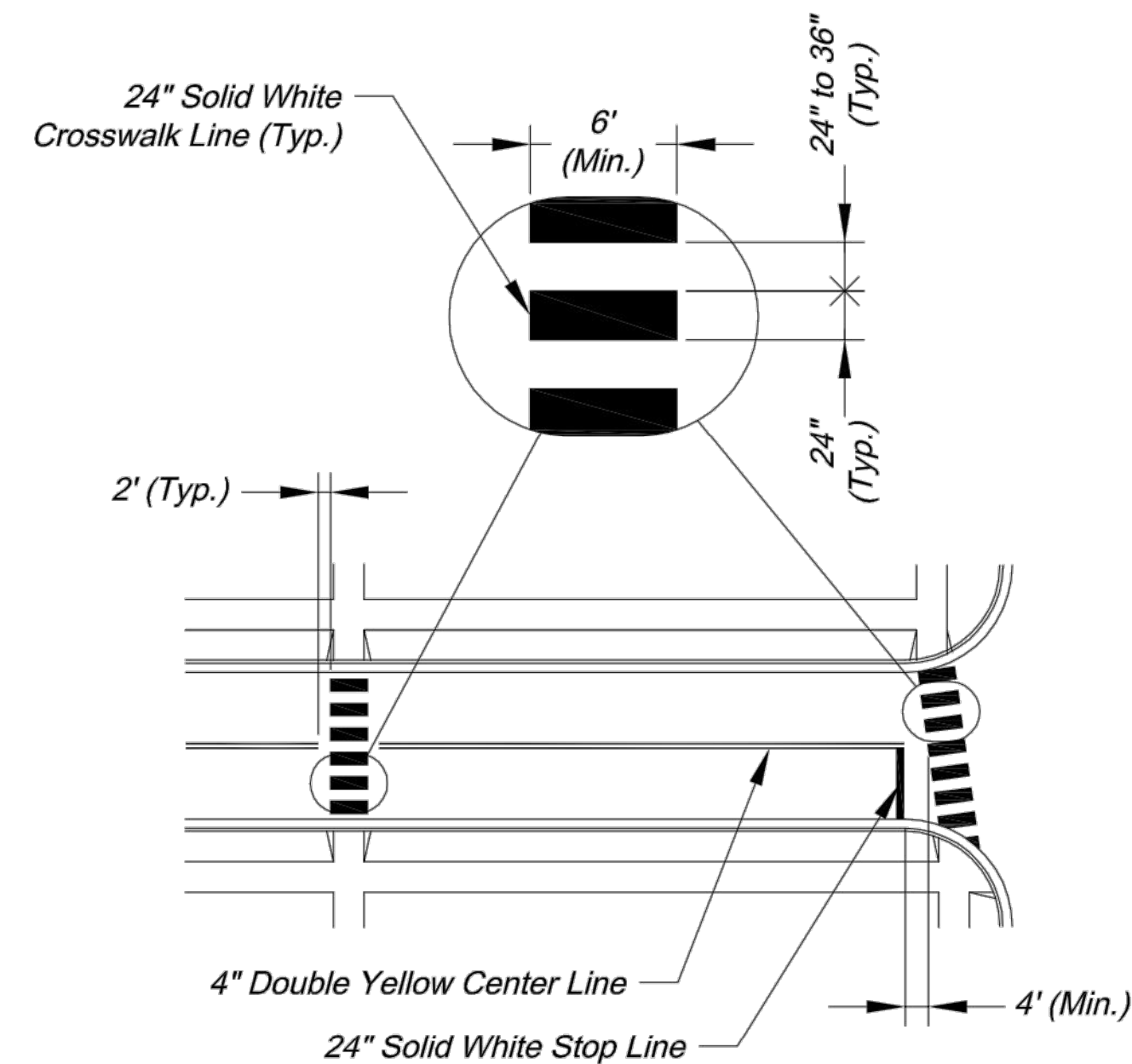
TYPICAL INTERSECTION MARKINGS

- 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.

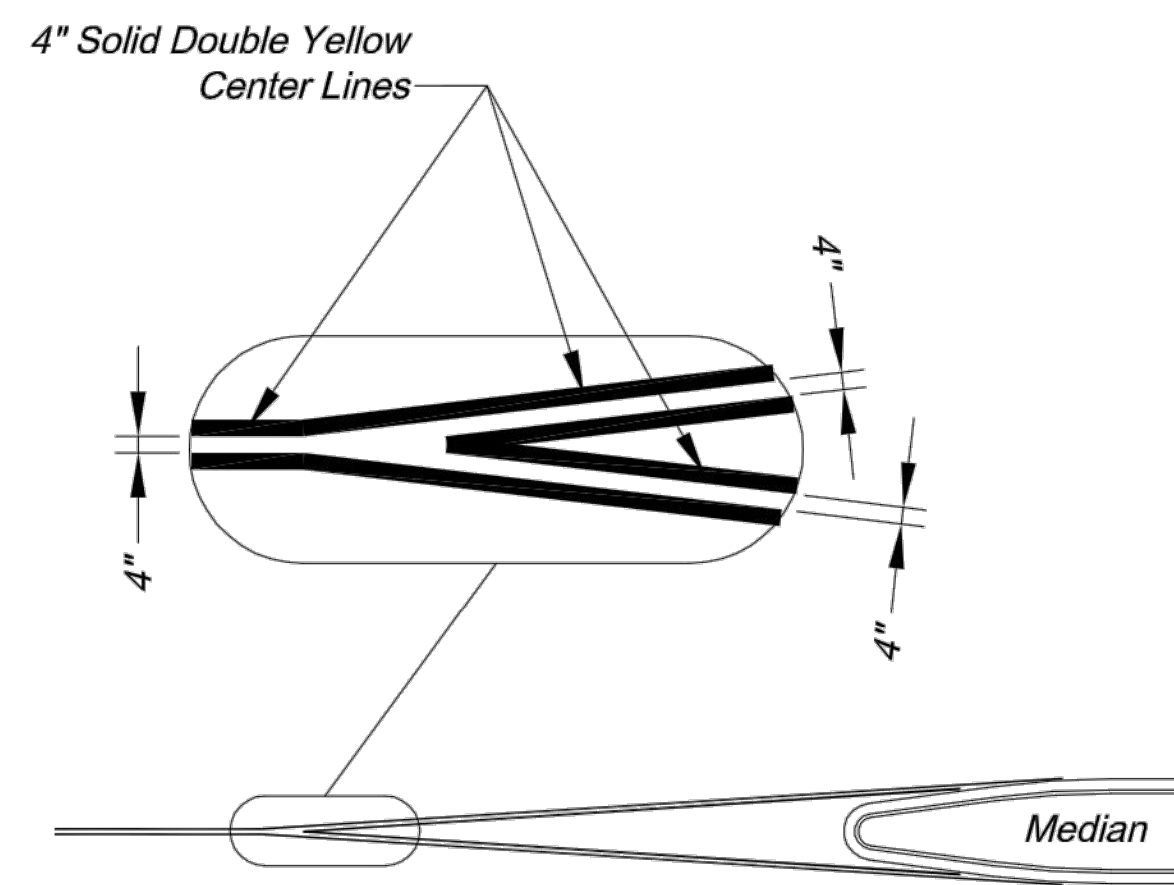


TYPICAL MARKINGS FOR FOUR-LANE UNDIVIDED ROADWAY

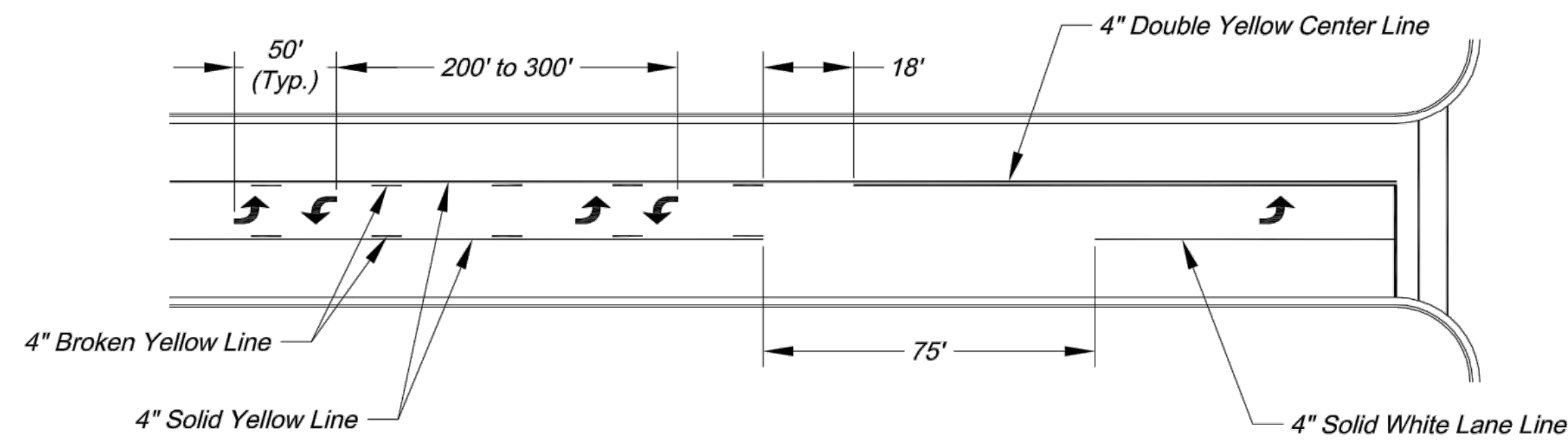
- PAVEMENT MARKING GENERAL NOTES:
1. All pavement markings shall be in accordance with the latest edition of the *Manual on Uniform Traffic Control Devices (MUTCD)*.
 2. All words and symbols shall conform to the latest edition of *Standard Alphabets for Highway Signs and Pavement Markings* printed by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



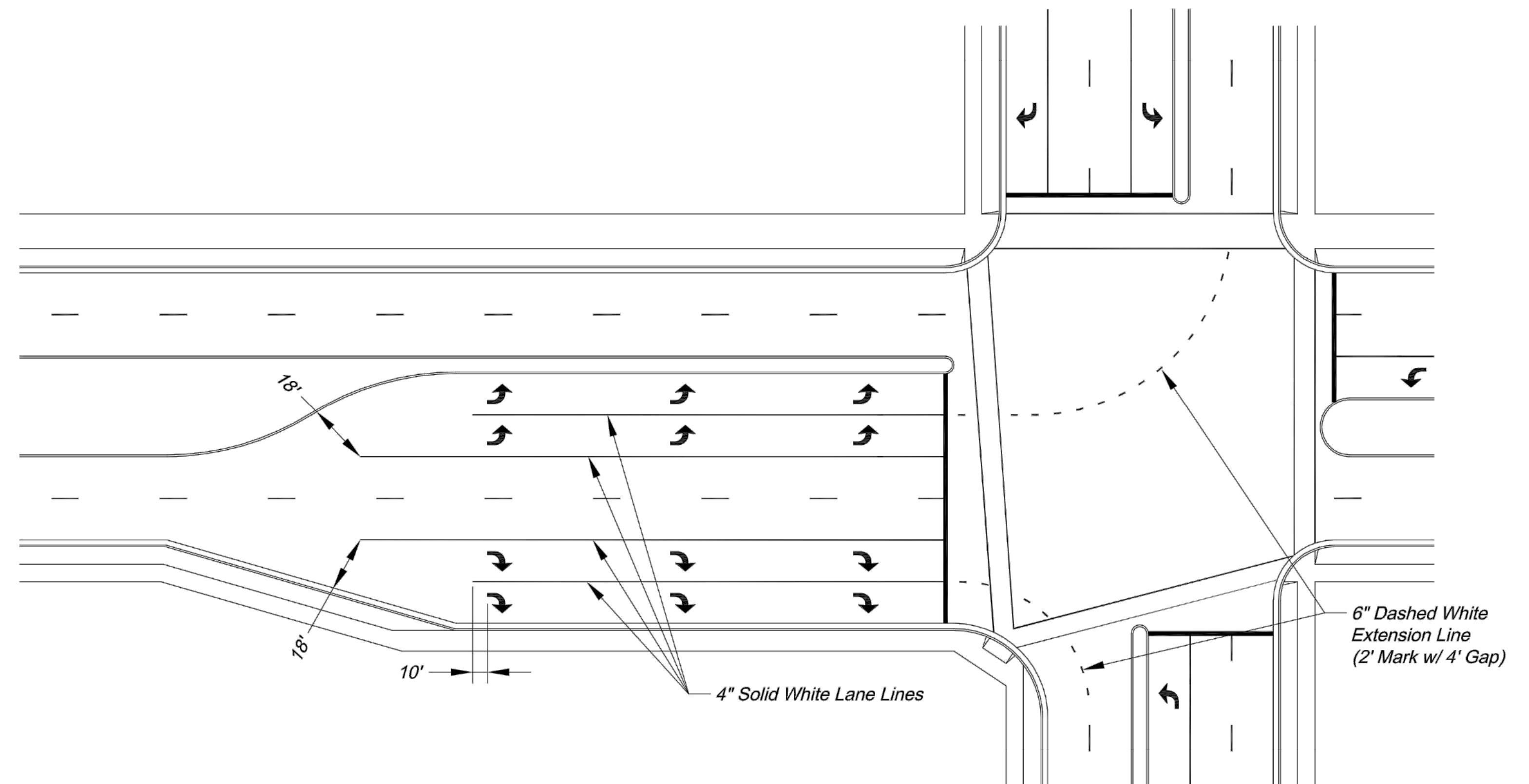
TYPICAL MIDBLOCK OR SCHOOL CROSS WALK



TYPICAL MEDIAN NOSE CENTER LINE DETAIL

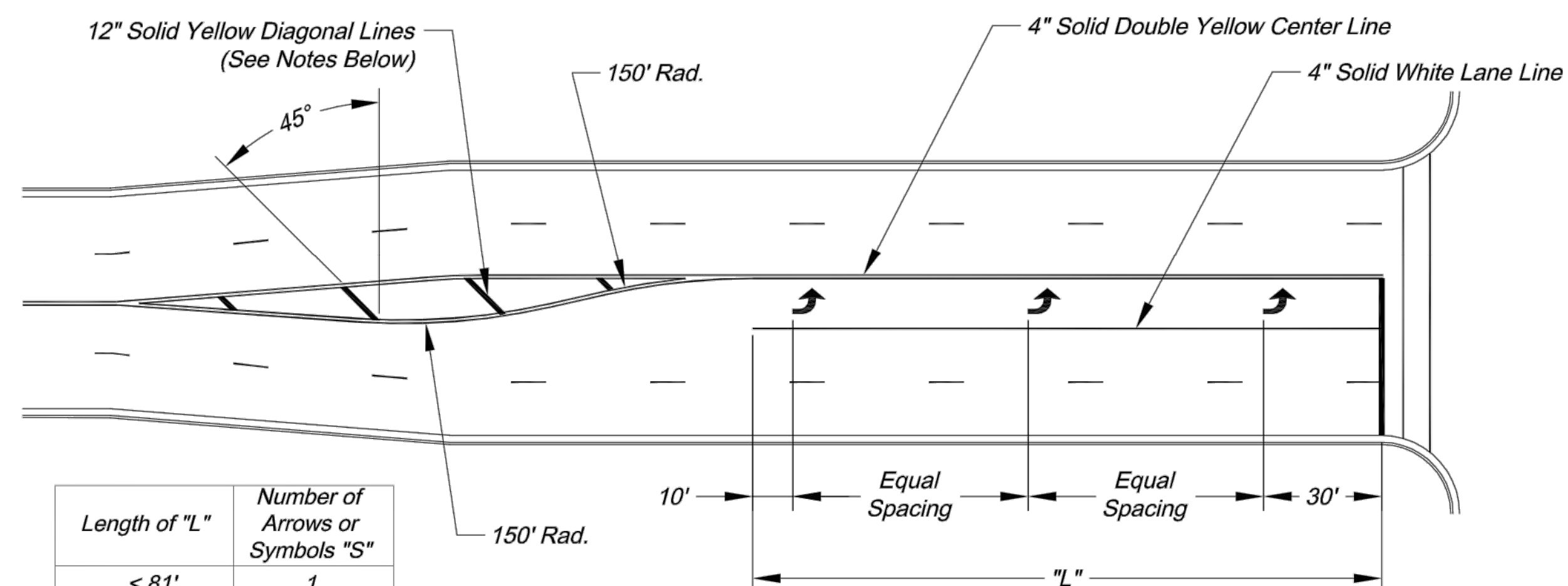


TYPICAL MARKINGS FOR TWO-WAY LEFT-TURN LANE



TYPICAL DUAL TURN LANE MARKINGS

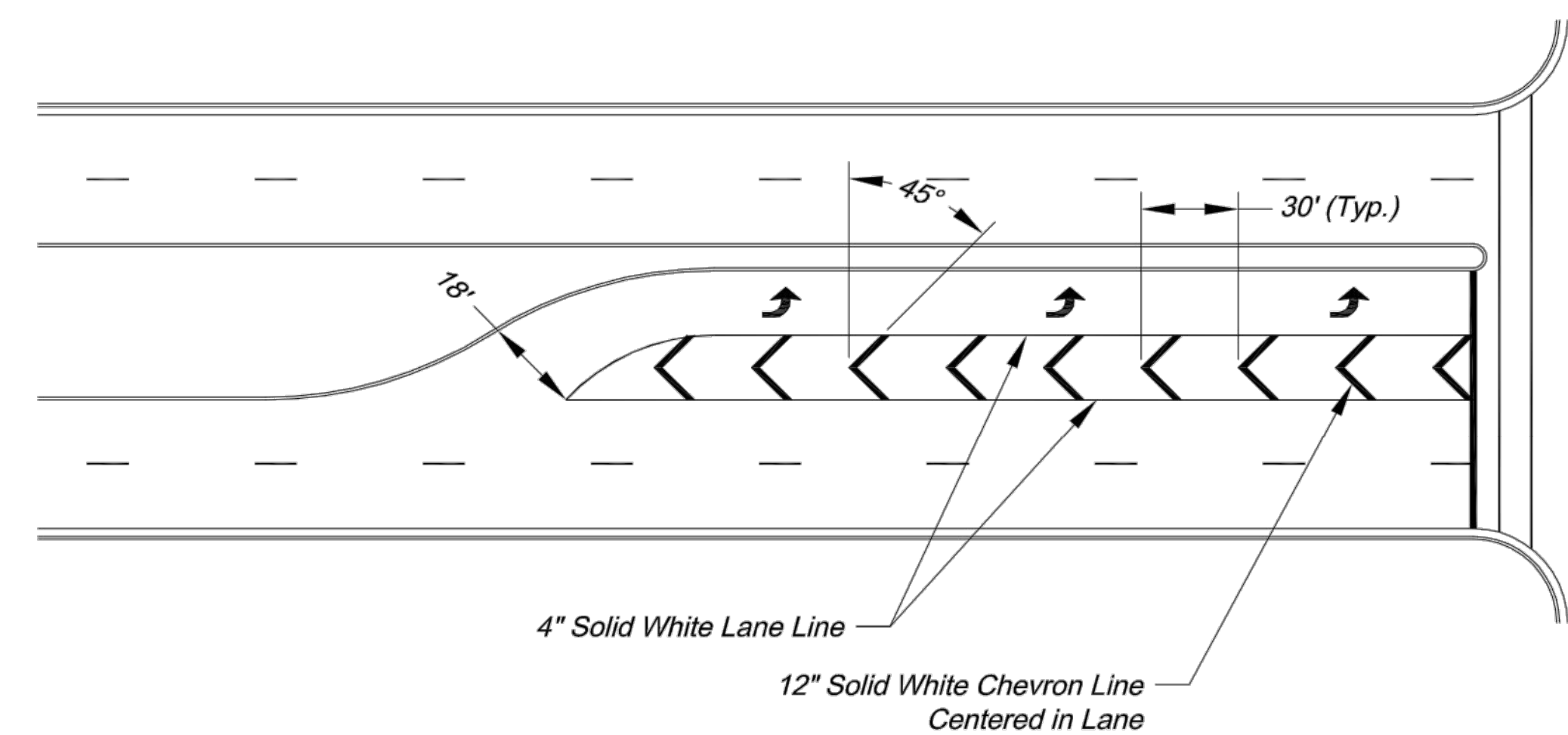
NOTE:
1. Dashed extension lines shall not extend through crosswalks.



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.



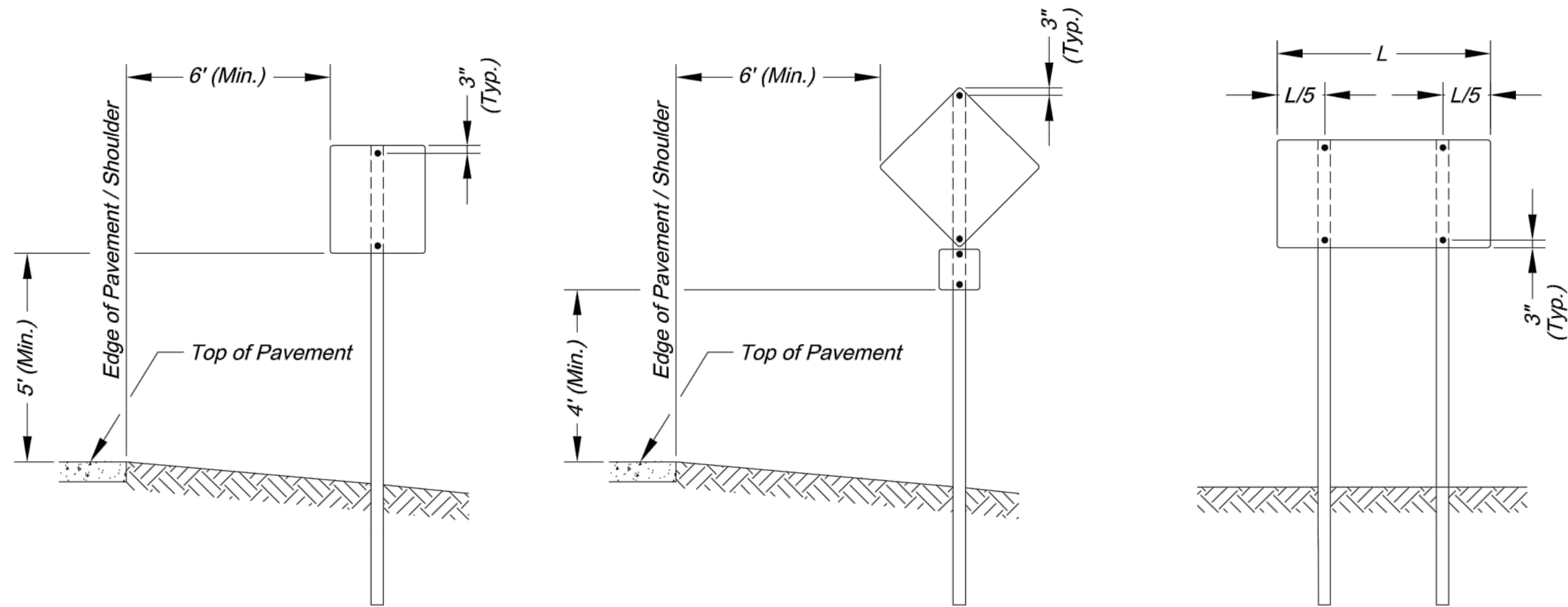
TYPICAL STRIPED OUT TURN LANE MARKINGS



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

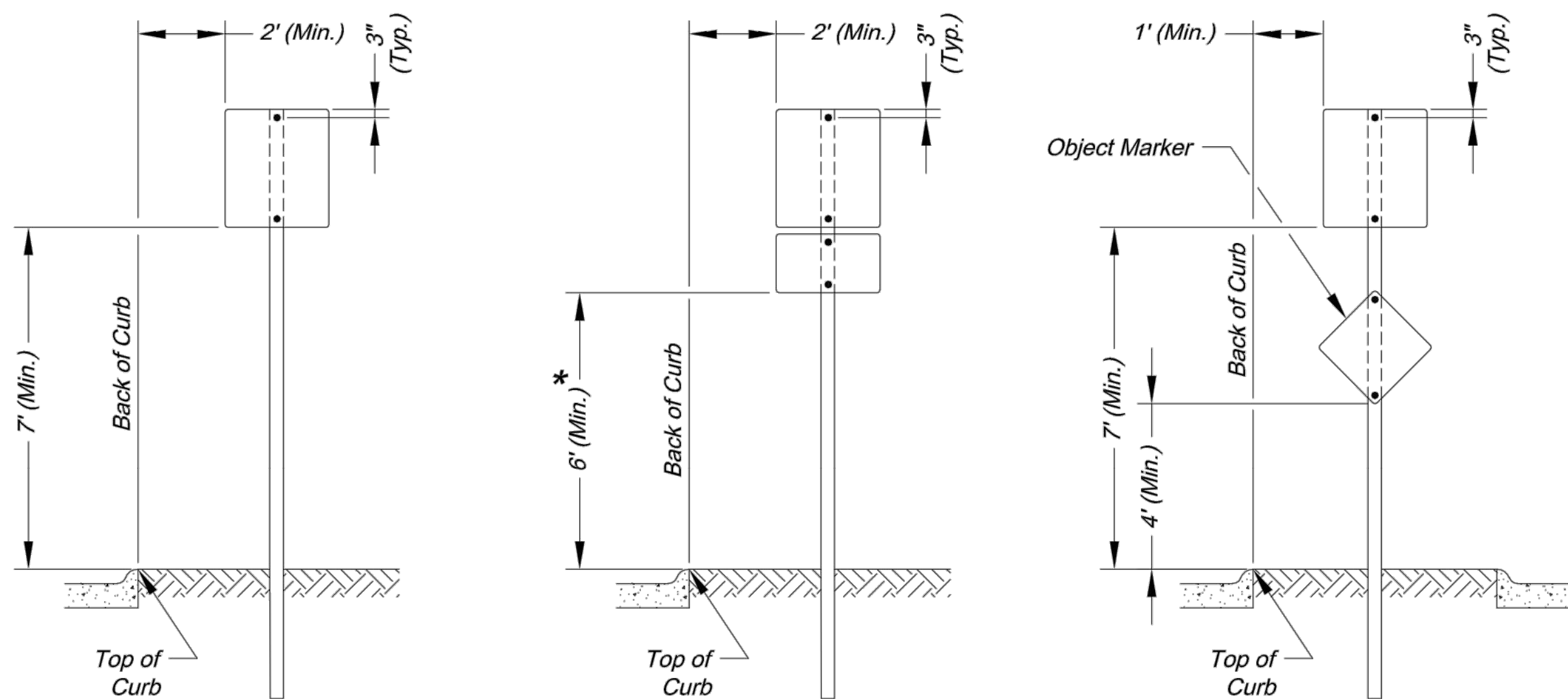
Drawn By: AS
Checked By: JW
Date: 09/09/2009
Project#



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

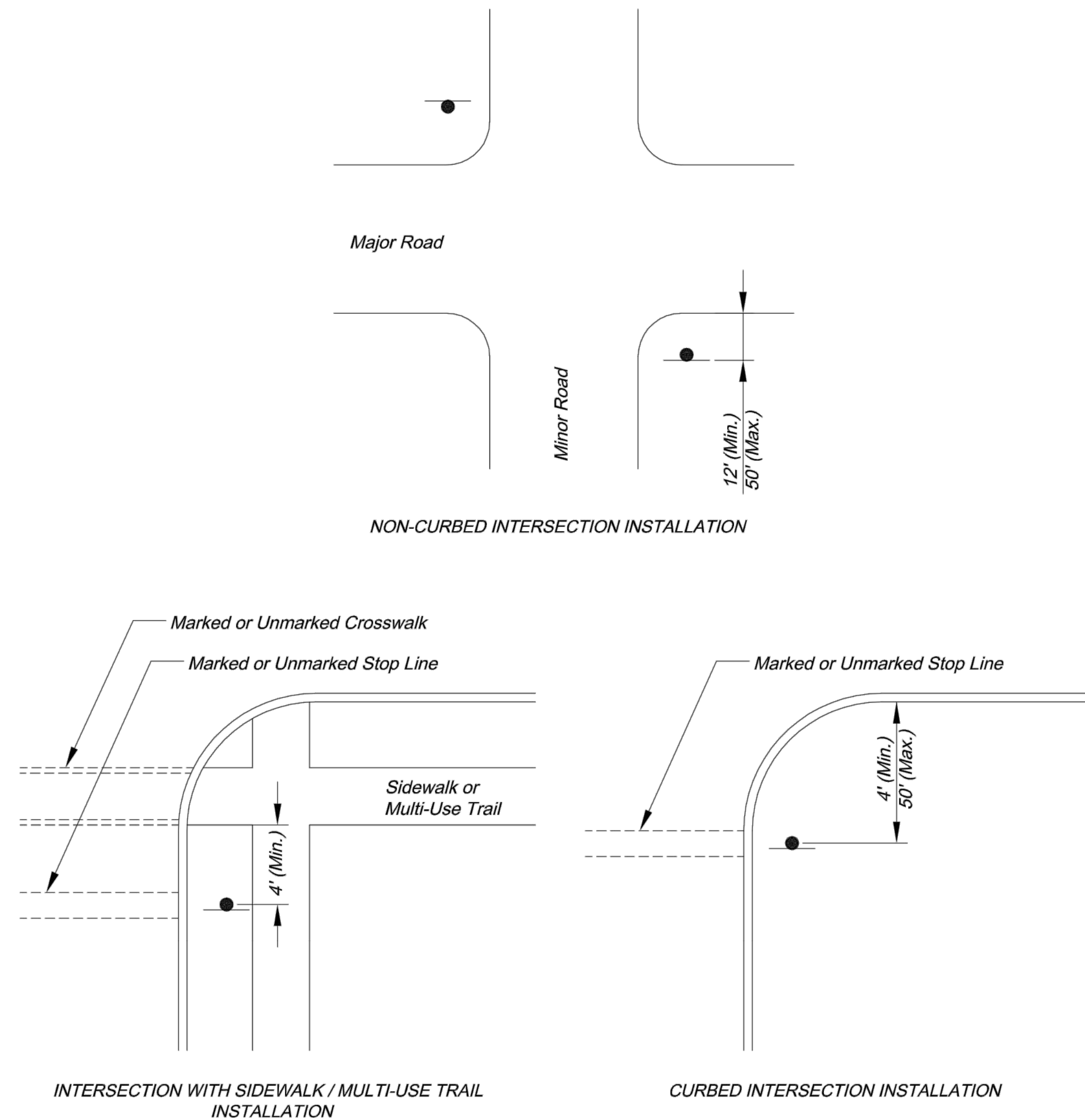
SIGN INSTALLATION FOR
RAISED MEDIANS

SIGN MOUNTING DETAILS

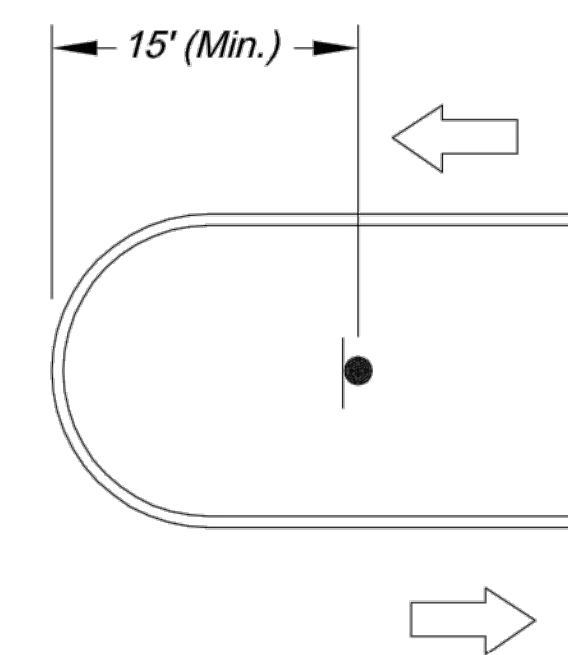
* The height to the bottom of a sign when it is located in a pedestrian walkway or extends into a walkway shall be a minimum of 80 inches above the walkway.

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

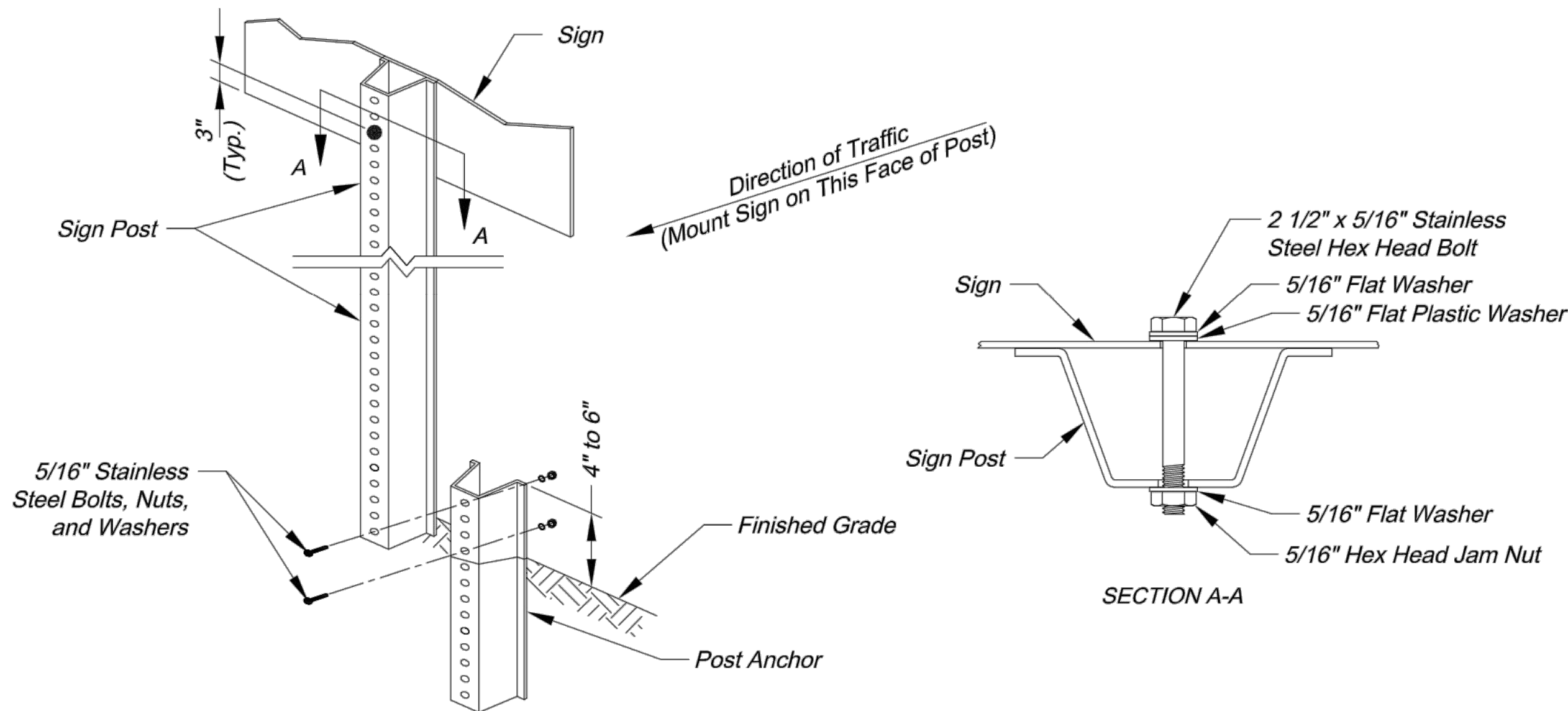
Drawn By: AS

Checked By: JW

Date: 08/26/2009

Project#

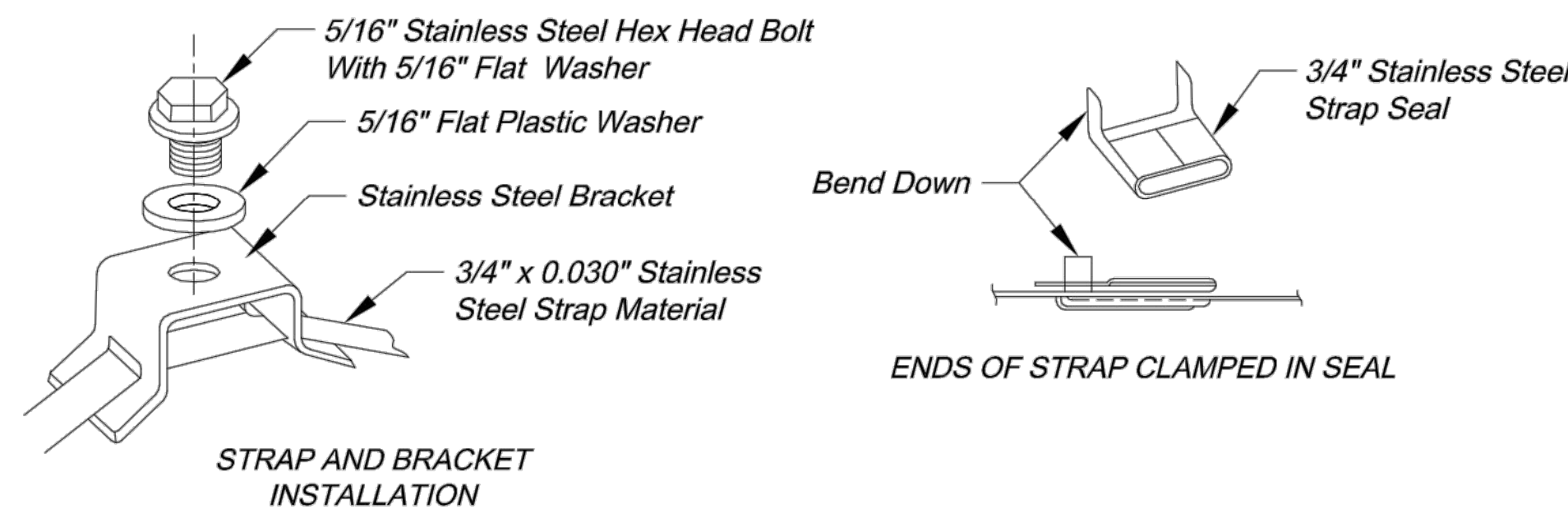
1 OF 3



U-STEEL POST DETAILS

U-STEEL POST NOTES:

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



STRAP TYPE SIGN SUPPORT DETAILS

METAL POLE SIGN MOUNTING NOTES:

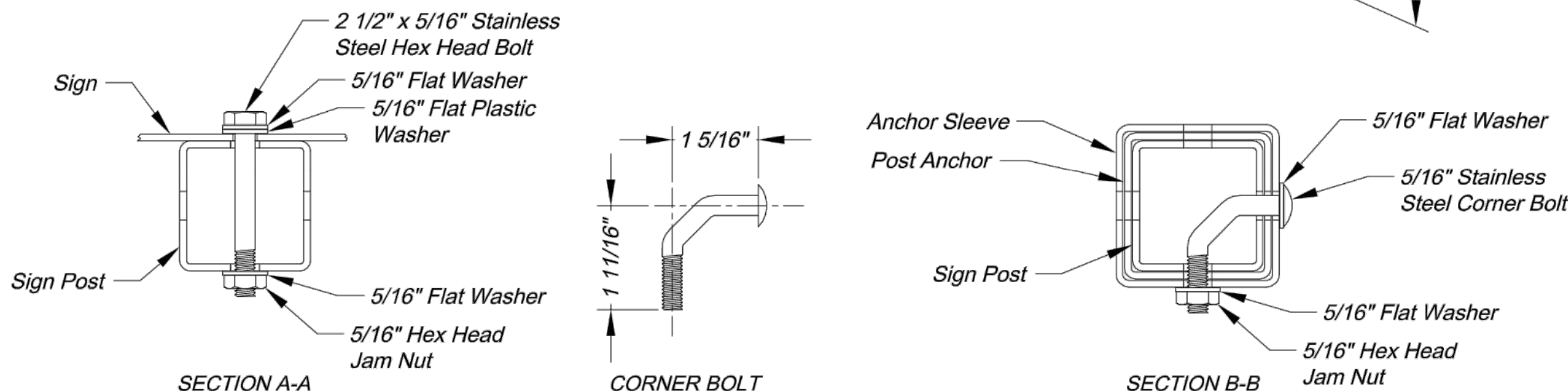
1. Signs on metal poles shall be attached with two brackets and stainless steel bands.
2. Holes in sign for attachment to the mounting brackets shall be offset a minimum of 2 inches from the edge of the sign.
3. Holes in sign shall be located such that the sign is level.
4. All strap, bracket, and seal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

PERMANENT SIGNING GENERAL NOTES:

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

SQUARE STEEL POST INSTALLATION SEQUENCE:

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



SQUARE STEEL POST DETAILS

SQUARE STEEL POST NOTES:

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

Project: COLBERN ROAD AND DOUGLAS STREET

SIGN POST DETAILS

Sheet Name: STANDARD DRAWING SN-2



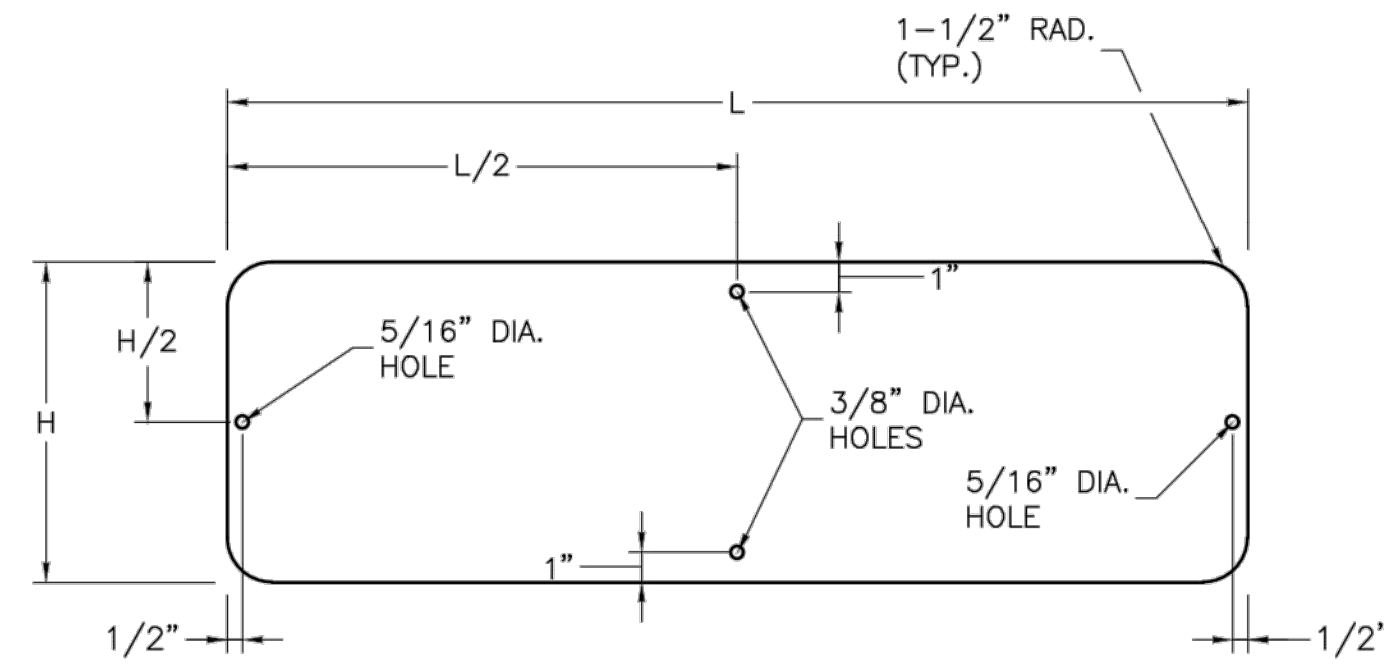
CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

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

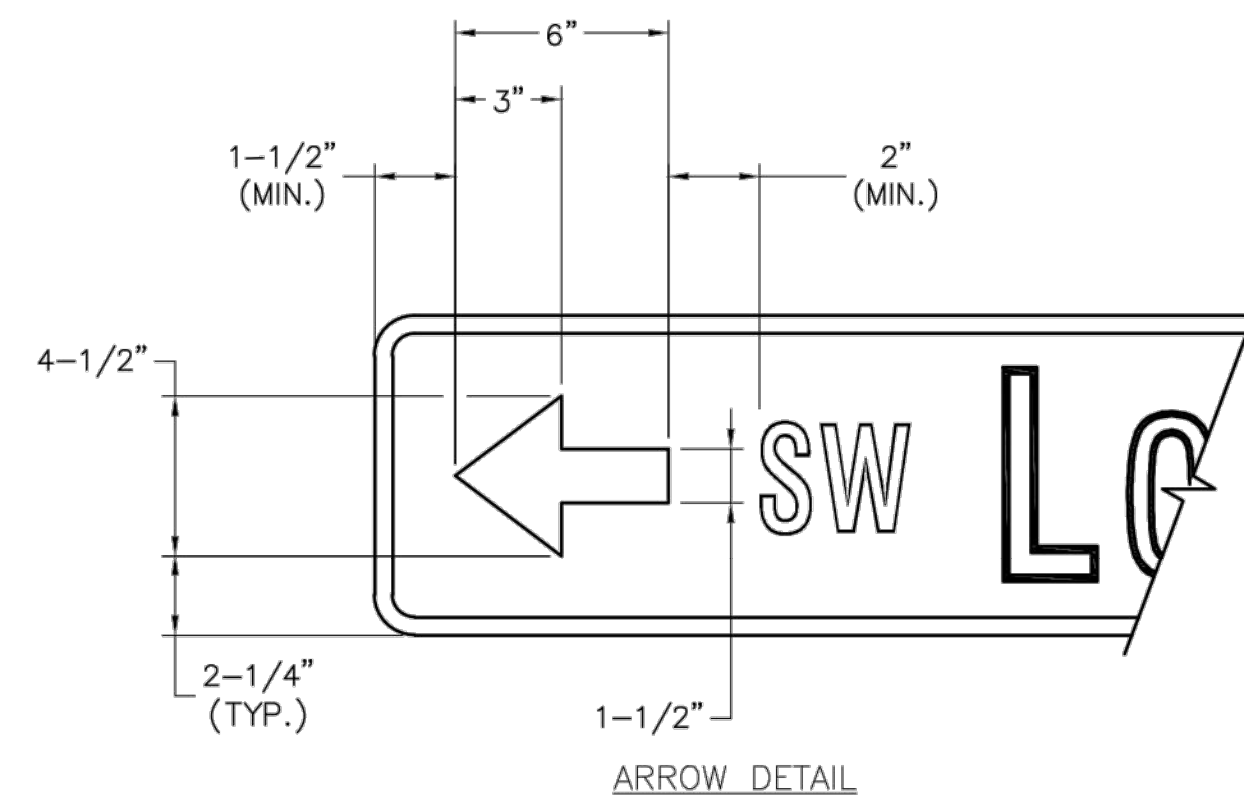
2 OF 3

NAMED STREETS	
AVENUE	Ave
BOULEVARD	Bldv
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

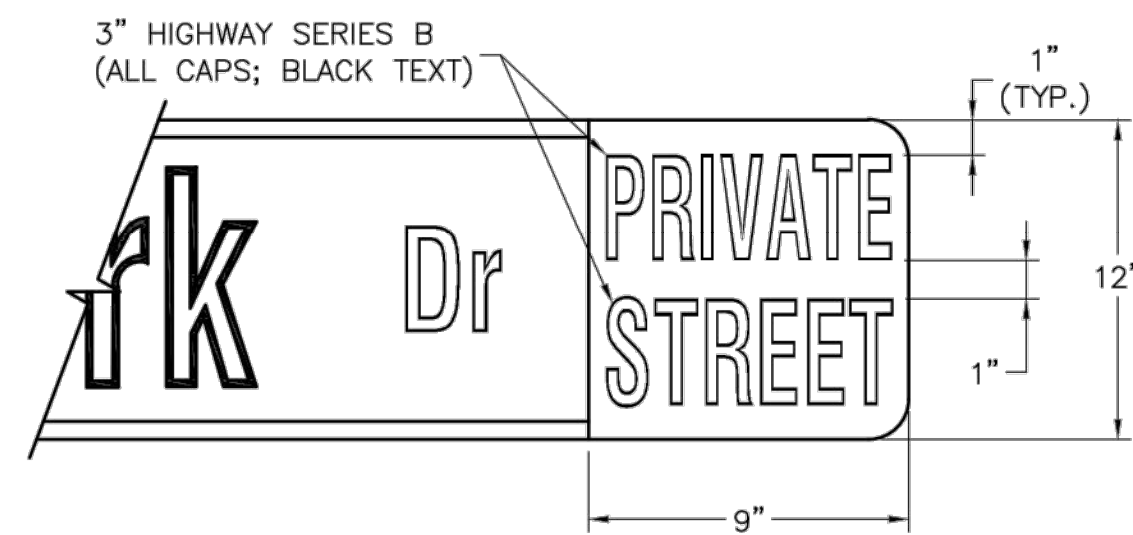
NUMBERED STREETS	
FIRST	ST
SECOND	ND
THIRD	RD
FOURTH TO TENTH	TH



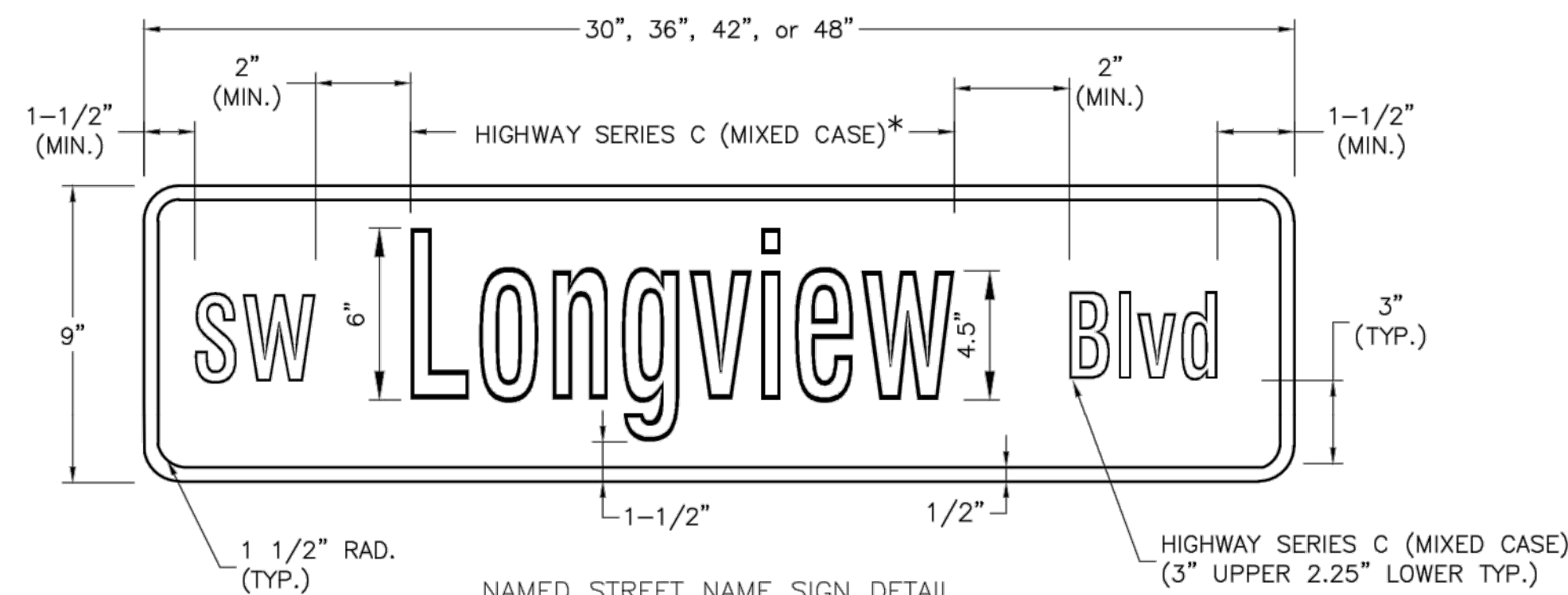
STREET NAME SIGN BLANK DETAILS



ARROW DETAIL



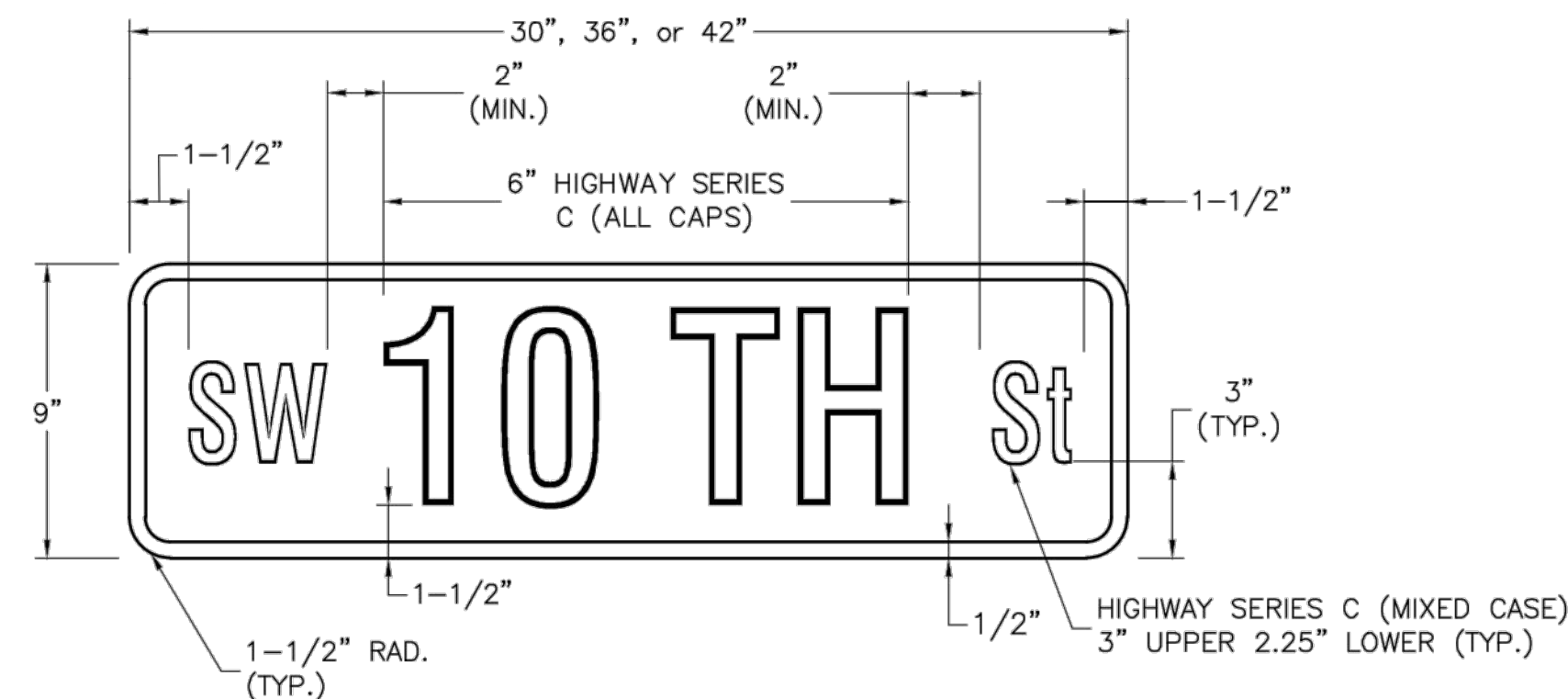
PRIVATE STREET TAG DETAIL



NAMED STREET NAME SIGN DETAIL

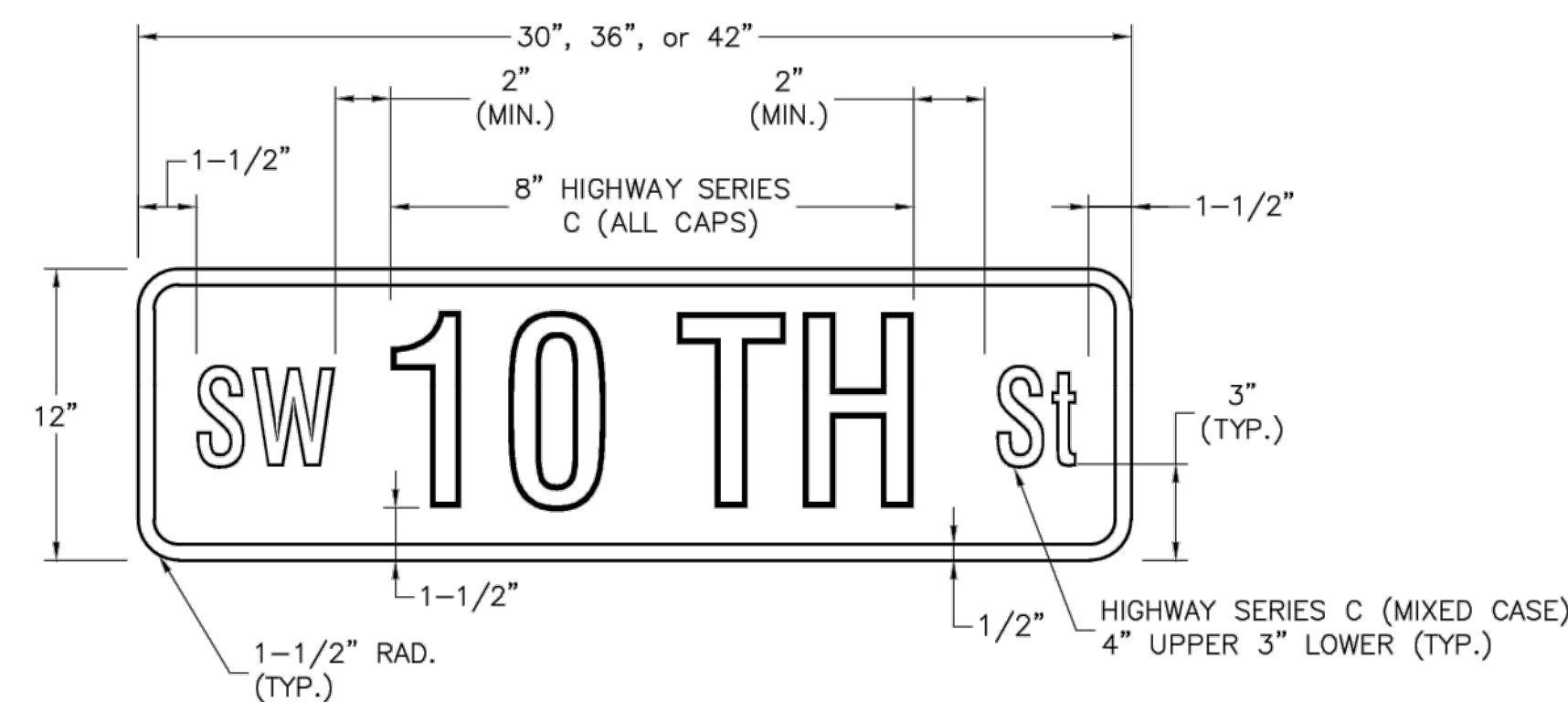
* USE HIGHWAY SERIES B (MIXED CASE) IN LIEU OF SERIES C IF NECESSARY TO FIT TEXT ON A 36" SIGN BLANK.

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



NUMBERED STREET NAME SIGN DETAIL

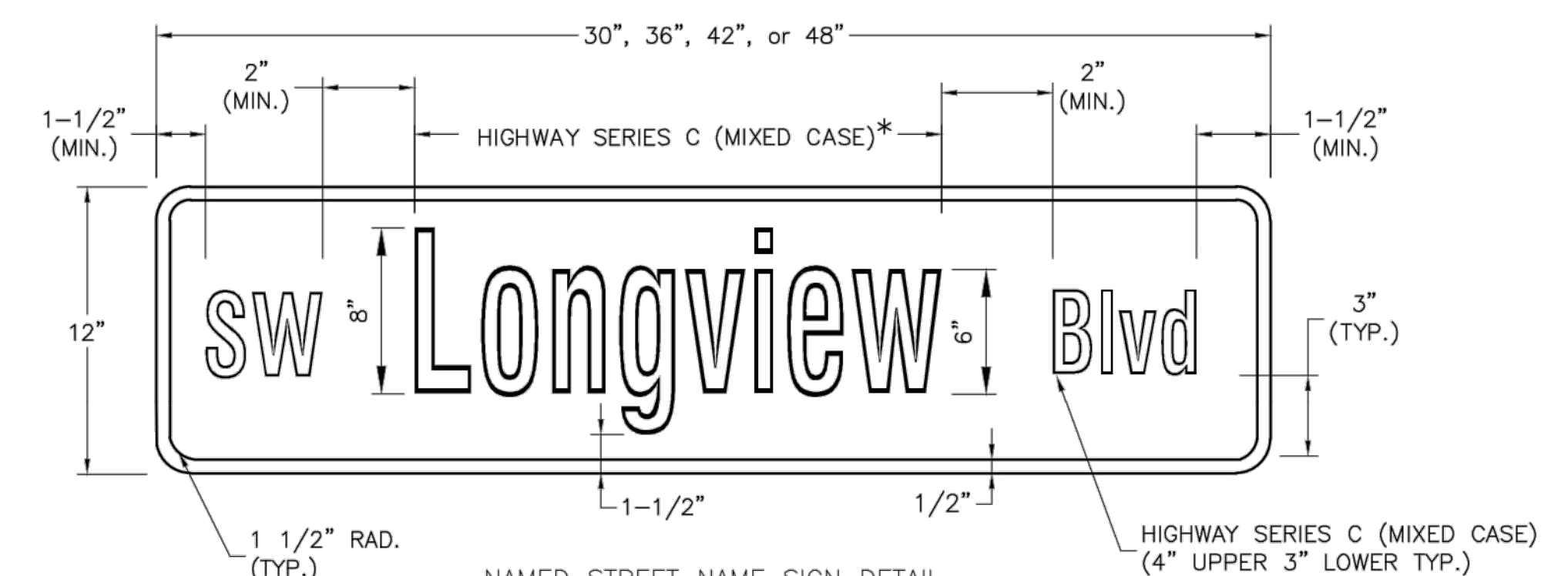
POST MOUNTED 2-LANE ALL SPEEDS AND MULTI-LANE UNDER 40 MPH



NUMBERED STREET NAME SIGN DETAIL

POST MOUNTED MULTI-LANE GREATER THAN 40 MPH

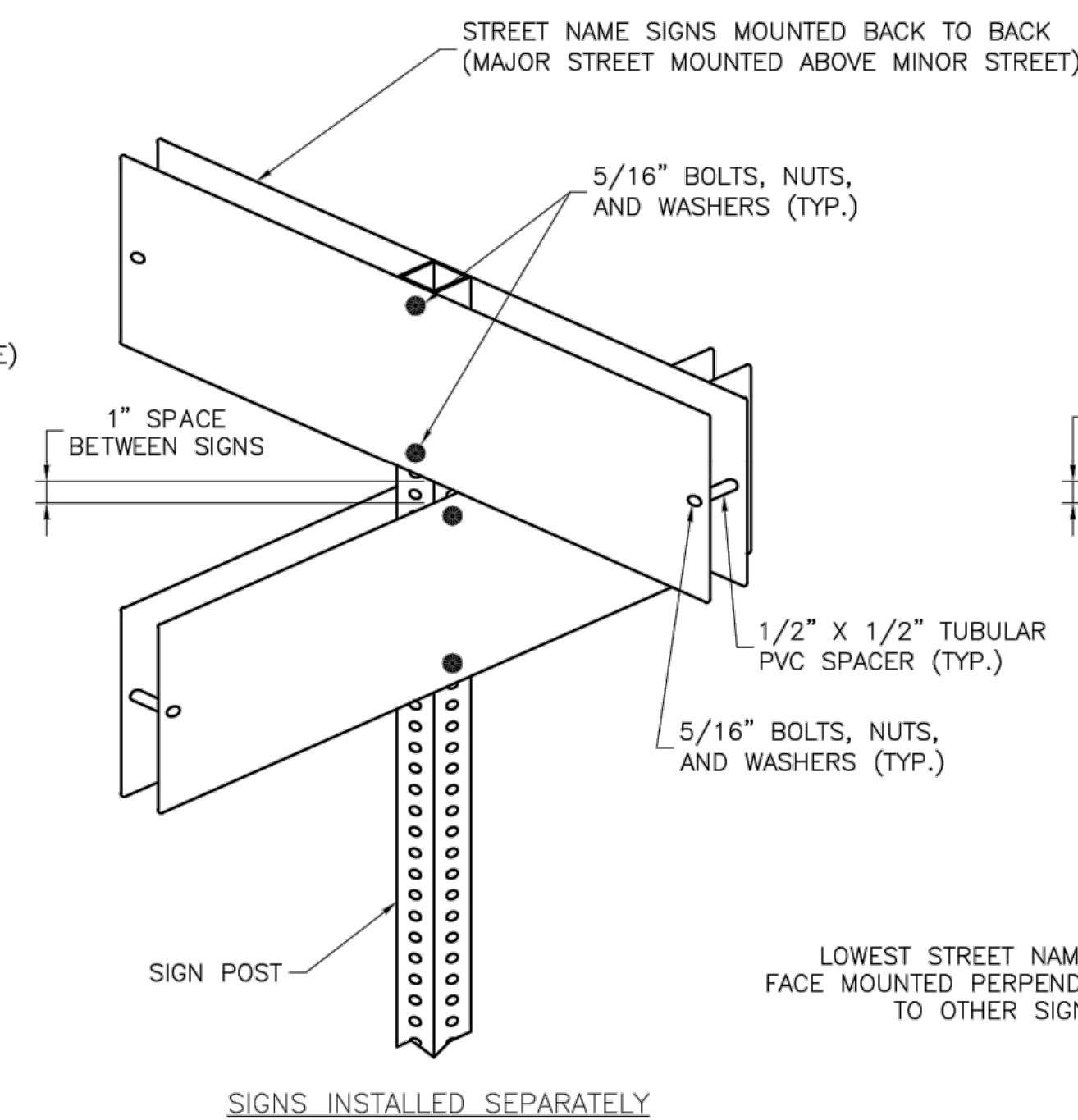
1. FOR ALL STREET NAME SIGNS, THE LEGEND SHALL BE WHITE AND THE BACKGROUND SHALL BE GREEN.
2. ARROWS SHALL BE ADDED TO STREET NAME SIGNS WHERE THE NAME OF A STREET CHANGES AT AN INTERSECTION. STREET NAME SIGNS WITH ARROWS ARE TO BE INSTALLED ON EACH SIDE OF THE INTERSECTION TO INDICATE THE CHANGE IN NAMES. ARROWS SHALL BE WHITE.
3. 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.
4. MULTI-LANE IS DEFINED AS HAVING 2 LANES OR MORE IN EACH DIRECTION, EXCLUDING TURN LANES.
5. OVERHEAD SIGN DETAILS MAY BE FOUND ON THE SIGNAL HEAD MOUNTING DETAIL.



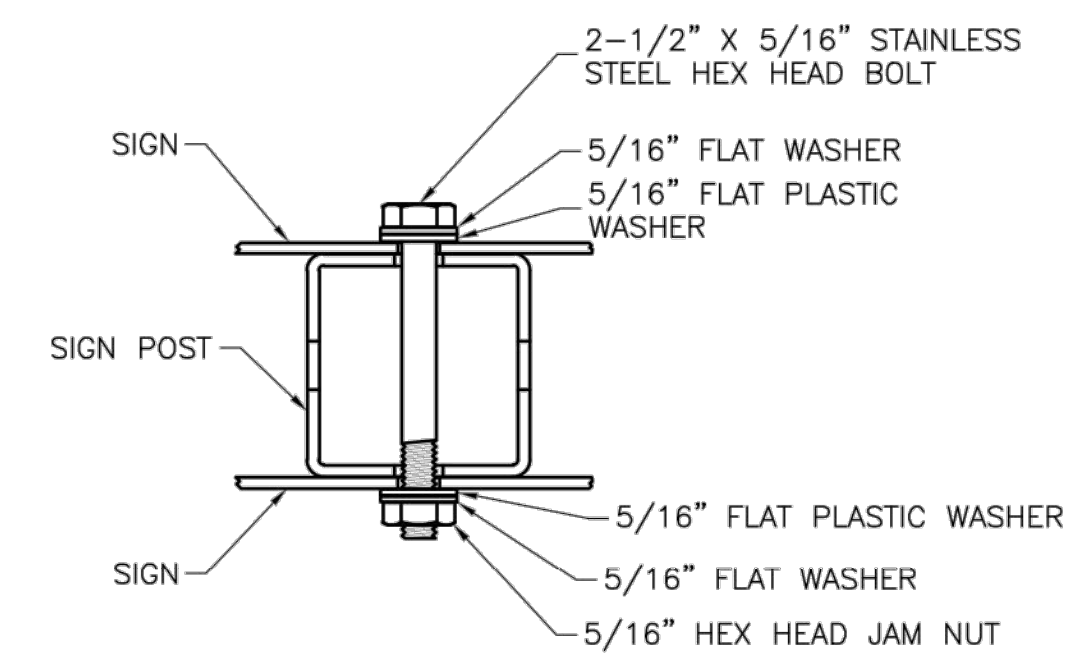
NAMED STREET NAME SIGN DETAIL

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

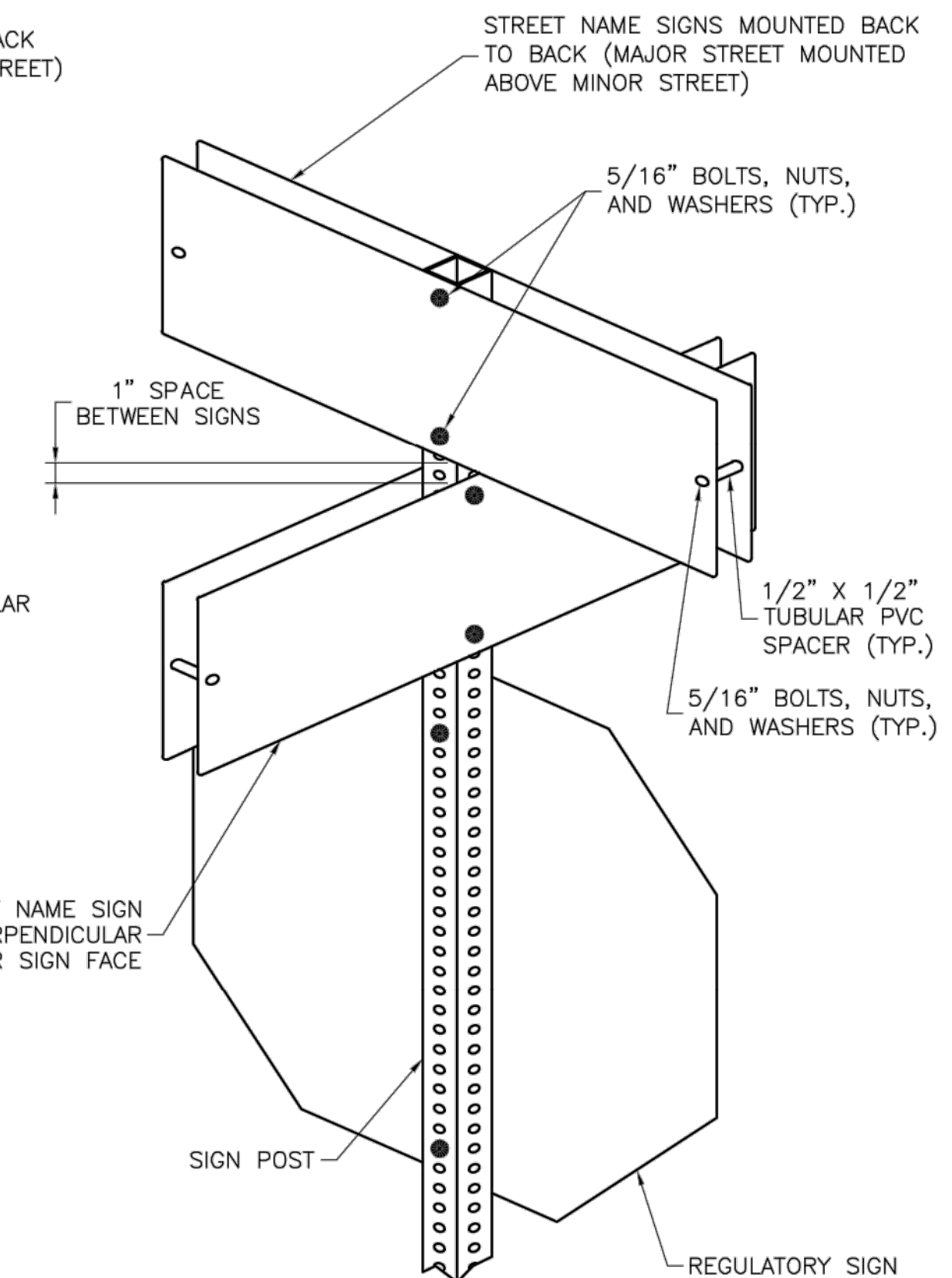
POST MOUNTED MULTI-LANE GREATER THAN 40 MPH



SIGNS INSTALLED SEPARATELY



PLAN VIEW



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



COLBERN ROAD AND DOUGLAS STREET

STREET NAME SIGN DETAILS

STANDARD DRAWING SN-3

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

OF 3

DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final\Plans\Sheets\JTTC\TRAFFIC CONTROL\F_TFE_D2104643.dwg USER: kwilliams2
DATE: Sep 27, 2023 4:55pm XREFS: F_P\TBLK_D02104643 C_P\BASE_D02104643 T_P\BASE_D02104643 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.

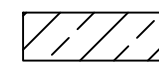
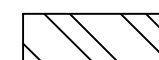
DOUGLAS STREET – DOUGLAS STREET TO REMAIN OPEN DURING PHASE 1 CONSTRUCTION. THE SOUTHBOUND THROUGH LANE IS TO BE TEMPORARILY CLOSED. THE TWO-WAY LEFT-TURN LANE IS TO BE UTILIZED FOR SOUTHBOUND THROUGH TRAFFIC.

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.

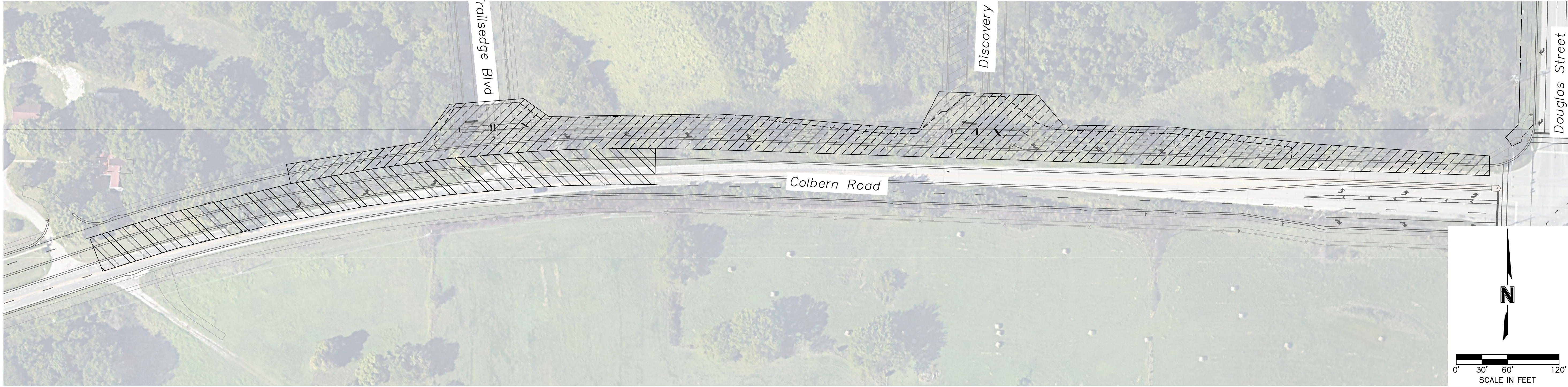
DOUGLAS STREET – DOUGLAS STREET TO REMAIN OPEN DURING PHASE 2 CONSTRUCTION IN BOTH DIRECTIONS WITH TEMPORARY TRAFFIC CONTROL IN PLACE FOR STRIPING OPERATIONS.

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

2023

REVISIONS

REVISIONS DESCRIPTION

DATE

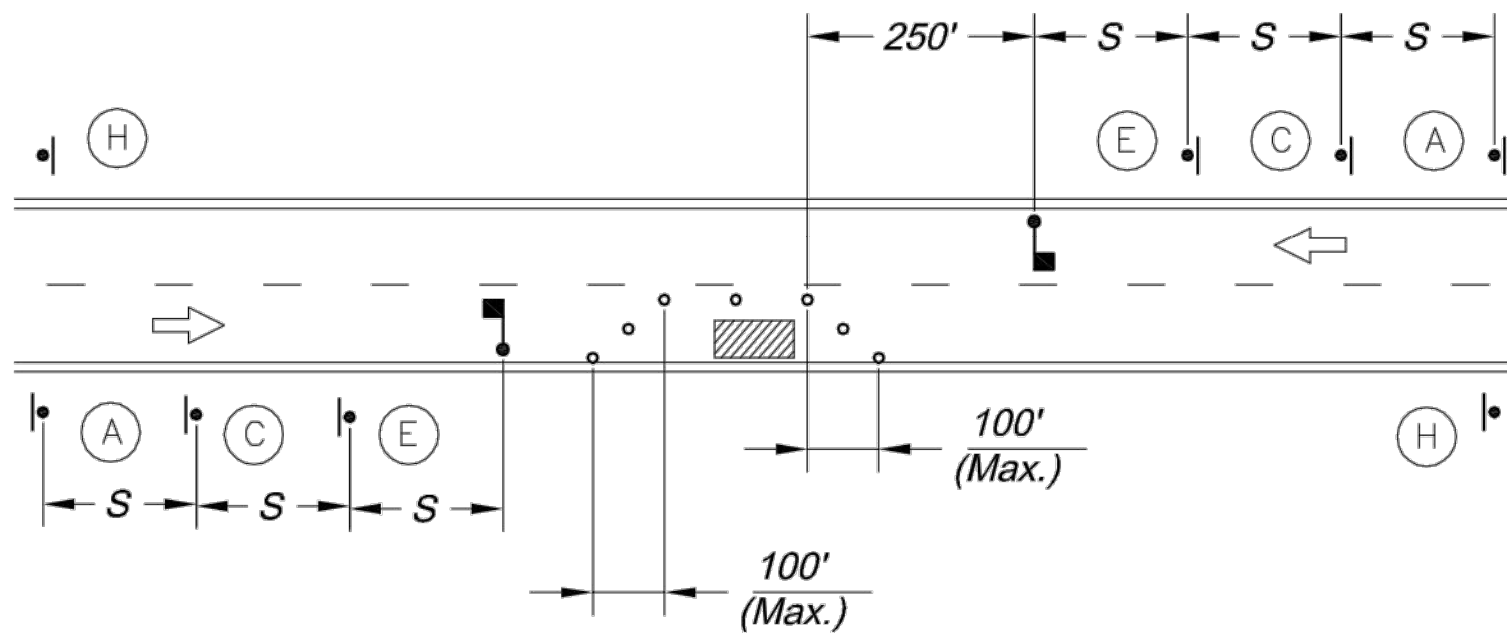
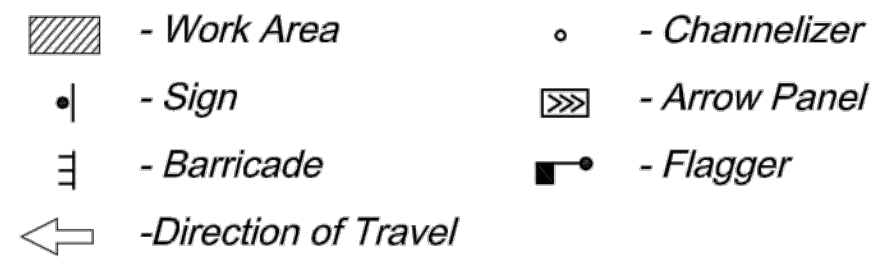
REV. NO.



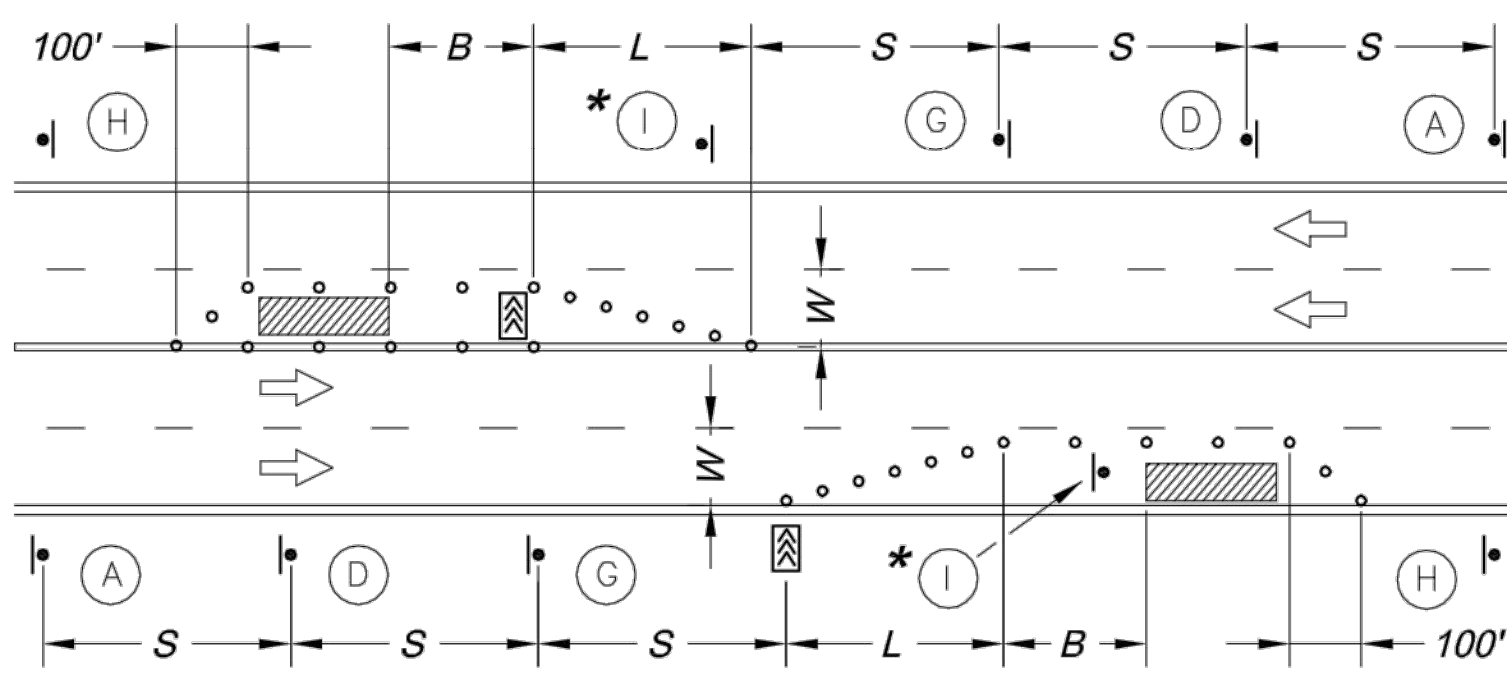
olsson

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

SYMBOL LEGEND

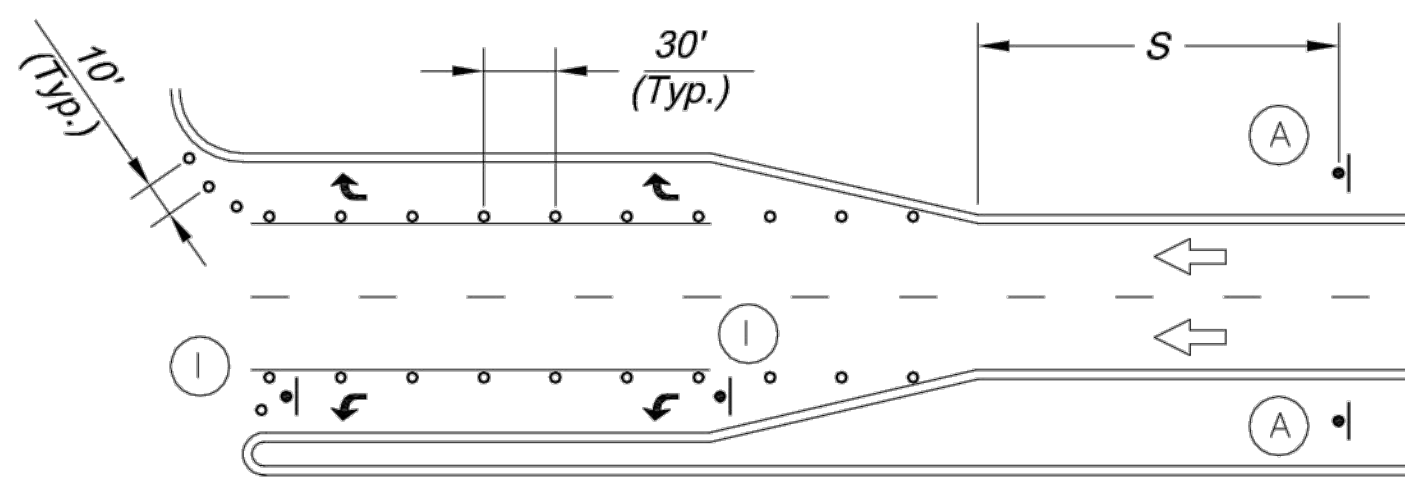


LANE CLOSURE - TWO LANE STREET



LANE CLOSURE - FOUR LANE STREET

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



TURN LANE CLOSURE

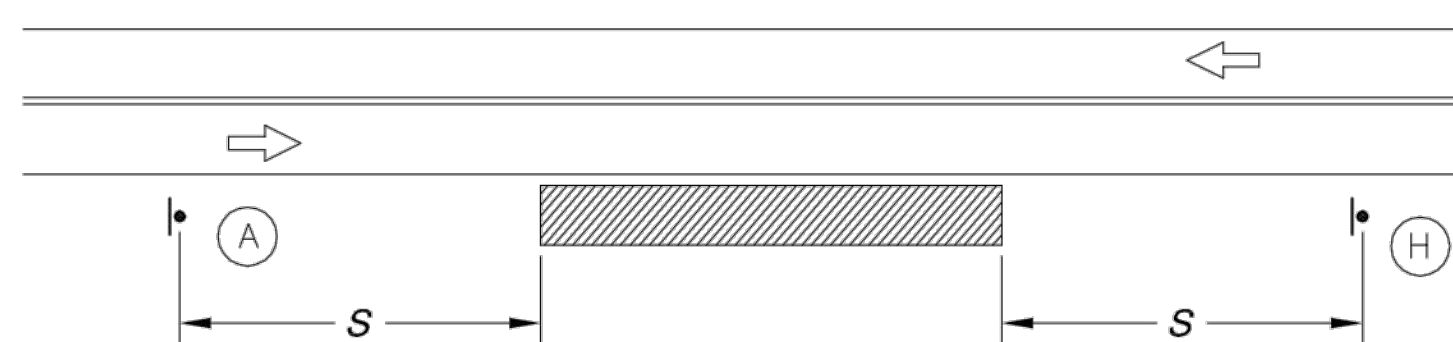
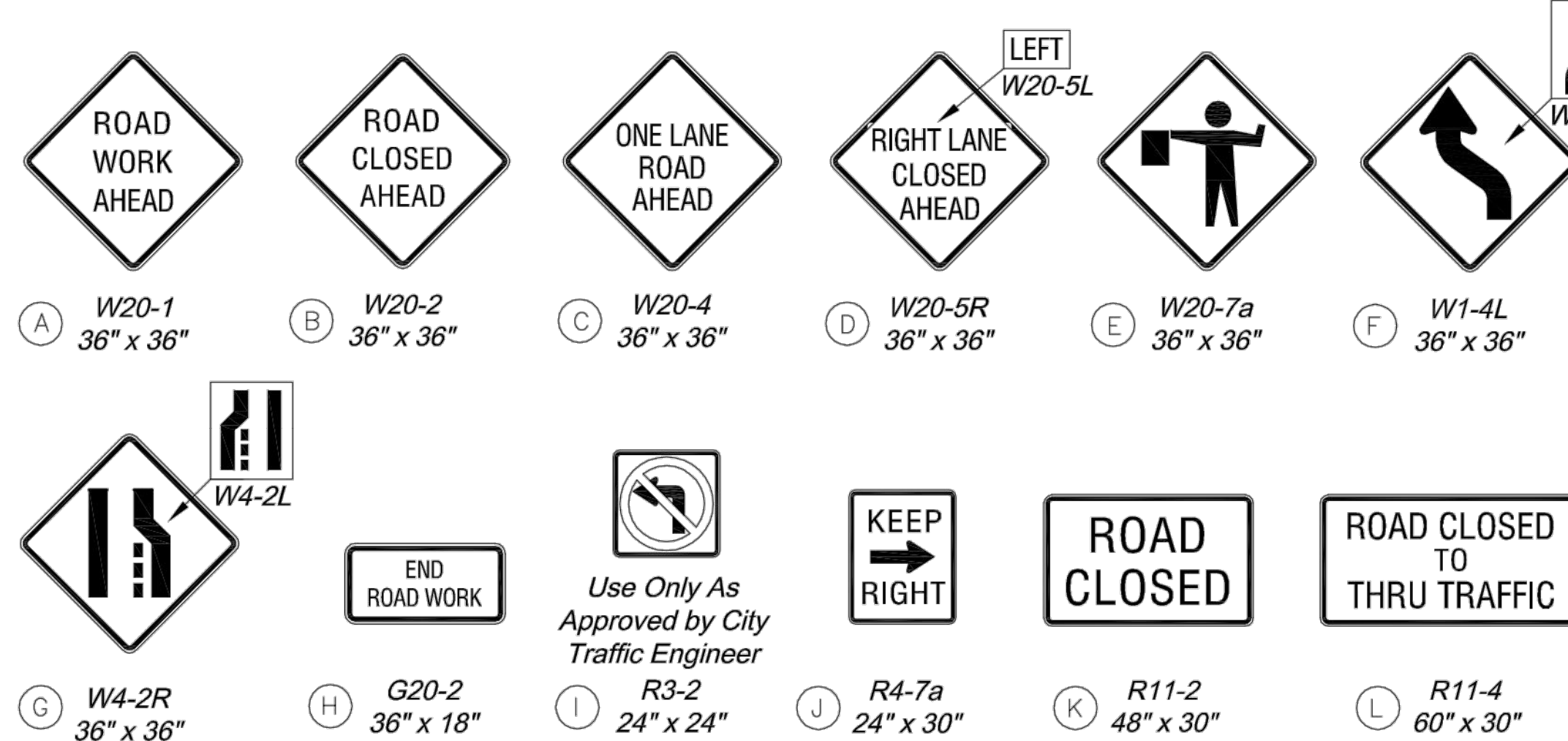
Sign Spacing "S"	
Speed Limit (mph)	Spacing (Feet)
25	100
30 - 35	250
≥ 40	350

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

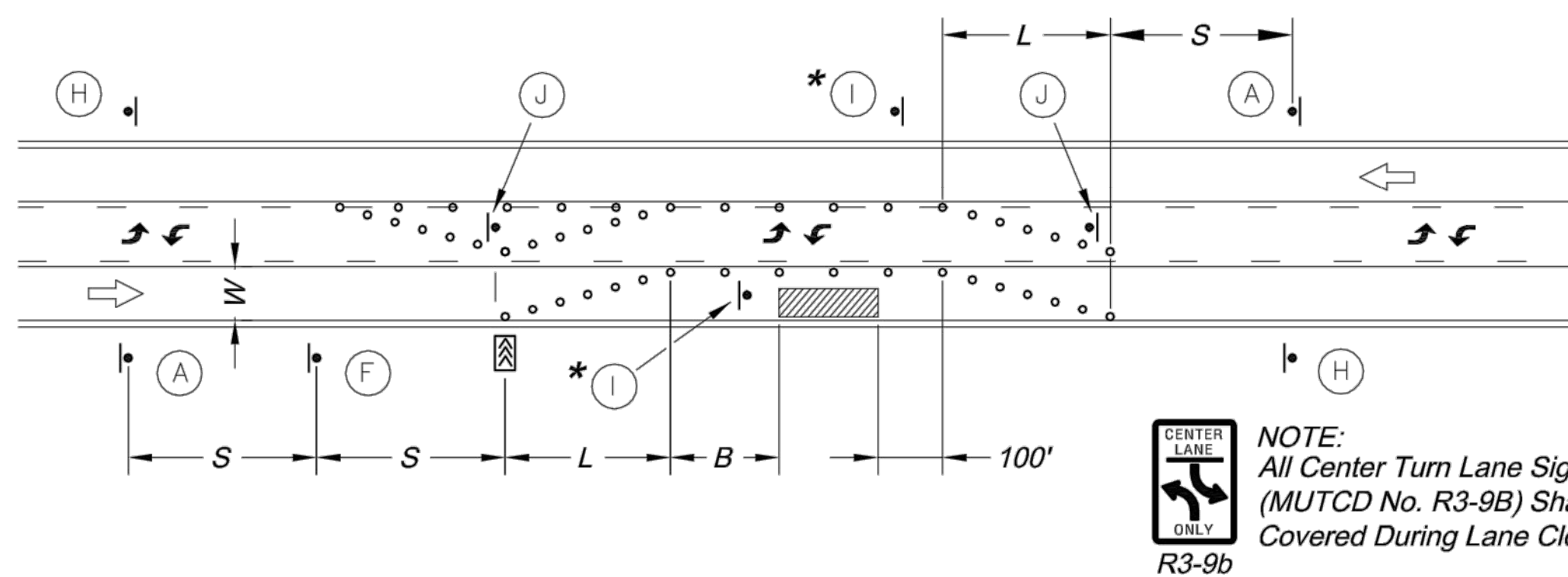
Guidelines for Length of Longitudinal Buffer Space "B"	
Speed Limit (mph)	Length (Feet)
25	35
30	55
35	85
40	120
45	170

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

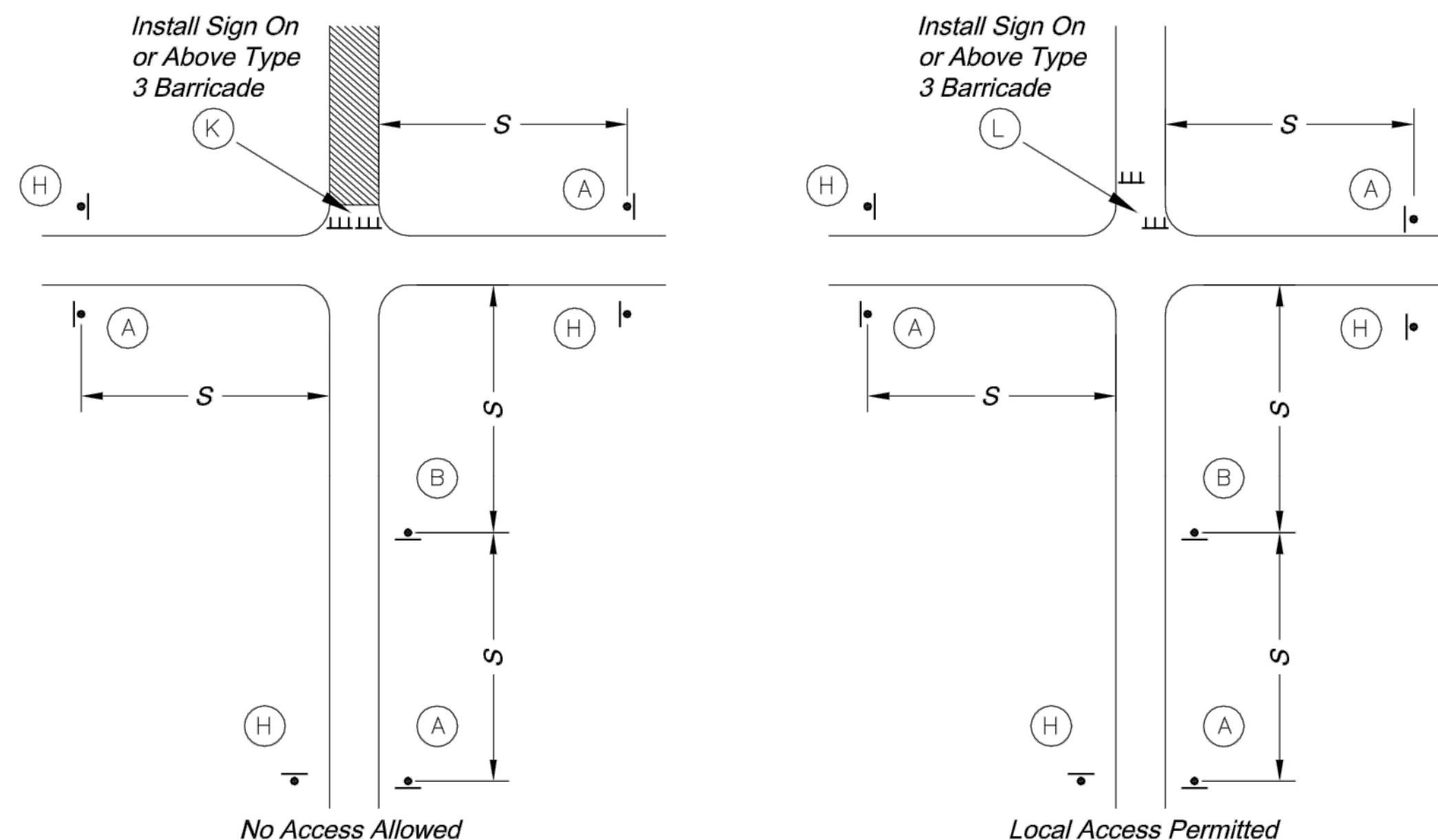


TYPICAL SIGNING FOR WORK ADJACENT TO THE STREET



LANE CLOSURE - THREE LANE STREET

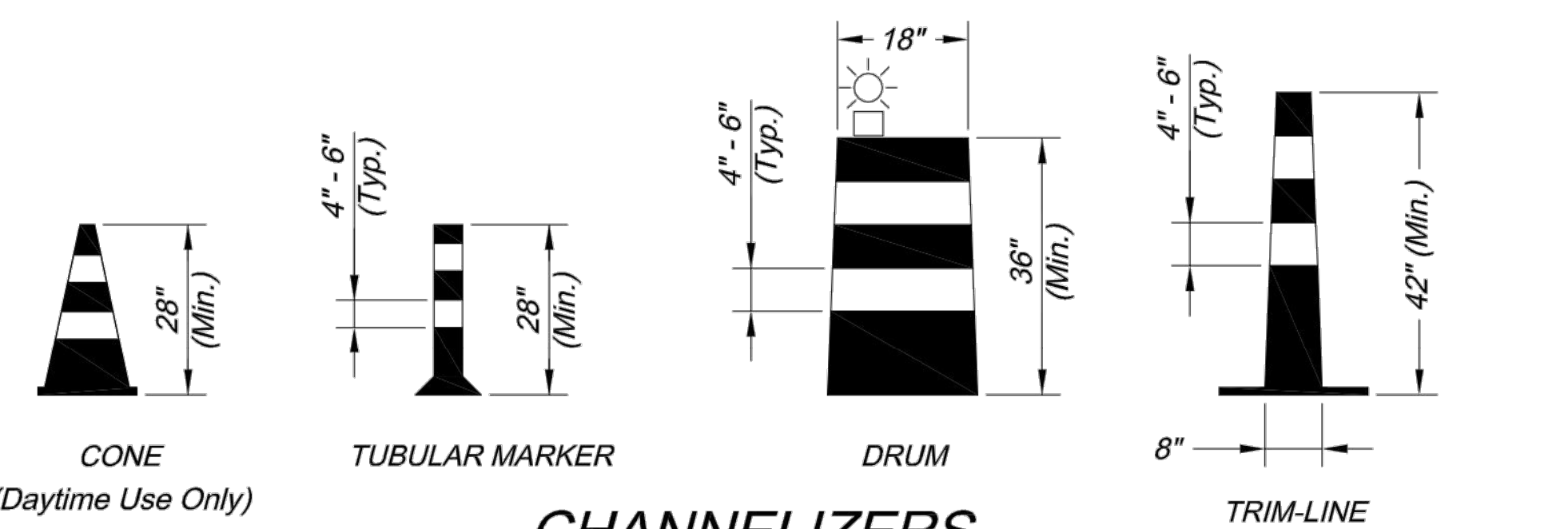
* Install Signs Every 200 Feet Throughout the Closed Lane or As Needed



TYPICAL STREET CLOSURE

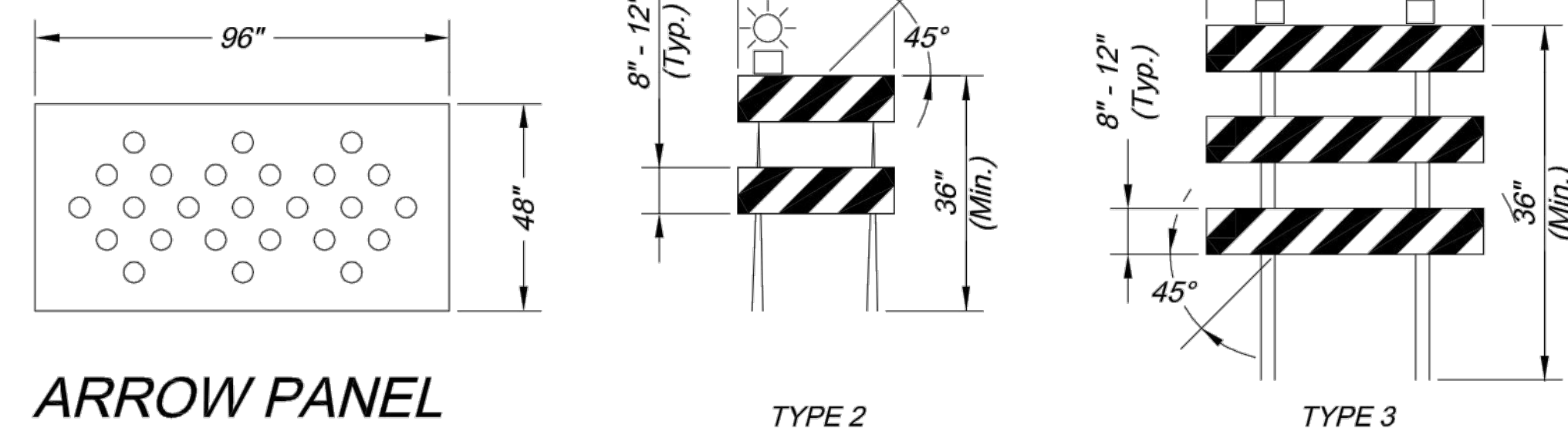
GENERAL NOTES:

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



CHANNELIZERS

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



ARROW PANEL

BARRICADES

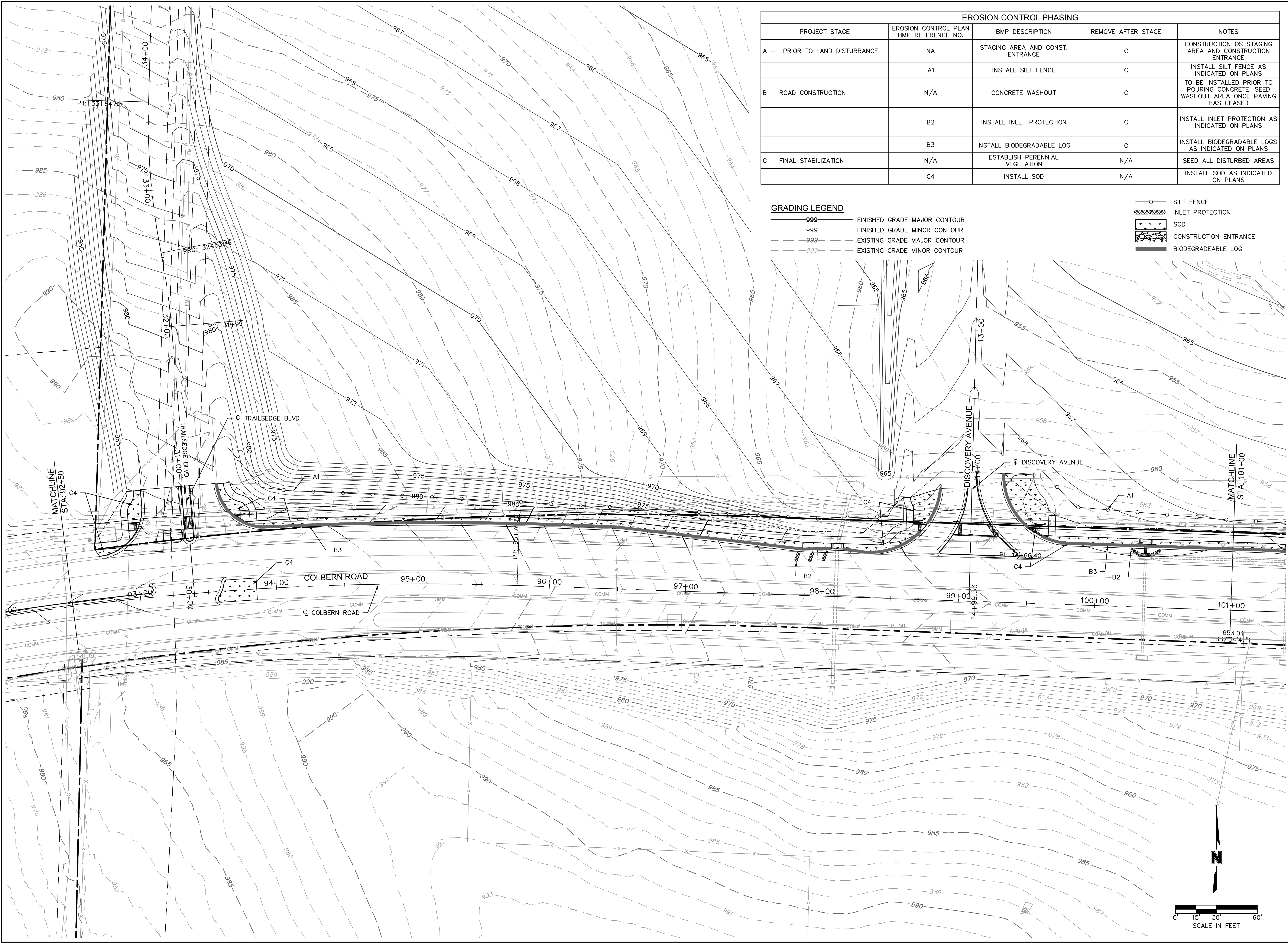
CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809



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

DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final\Plans\Sheets\RDW\T.ERC01_D02104643.dwg
DATE: Sep 28, 2023 4:26pm XREFS: 1_PBASE_D02104643 1_PTBK_D02104643 1_PSTRM_D02104643
USER: kwilliams2 C_XALTA-B2104643 C_FROAD_D2104643



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

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

olsson

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

STATE OF MISSOURI
JAMES H. GALLAGHER
NUMBER
PE-2018010499
9/18/2023
PROFESSIONAL ENGINEER

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: KIW
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: ERC01_D02104643
date: 9/14/2023

2023

REVISIONS

REVISIONS DESCRIPTION

DATE

REV. NO.

SHEET
61 OF 86

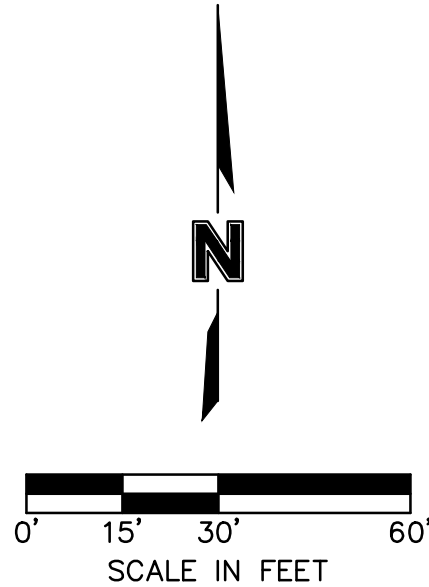
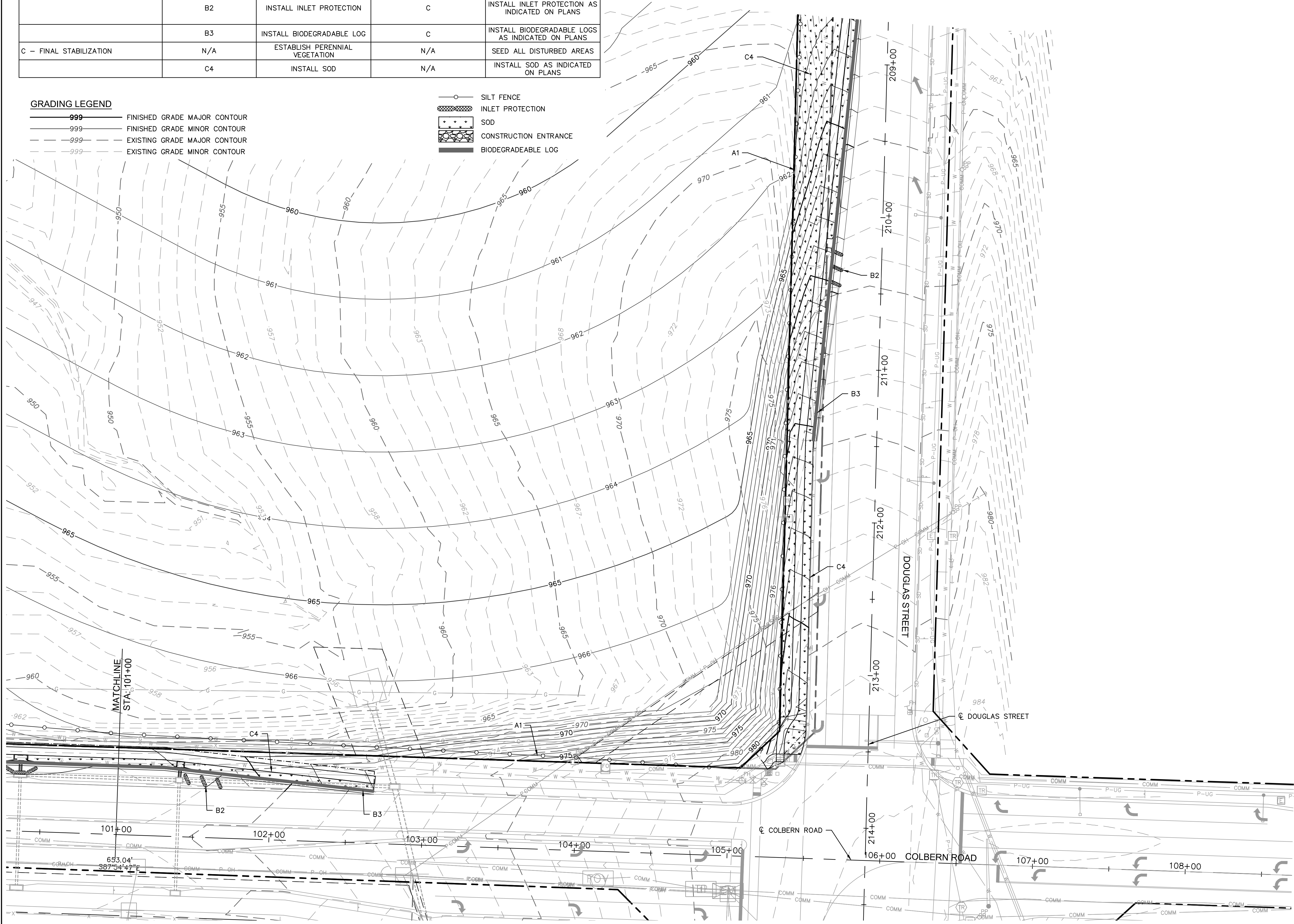
DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final\Plans\Sheets\RDW\T-ERC01_D02104643.dwg
DATE: Sep 28, 2023 4:27pm
XREFS: I_PBASE_D02104643 I_PTLK_D02104643 I_PSTRM_D02104643
USER: kwilliams2
C:\XALTA-B2104643 C:\ROAD-D2104643

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

GRADING LEGEND

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

- SILT FENCE
[Pattern] INLET PROTECTION
[Pattern] SOD
[Pattern] CONSTRUCTION ENTRANCE
[Pattern] BIODEGRADEABLE 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: KIW
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: T-ERC01_D02104643
date: 7/14/2023

2023

erosion control plans

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

LEE'S SUMMIT, MISSOURI

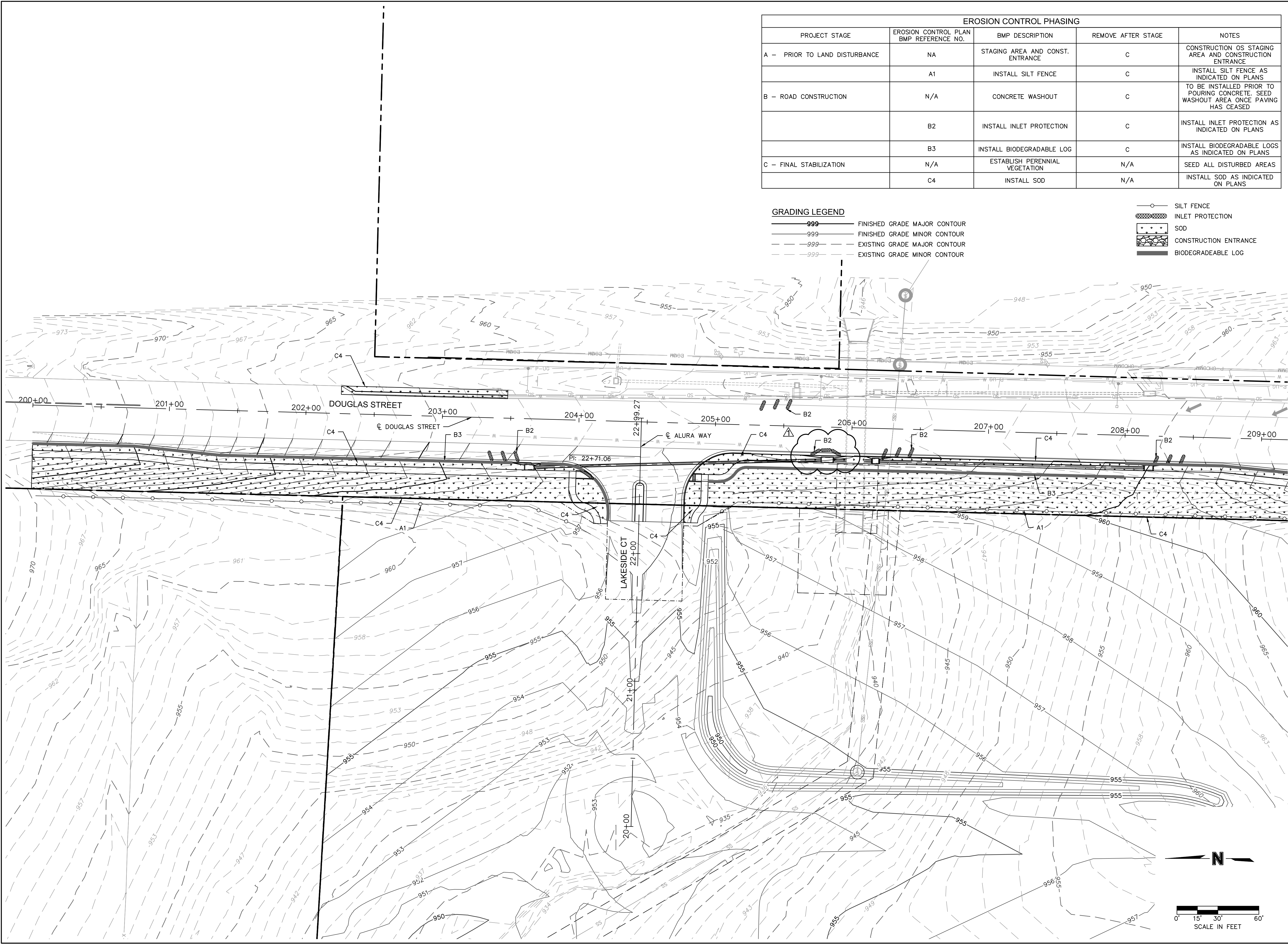
2023

REVISIONS

STATE OF MISSOURI
JAMES L. GALLAGHER
NUMBER
PE-2018010499
9/18/2023
PROFESSIONAL ENGINEER

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

DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final\Plans\Sheets\RDW\T.ERC01_D02104643.dwg
DATE: Oct 20, 2023 2:53pm XREFS: T_PBASE_D02104643 T_PTBLK_D02104643 T_PSTRM_D02104643
USER: kwilliams2 C_XALTA_B2104643 C_FROAD_D02104643

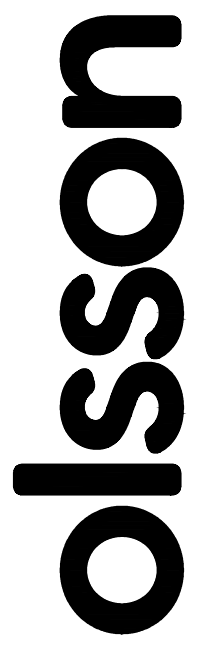


EROSION CONTROL PHASING				
PROJECT STAGE	EROSION CONTROL PLAN BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES
A - PRIOR TO LAND DISTURBANCE	NA	STAGING AREA AND CONST. ENTRANCE	C	CONSTRUCTION OS STAGING AREA AND CONSTRUCTION ENTRANCE
	A1	INSTALL SILT FENCE	C	INSTALL SILT FENCE AS INDICATED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

GRADING LEGEND

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

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



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



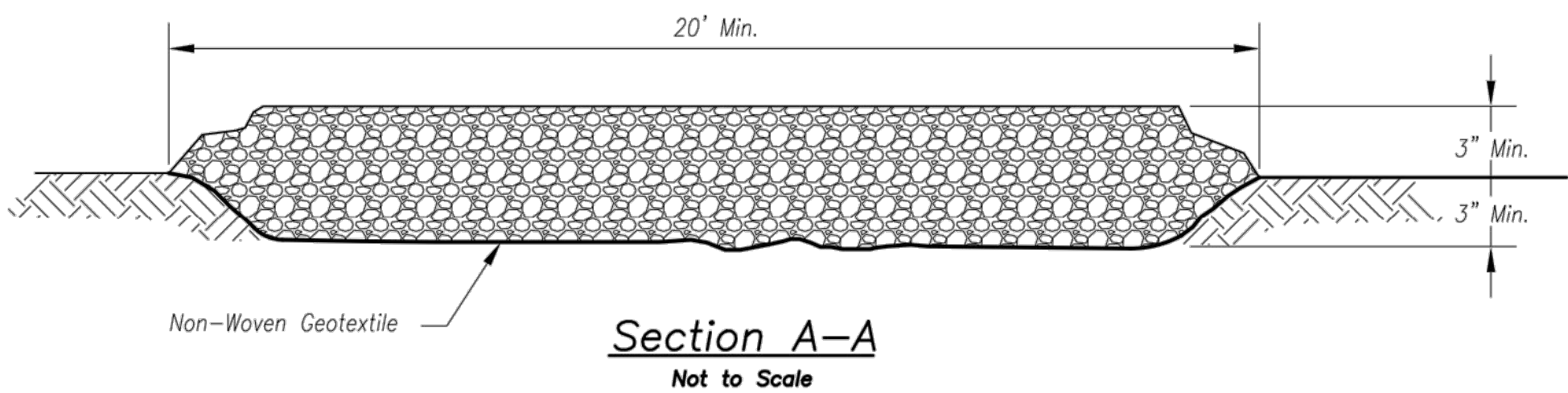
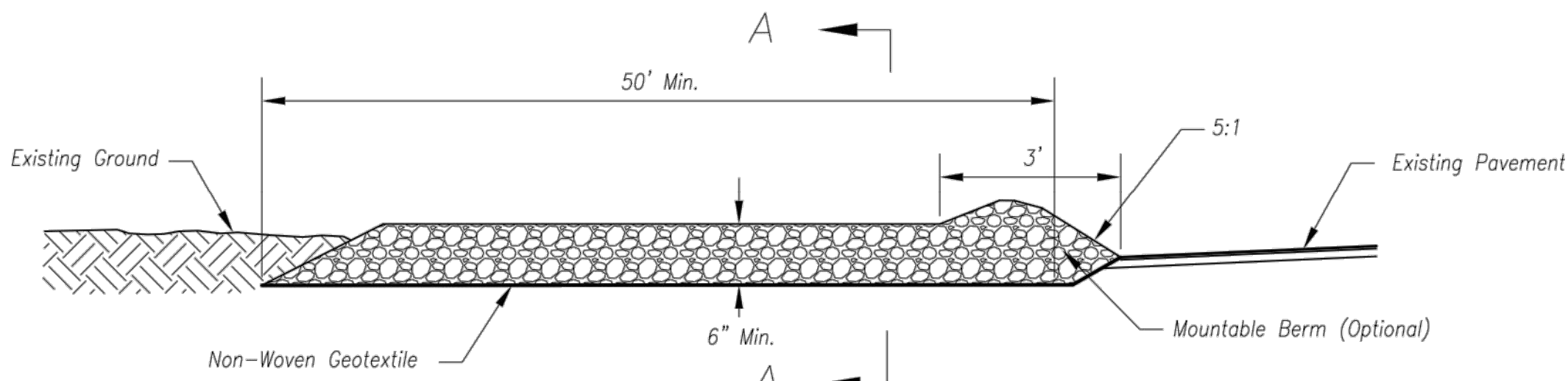
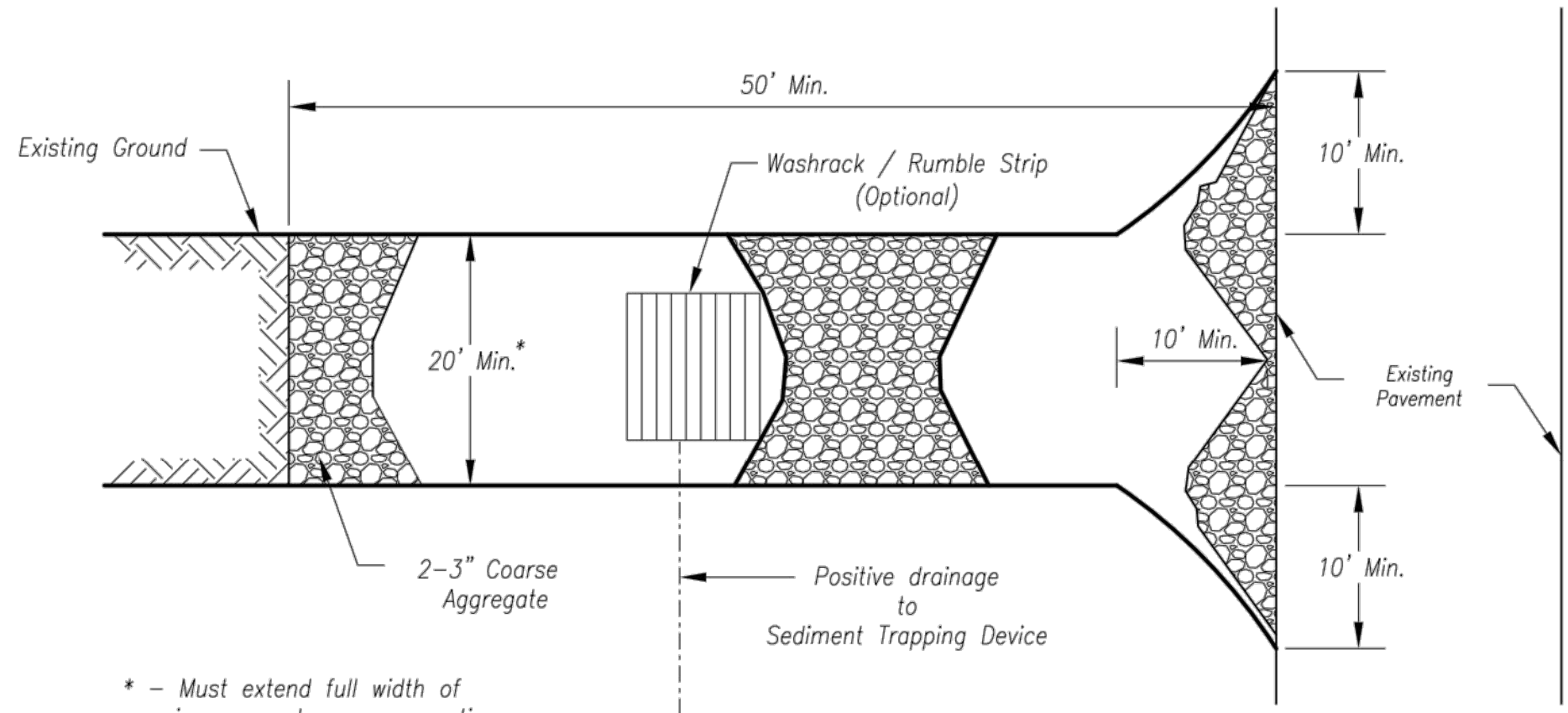
REV. NO.	DATE	REVISIONS DESCRIPTION
1	10/18/2023	CITY COMMENTS ON 10/05/2023

REV. NO.	DATE	REVISIONS DESCRIPTION

EROSION CONTROL PLANS	
THE VILLAGE AT DISCOVERY PARK	
COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	
LEE'S SUMMIT, MISSOURI	
drawn by: BJW	2023
checked by: KLW	
approved by: JFG	
QA/QC by: JJW	
project no.: 021-04643	
drawing no.: ERC01_D02104643	
date: 7/14/2023	

SHEET	
63	OF 86

DWG: F:\2021\04501-05000\021-04843-0\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_ERCD01_D02104643.dwg
DATE: Sep 28, 2023 4:27am
XREFS: 1_PTBK_D02104643
USER: kwilliams2



Notes for Construction Entrance:

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

Maintenance for Construction Entrance:

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

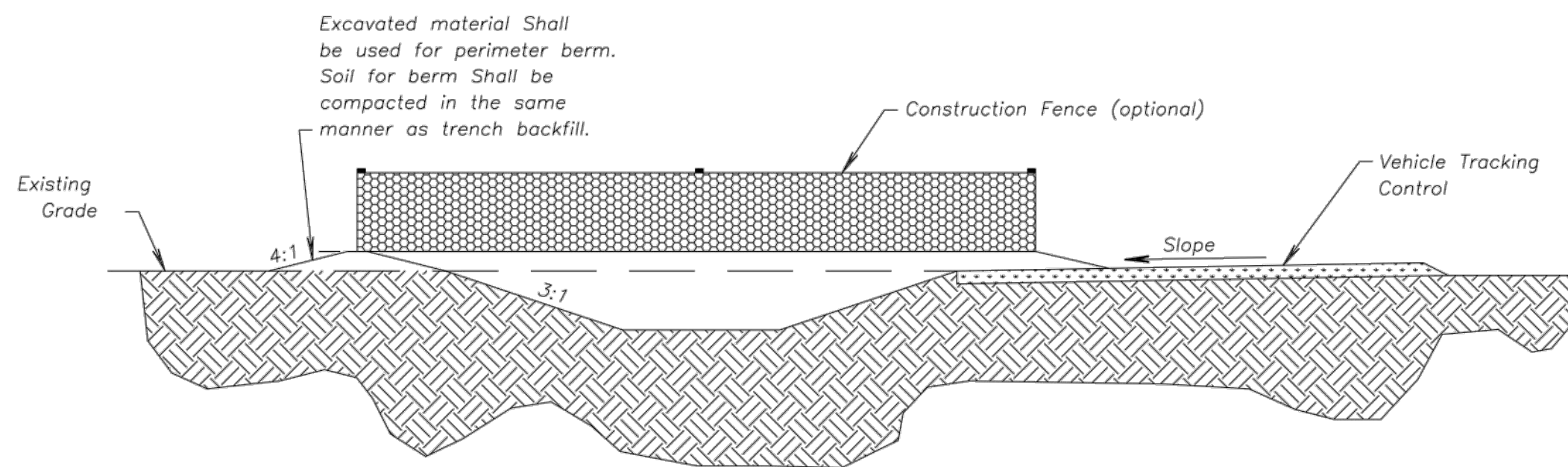
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

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

Maintenance for Concrete Washout:

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



CONCRETE WASHOUT

AMERICAN PUBLIC WORKS ASSOCIATION



KANSAS CITY
METRO CHAPTER

CONSTRUCTION ENTRANCE
AND CONCRETE WASHOUT

STANDARD DRAWING
NUMBER ESC-01
ADOPTED:
10/24/2016

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

EROSION CONTROL DETAILS

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

LEE'S SUMMIT, MISSOURI

2023

REVISIONS

REVISIONS DESCRIPTION

DATE

REV. NO.



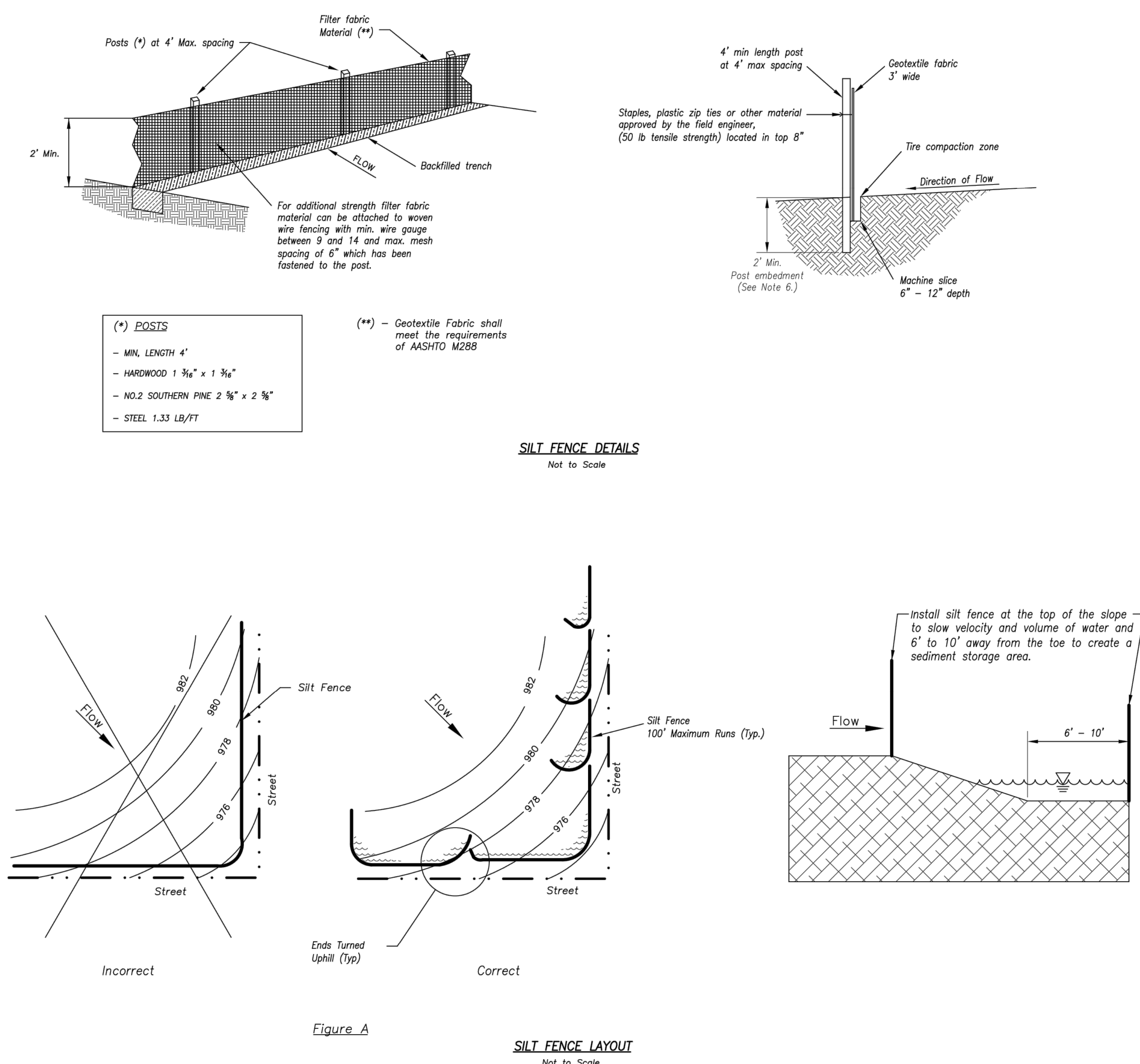
olsson

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

SHEET
64 OF 86

drawn by: BJW
checked by: KLV
approved by: JFG
QA/QC by: JJW
project no.: 021-04843
drawing no.: ERCD01_D02104843
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.olsson.com

STATE OF MISSOURI
JAMES L. GALLAGHER
NUMBER
PE-2018010499
9/18/2023
PROFESSIONAL ENGINEER

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

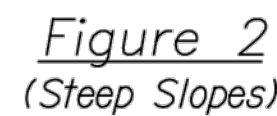
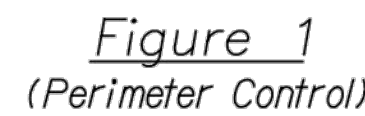
REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION

2023

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

SHEET
66 OF 86

WATTLES AND BIODEGRADABLE LOG

MULCH OR COMPOST FILTER BERMS

- Notes for Wattles and Biodegradable Log Slope Protection:

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

Notes for Mulch and Compost Filter Beam:

1. The sediment control berm shall be placed uncompacted in a window 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.

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

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

olson

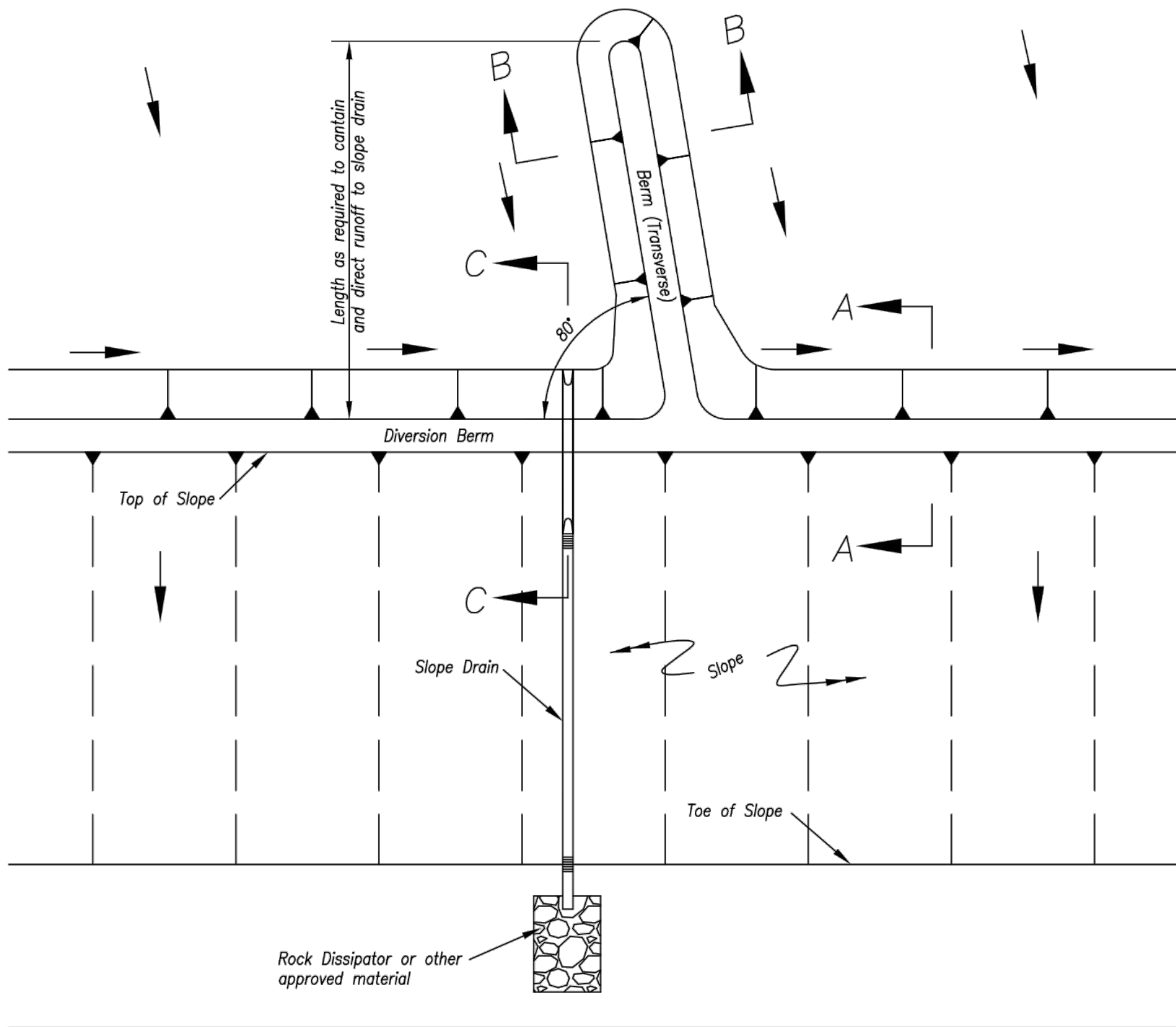
Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116 TEL 8

[illegible]

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

Drawn by: BJW
 Checked by: K LW
 Approved by: J PG
 QA/QC by: J JW
 Project no.: 021-04643
 Drawing no.: ERCD01 D02104643
 Date: 7/14/2023

DWG: F:\2021\04501-05000\021-04643-0\40-Design\AutoCAD\Final Plans\Sheets\RDWV\T_ERCD01_D02104643.dwg
DATE: Sep 28, 2023 4:27am
XREFS: 1_PTBK_02104643
USER: kwilliams2



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:

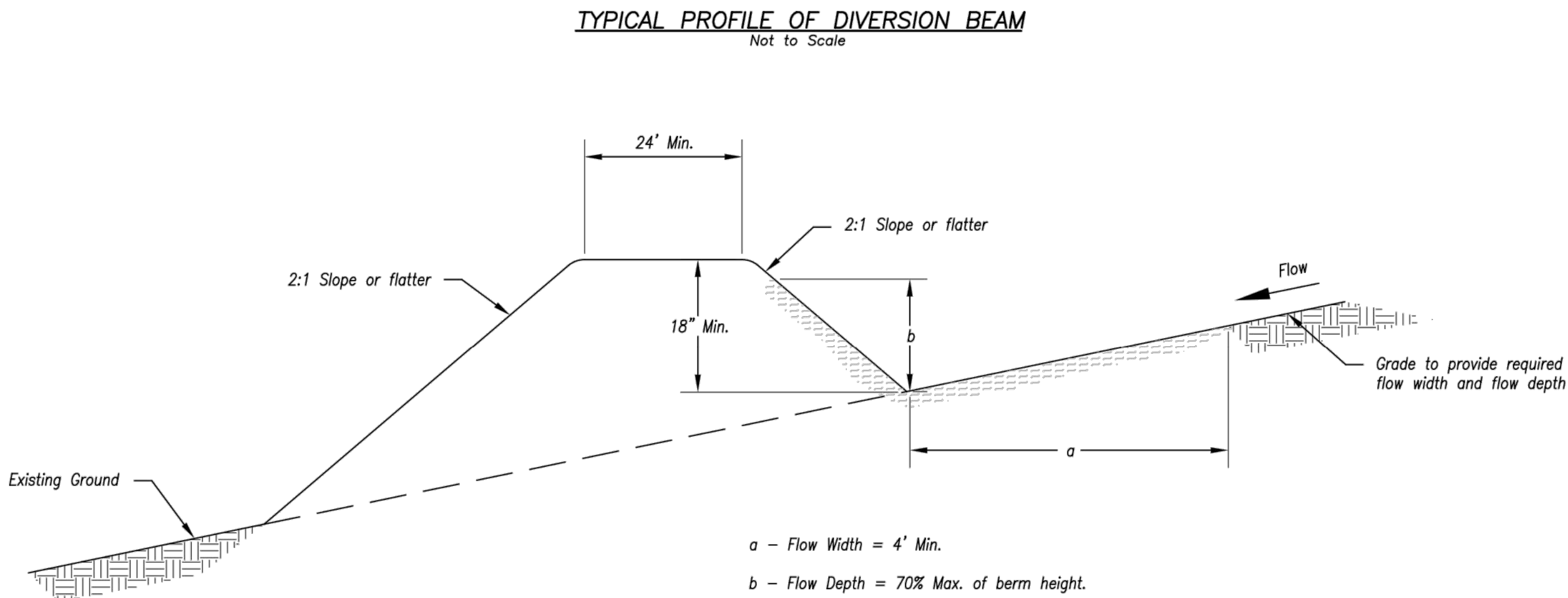
- Berm shall be reshaped, compacted, and stabilized as necessary to maintain its function.
- Breaches in the berm shall be repaired immediately.

Notes for Slope Drain:

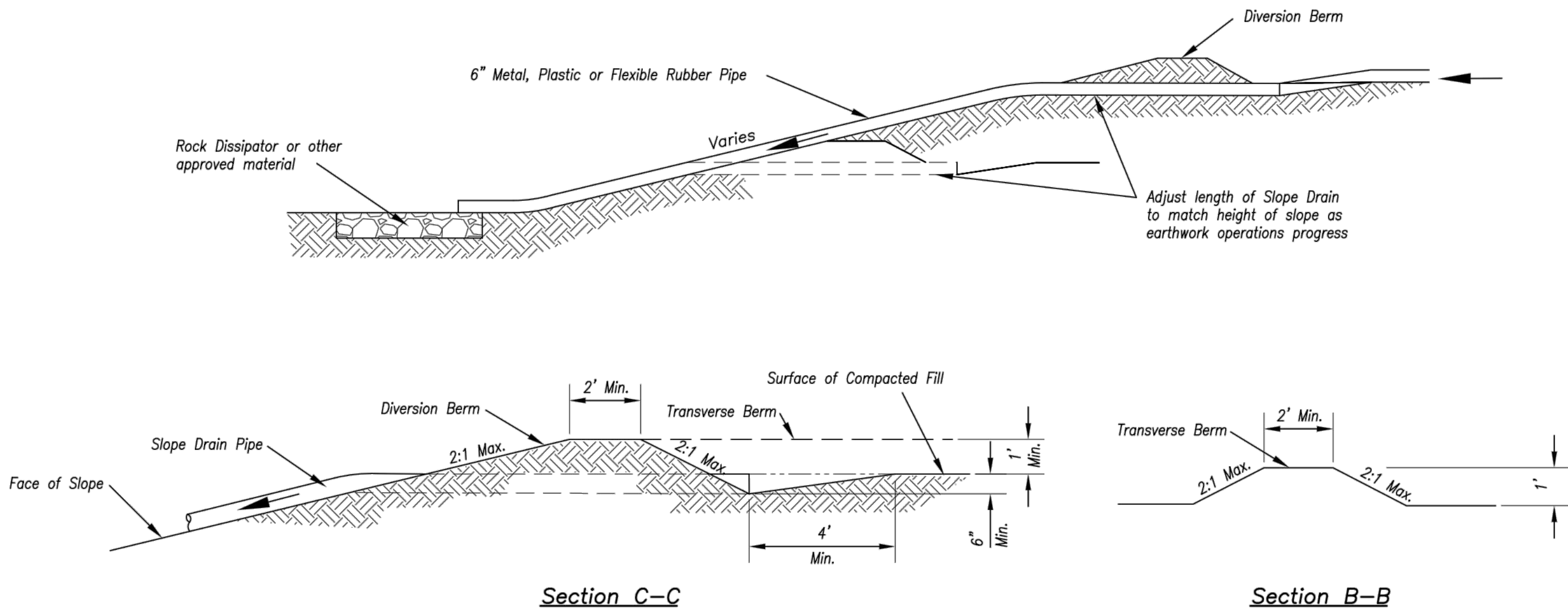
- Slope Drain and Diversion Berm may be used on either project foreslopes or project backslopes.
- Discharge of Slope Drains shall be into stabilized ditch or area, or into Sediment Basin.
- Pipe shall be secured in place as approved by Engineer.

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



TYPICAL PROFILE OF DIVERSION BERM WITH SLOPE DRAIN

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

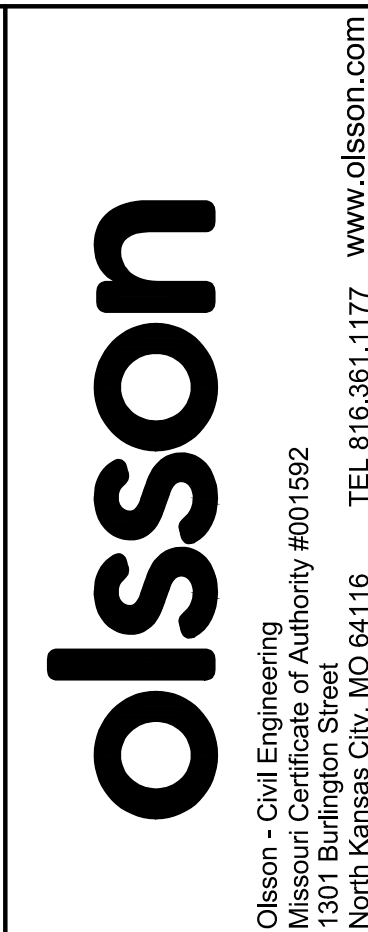
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.



REVISIONS	
REV. NO.	DESCRIPTION

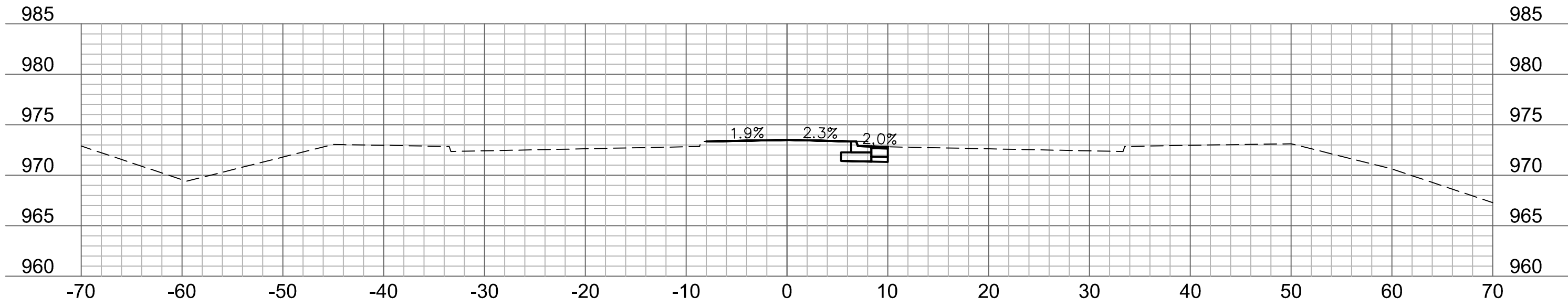
EROSION CONTROL DETAILS	THE VILLAGE AT DISCOVERY PARK COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	2023
		LEE'S SUMMIT, MISSOURI

drawn by: BJW
checked by: KLG
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: ERCD01_D02104643
date: 7/14/2023

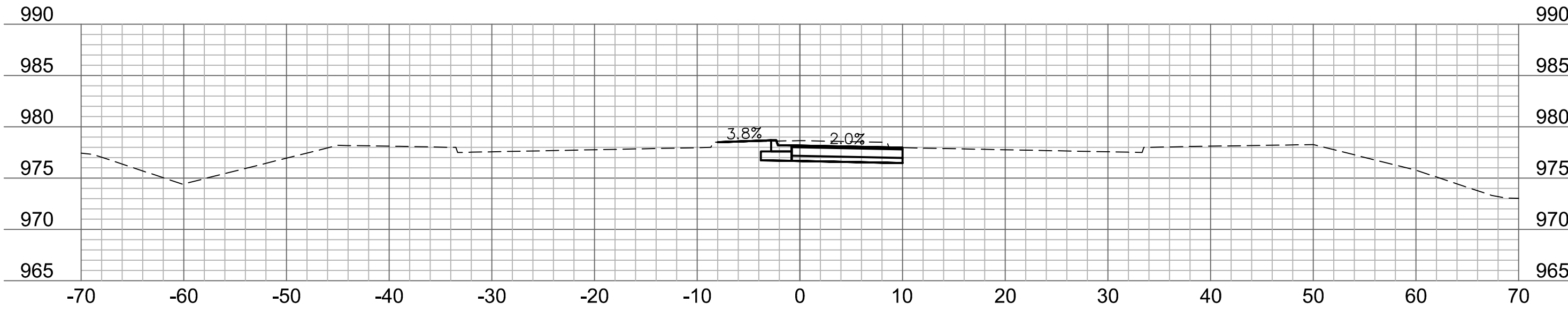


USER: kwilliams2

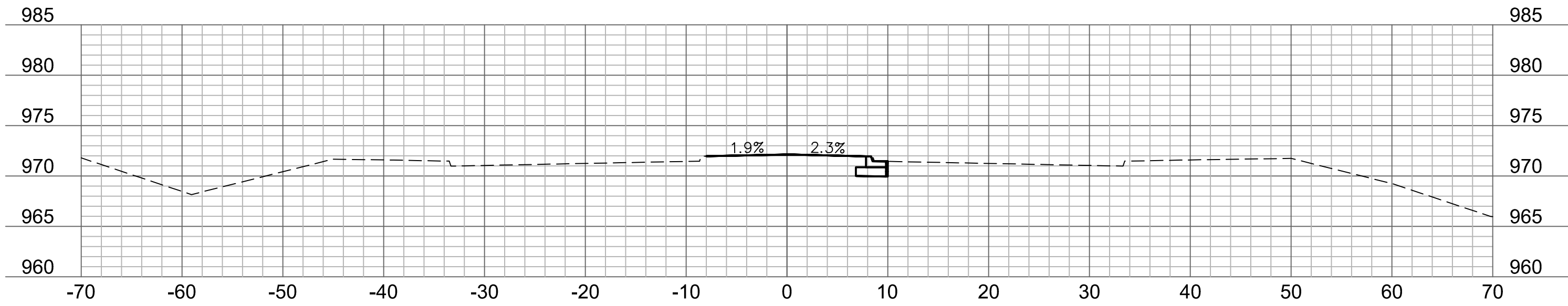
DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_XSC01_D02104643.dwg
DATE: Oct 20, 2023 2:55pm XREFS: T_PBASE_D02104643



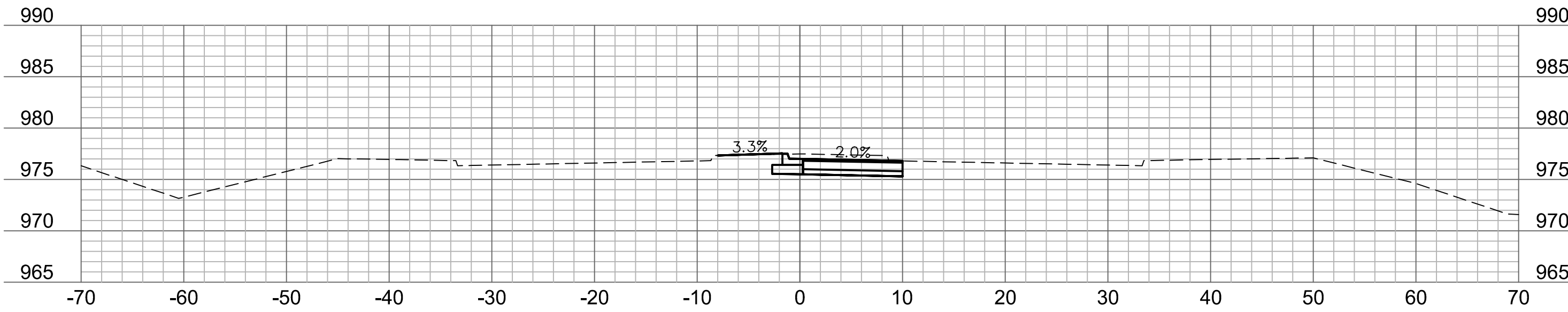
89+75



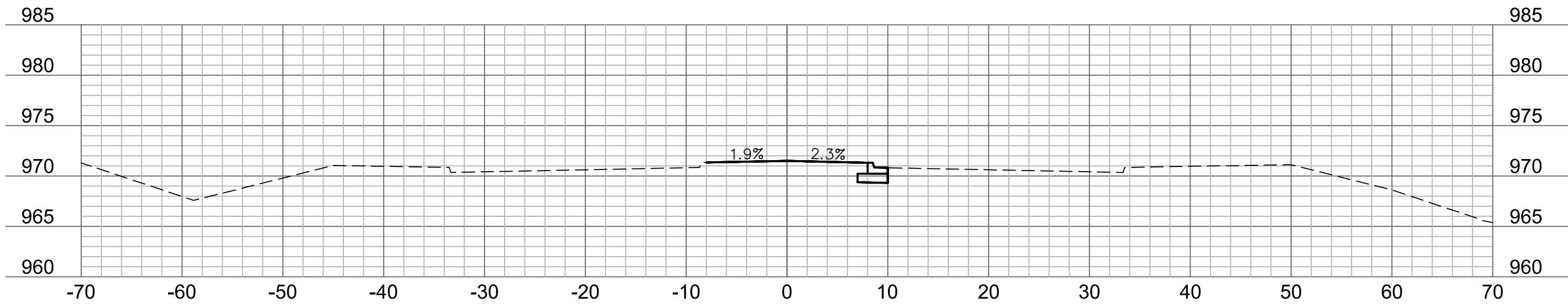
90+75



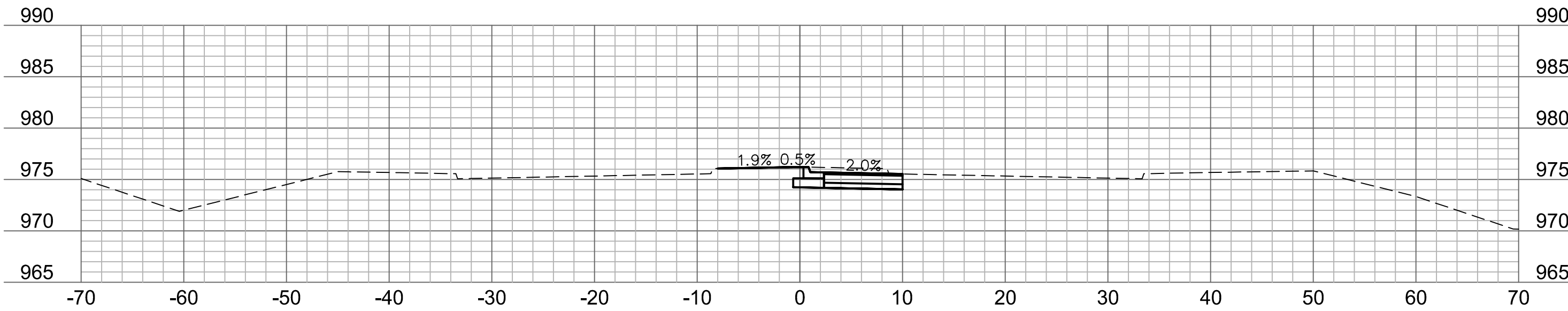
89+50



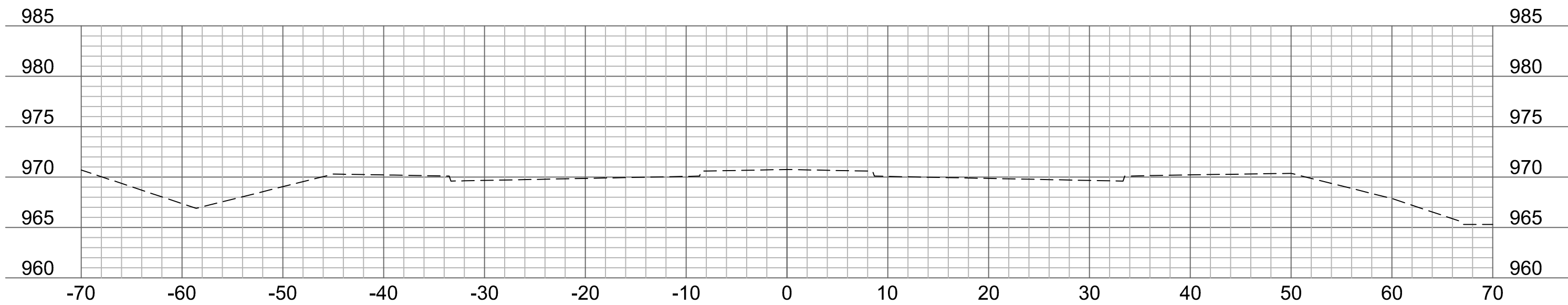
90+50



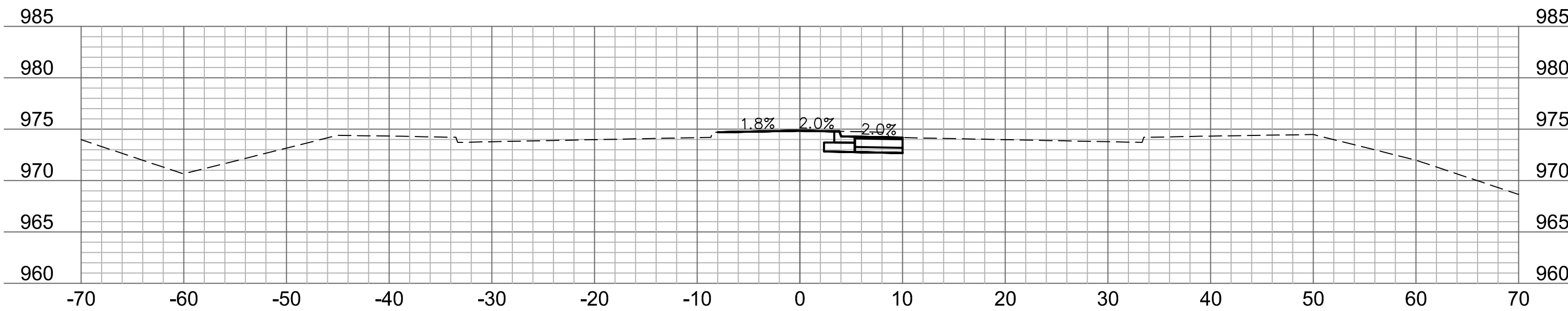
89+38.63



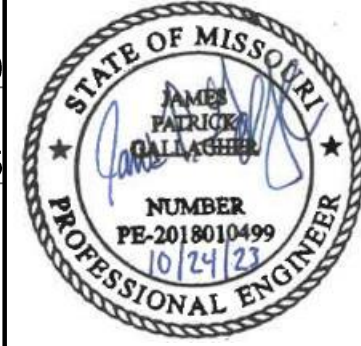
90+25



89+25



90+00



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

CROSS SECTIONS
COLBERN ROAD

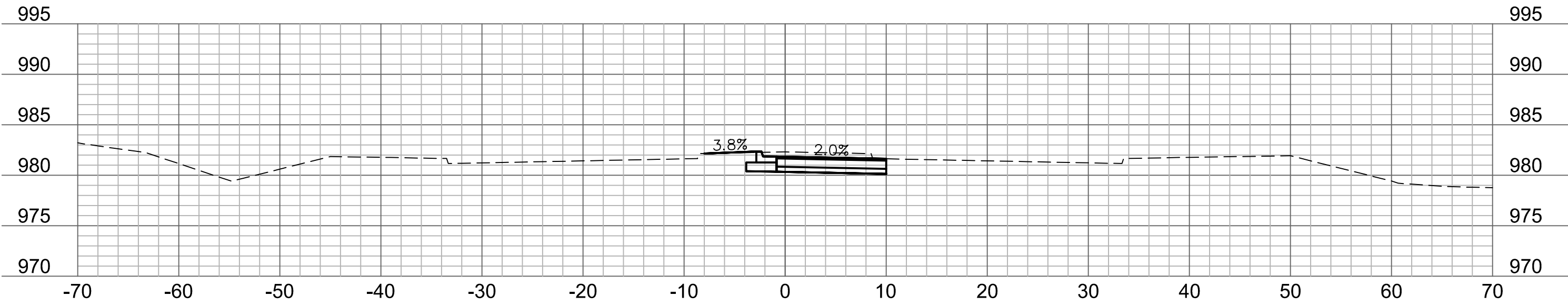
THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

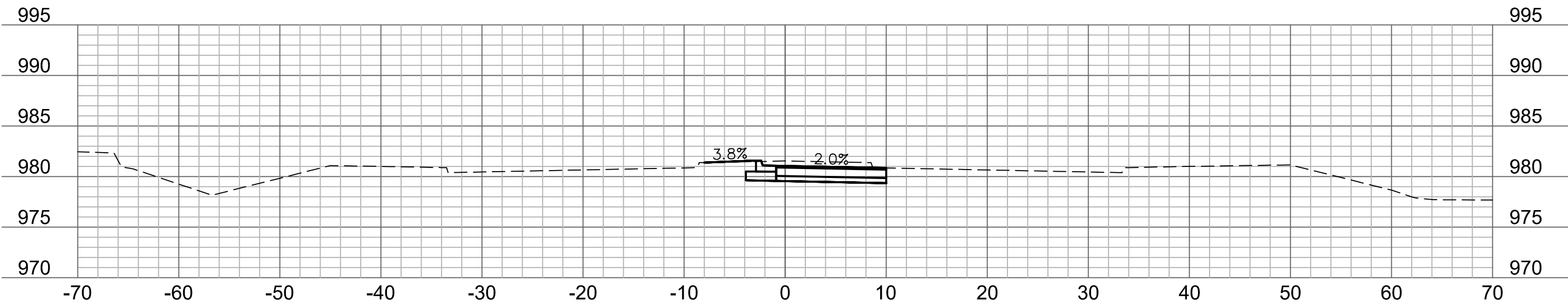
2023

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

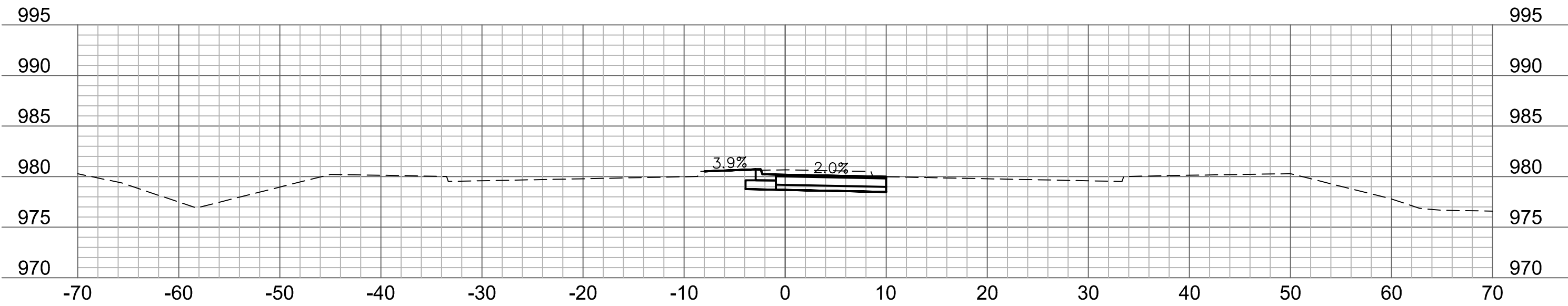
DWG: F:\2021\04501-05000\021-04643-0\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_XSC01_D02104643.dwg
DATE: Oct 20, 2023 2:55pm XREFS: T_PBASE_D02104643 USER: kwilliams2



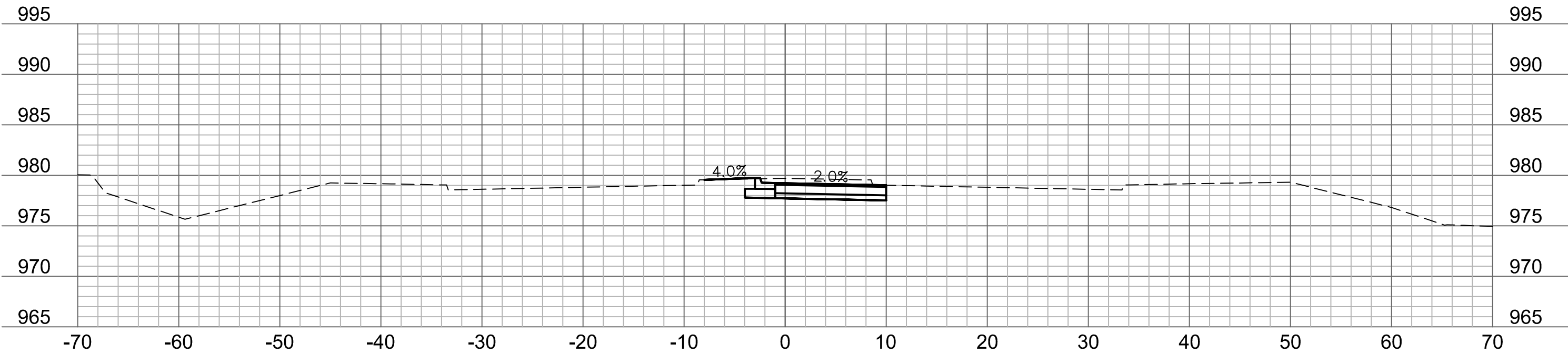
91+75



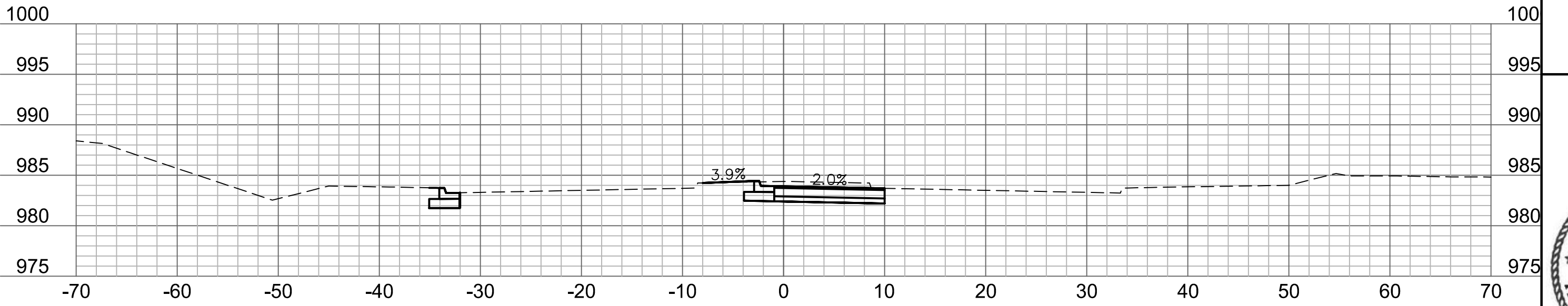
91+50



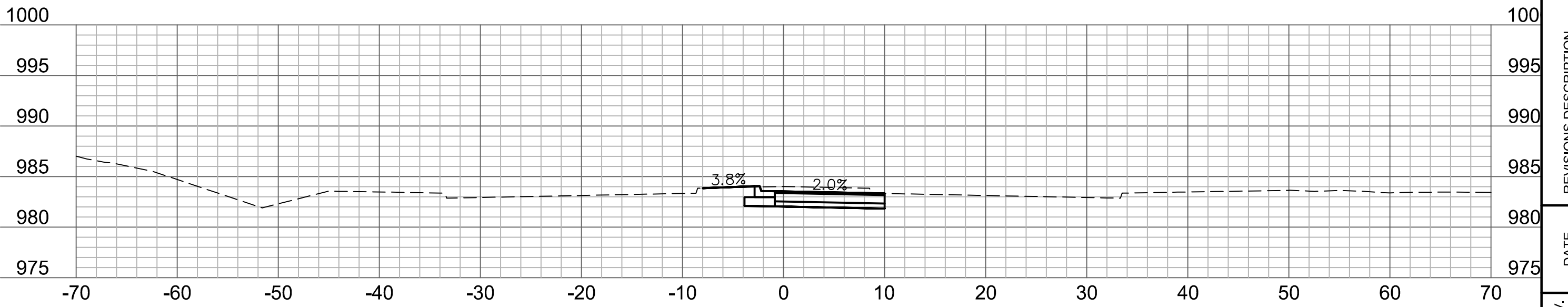
91+25



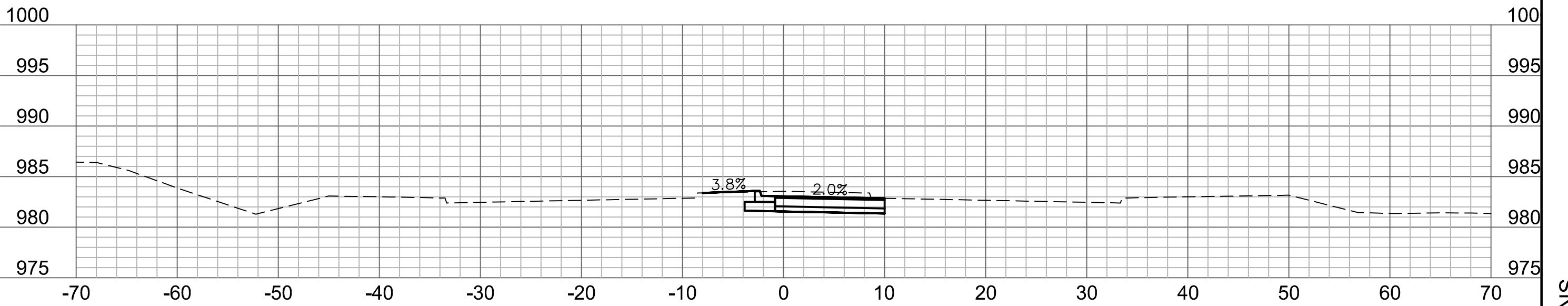
91+00



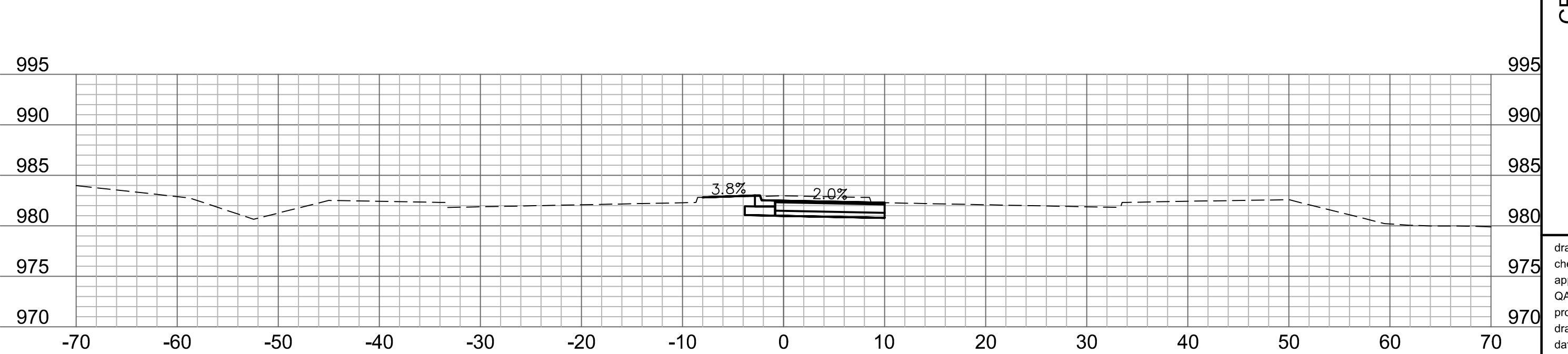
92+75



92+50



92+25



92+00

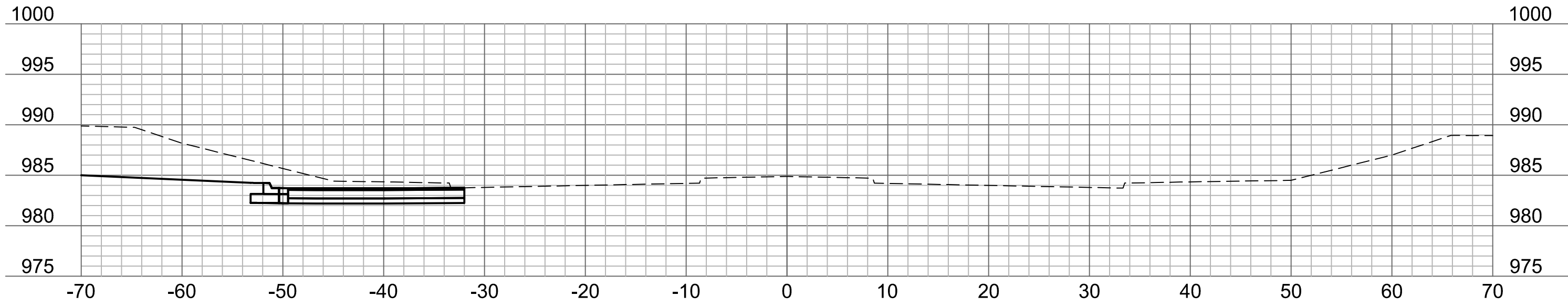


REV. NO.	DATE	REVISIONS DESCRIPTION
1	10/18/2023	CITY COMMENTS ON 10/05/2023

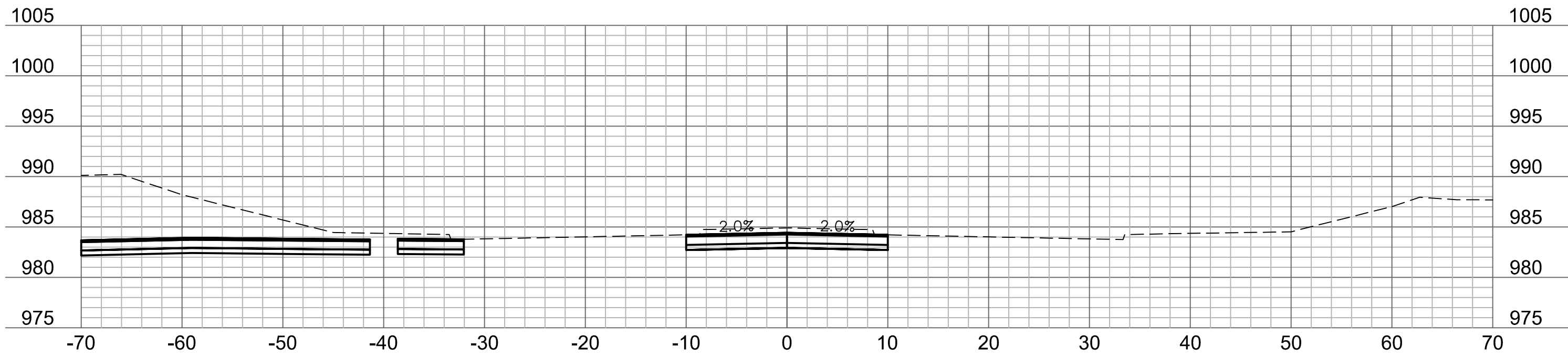
CROSS SECTIONS
COLBERN ROAD
THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS
LEE'S SUMMIT, MISSOURI
2023

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

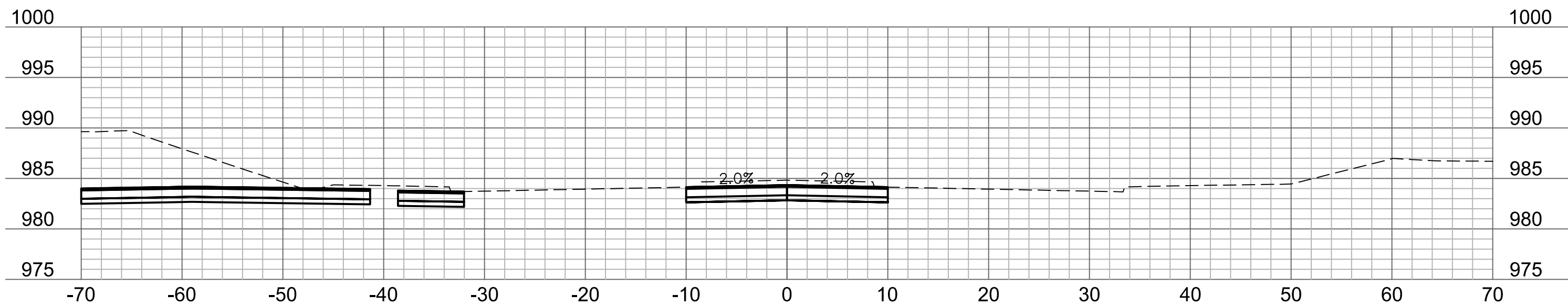
DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final_Plans\Sheets\RDW\T_XSC01_D02104643.dwg
DATE: Oct 20, 2023 2:55pm XREFS: T_PBASE_D02104643 USER: kwilliams2



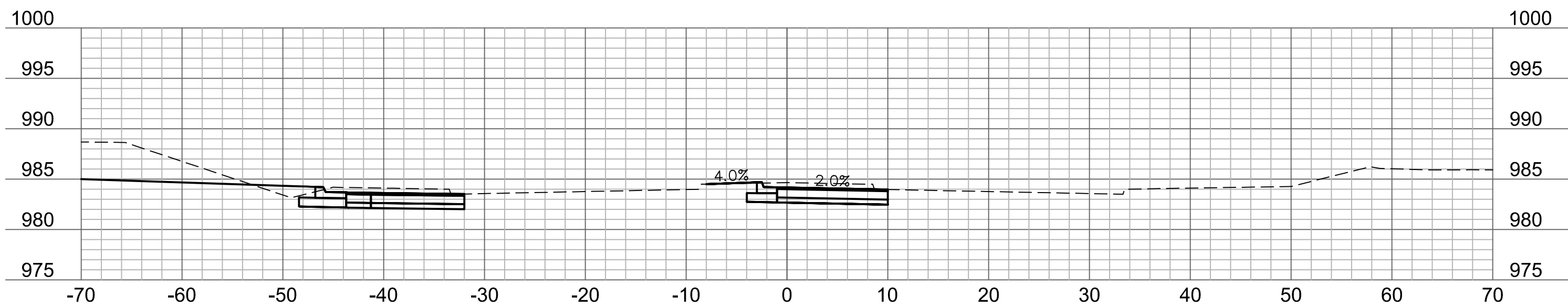
93+75



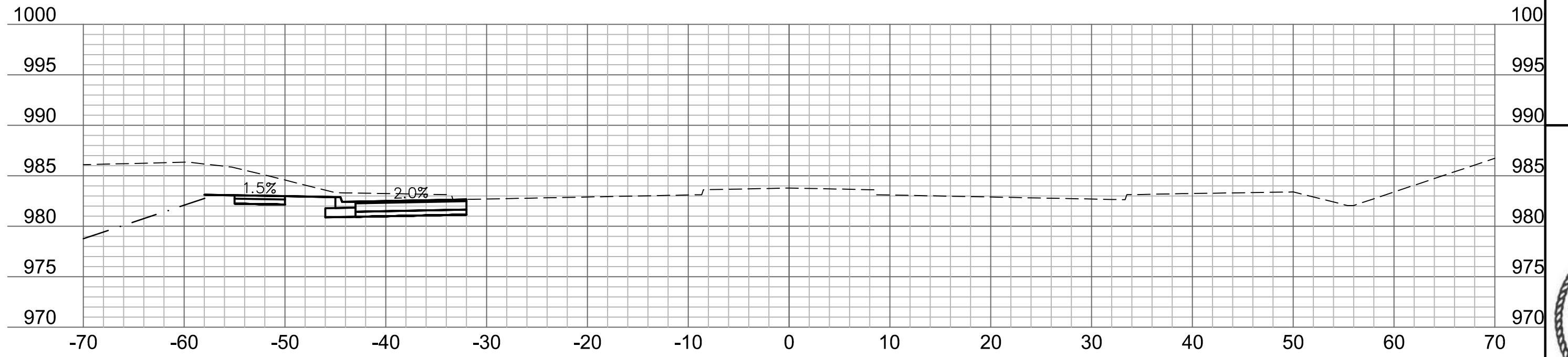
93+50



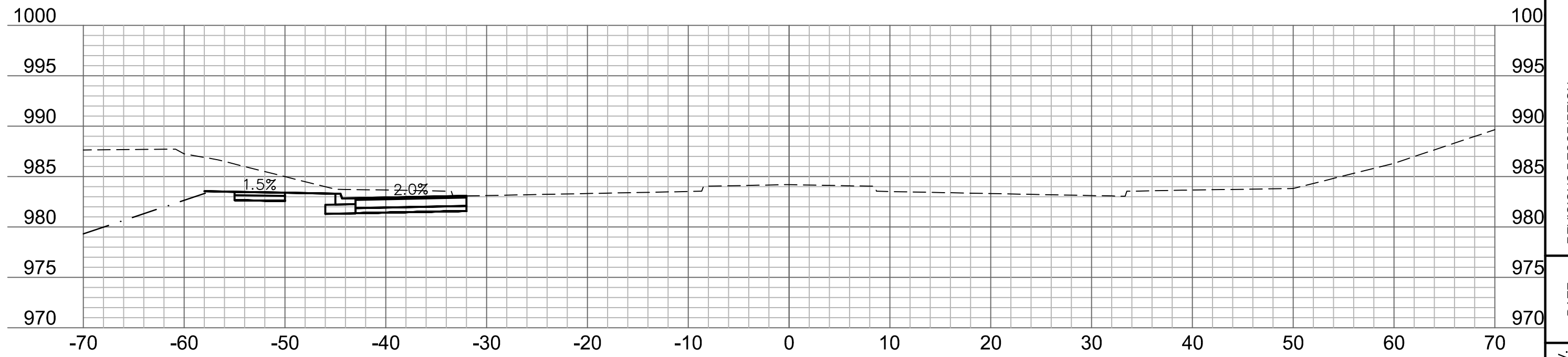
93+25



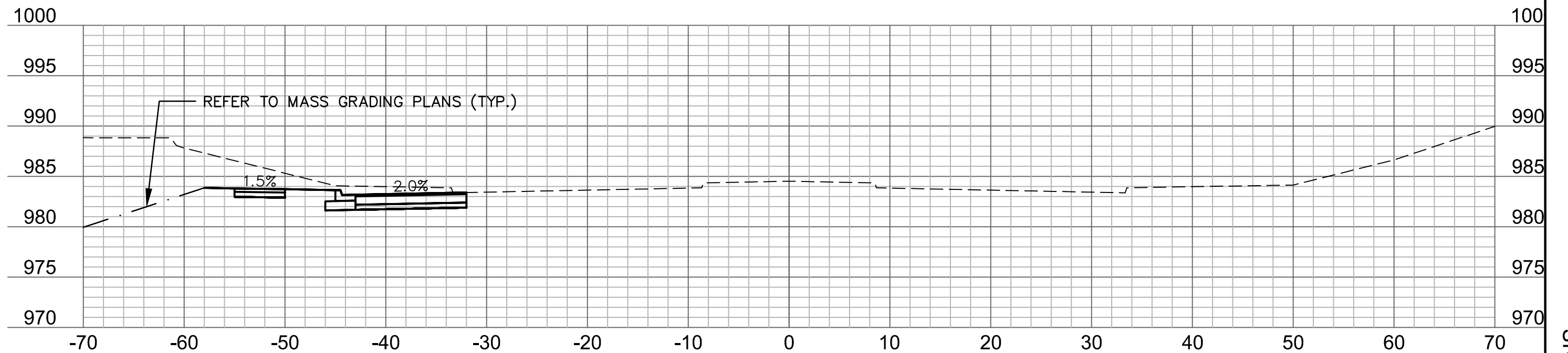
93+00



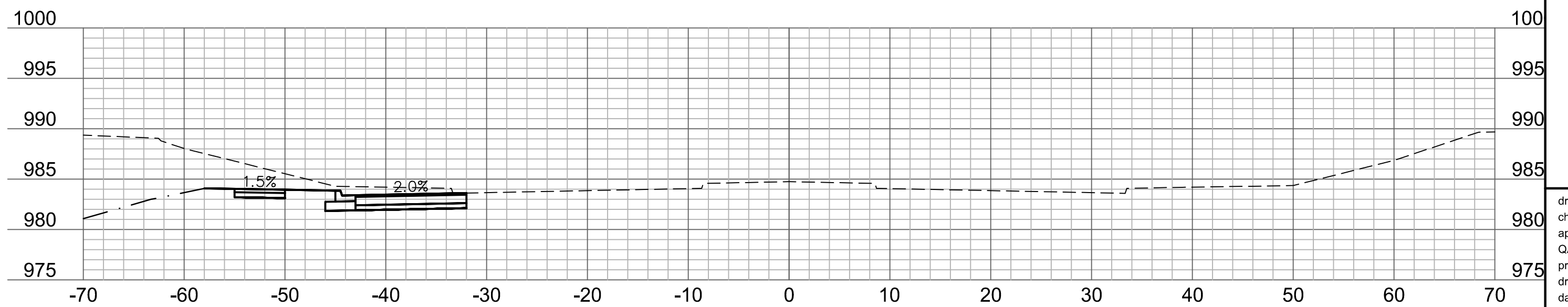
94+75



94+50



94+25



94+00



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

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

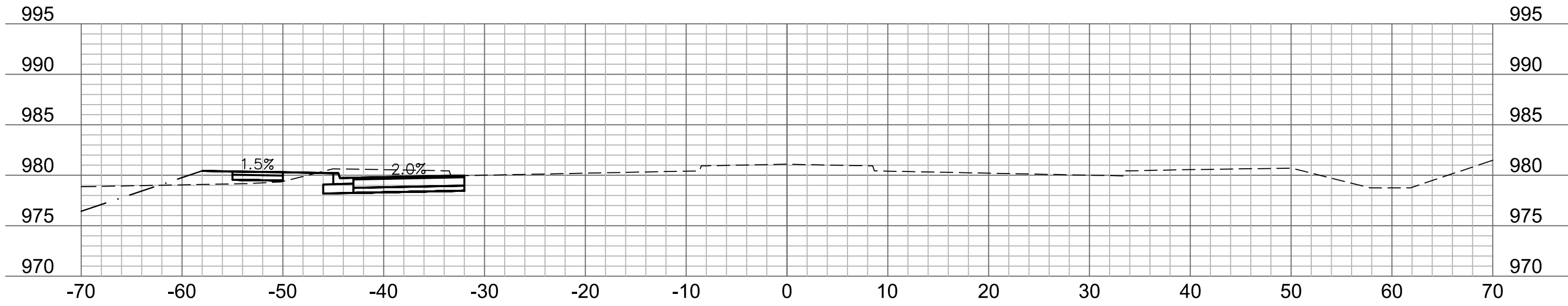
drawn by: BJW
checked by: KLG
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: XSC01_D02104643
date: 7/14/2023

SHEET
72 OF 86

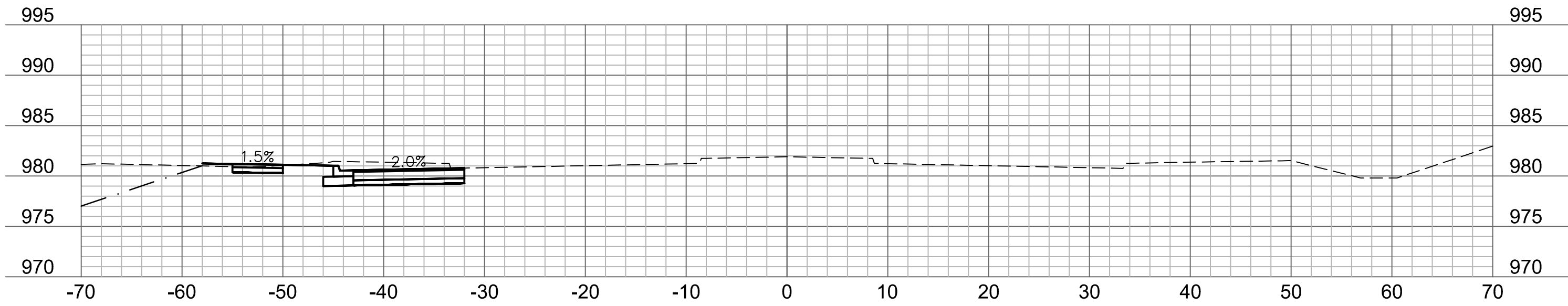
olsson
Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177 www.olsosn.com

USER: kwilliams2

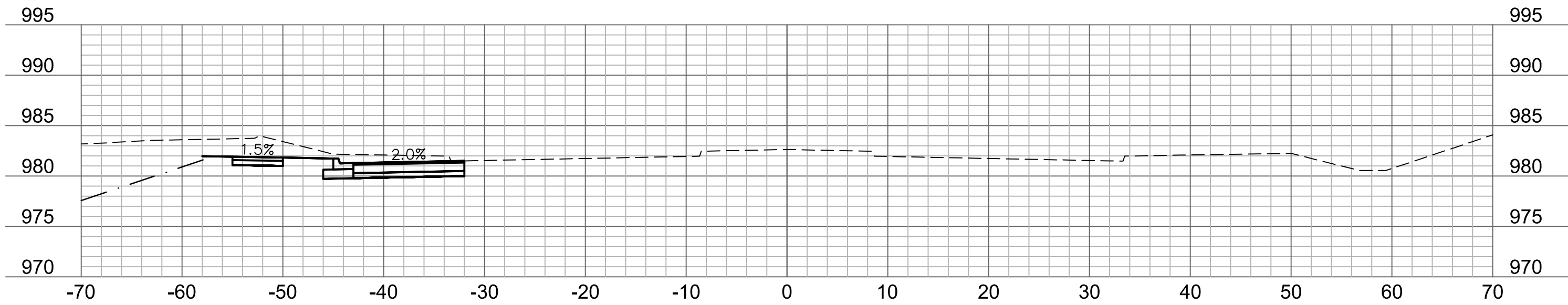
DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_XSC01_D02104643.dwg
DATE: Oct 20, 2023 2:55pm XREFS: T_PBASE_D02104643



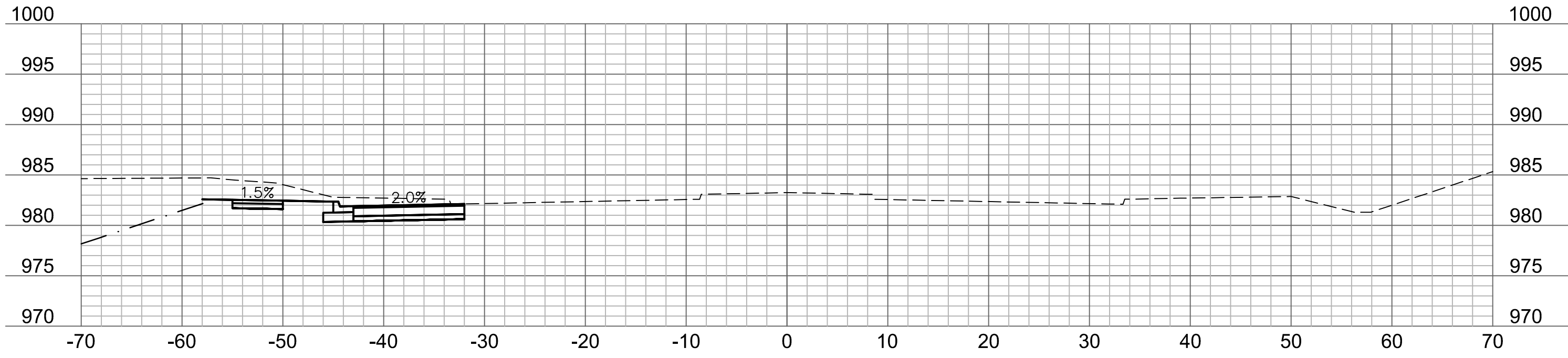
95+75



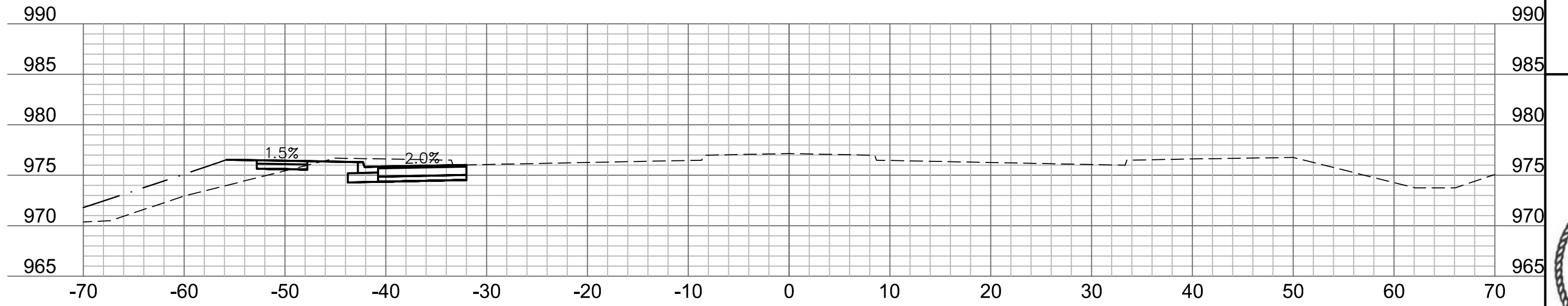
95+50



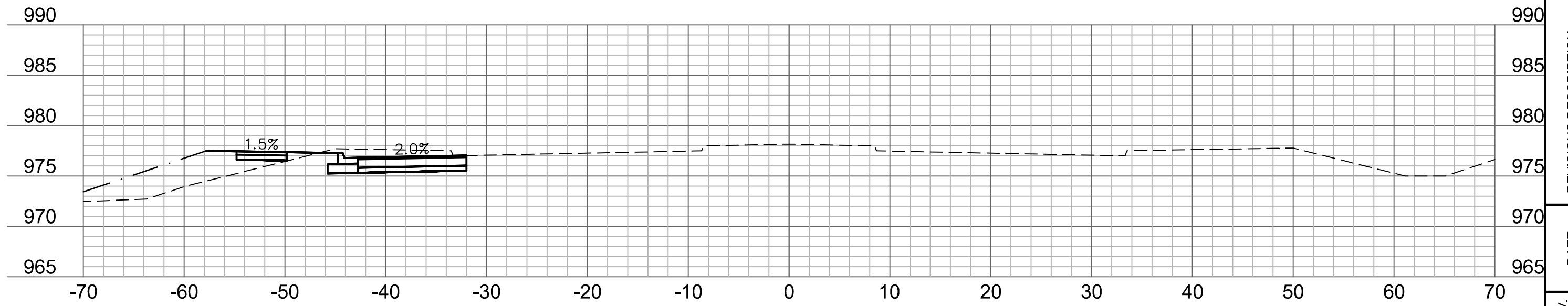
95+25



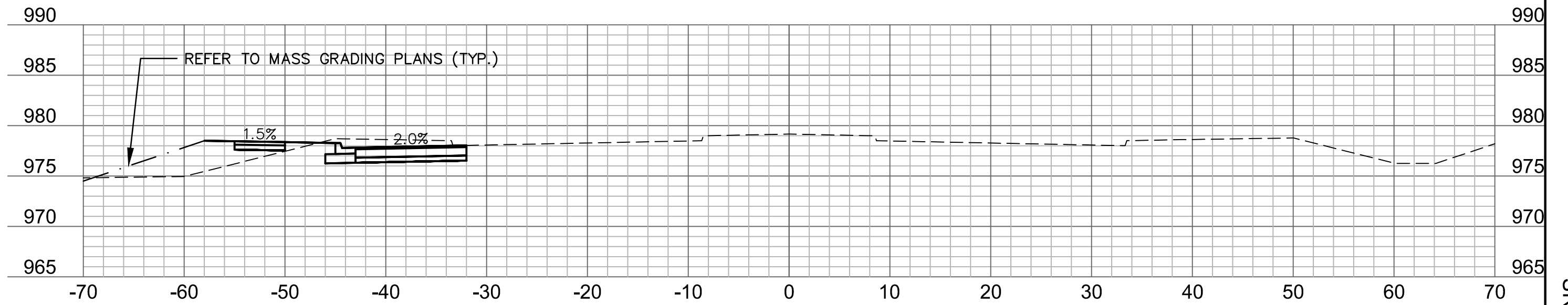
95+00



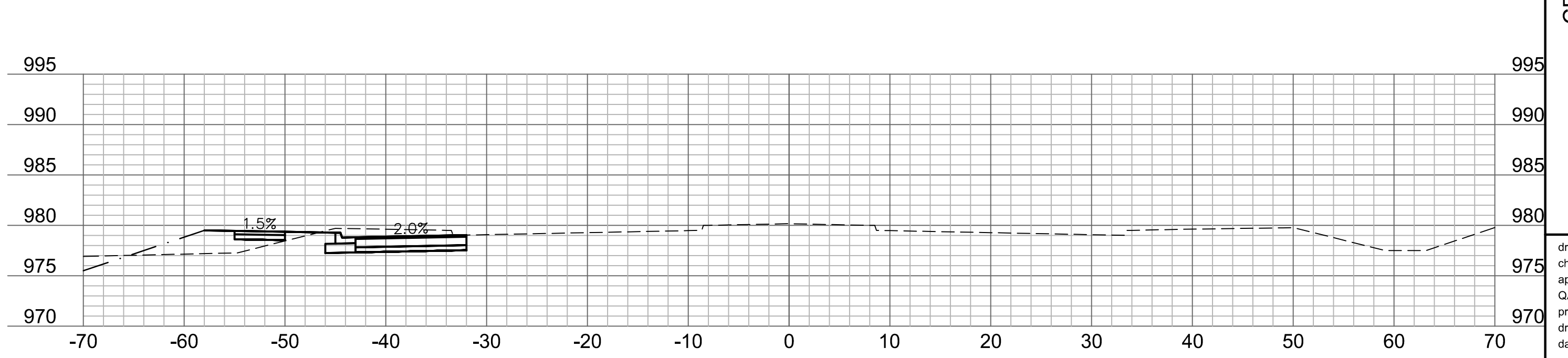
96+75



96+50



96+25



96+00



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

CROSS SECTIONS
COLBERN ROAD

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

LEE'S SUMMIT, MISSOURI

2023

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

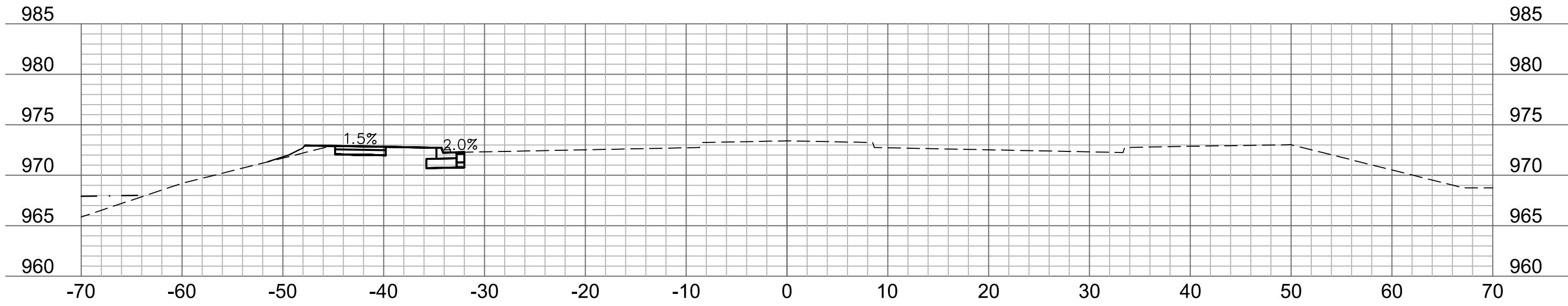
SHEET
73 OF 86

olsson

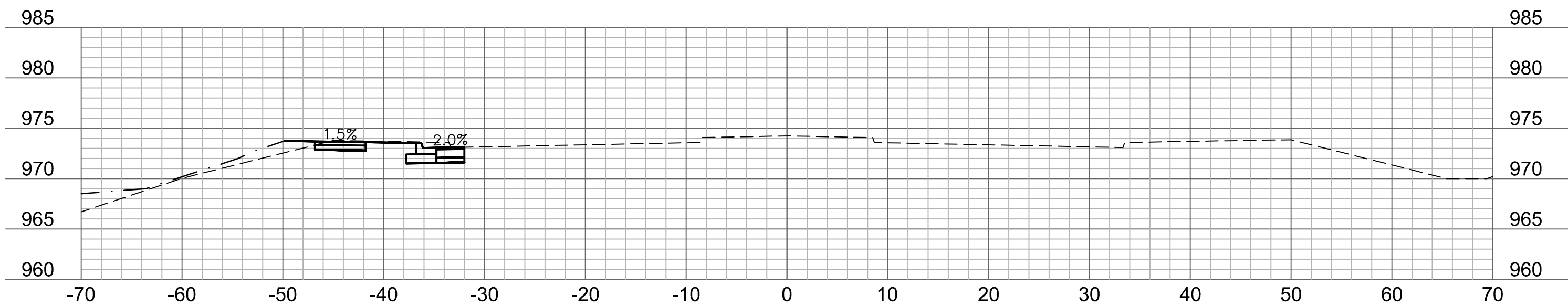
Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177 www.olsson.com

USER: kwilliams2

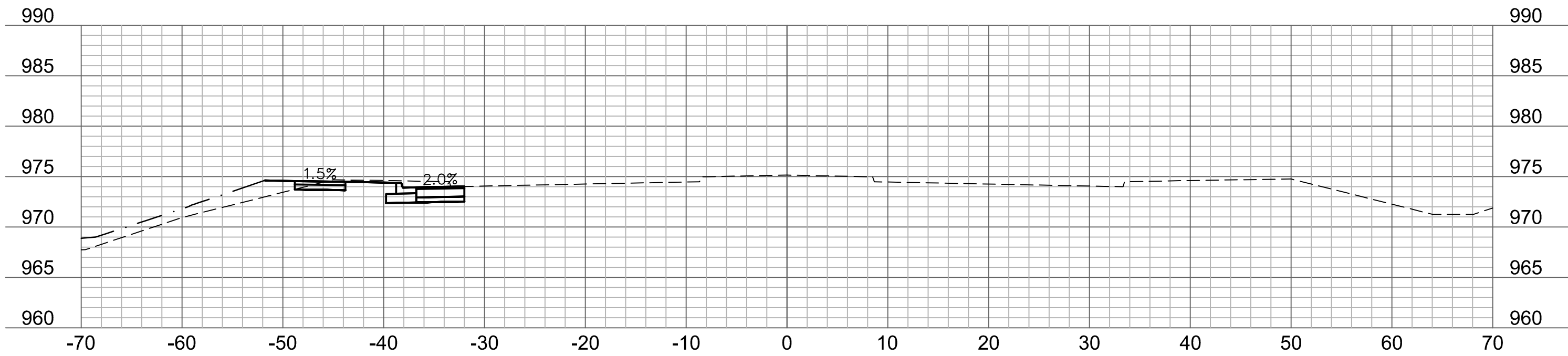
DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_XSC01_D02104643.dwg
DATE: Oct 20, 2023 2:55pm XREFS: T_PBASE_D02104643 T_PBLK_D02104643



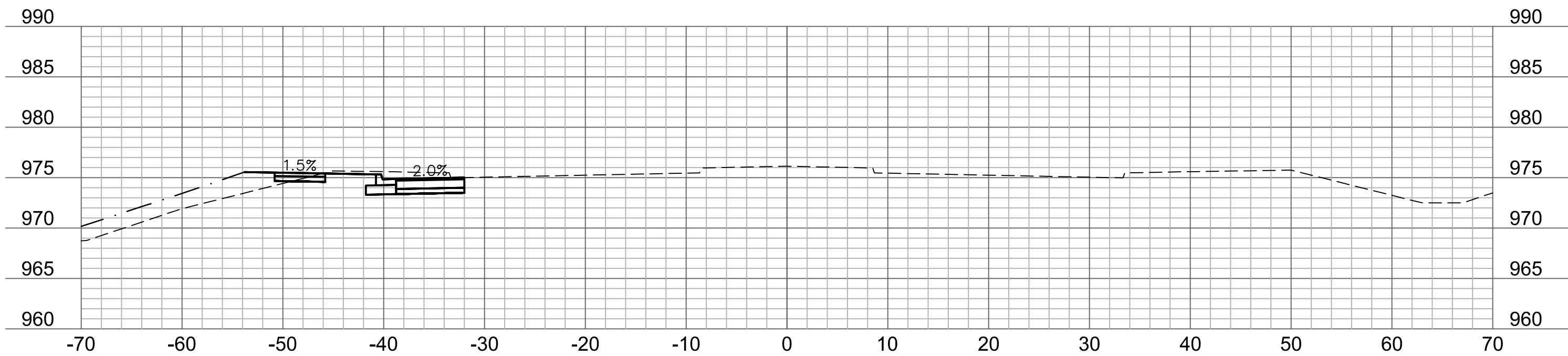
97+75



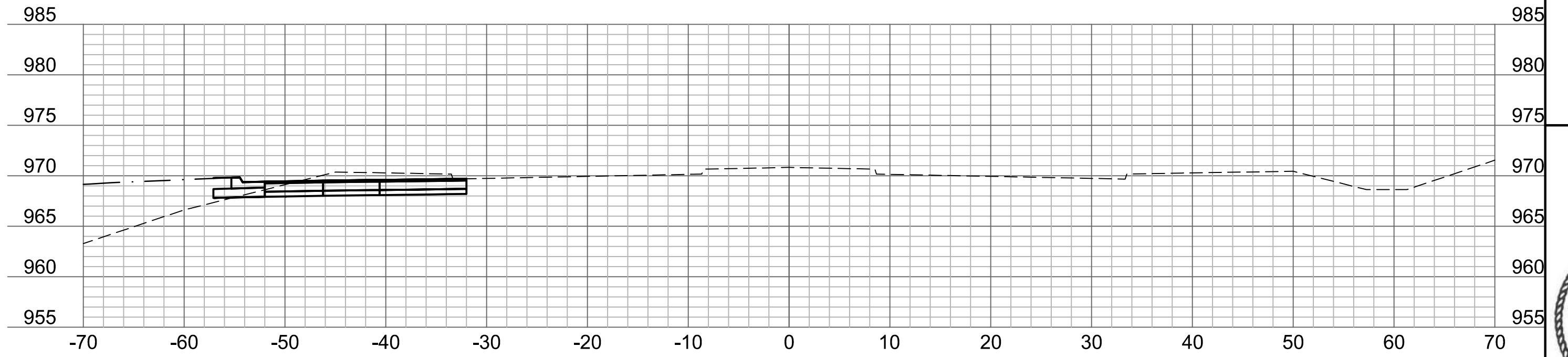
97+50



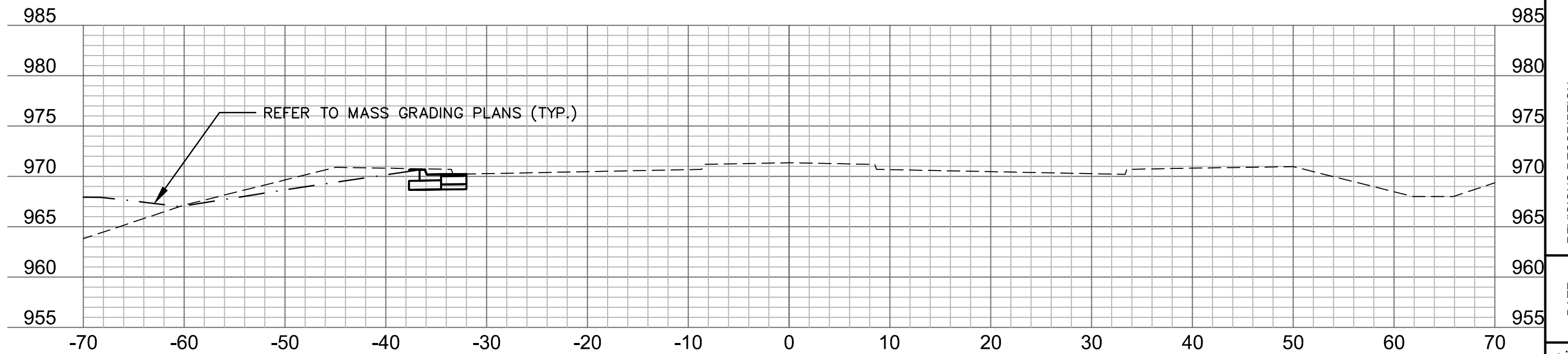
97+25



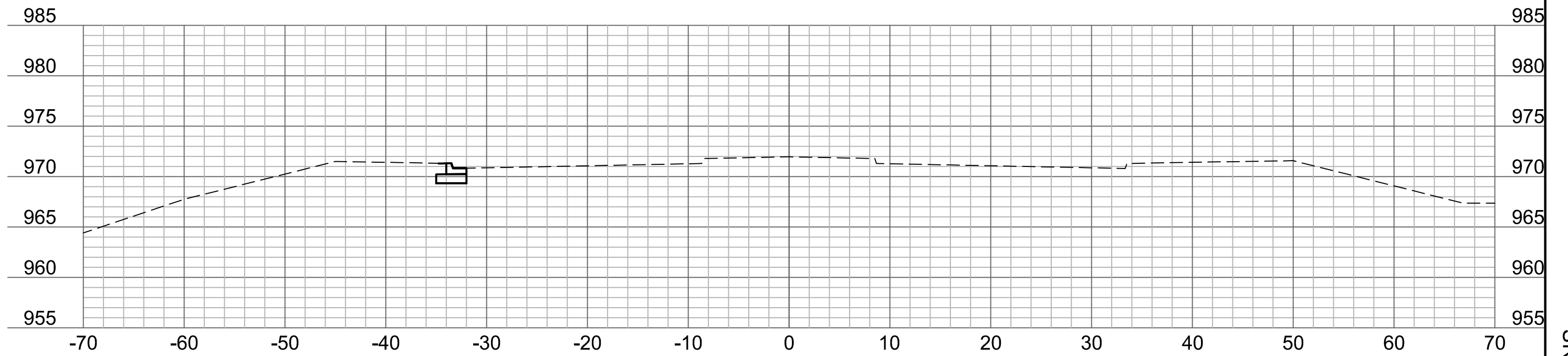
97+00



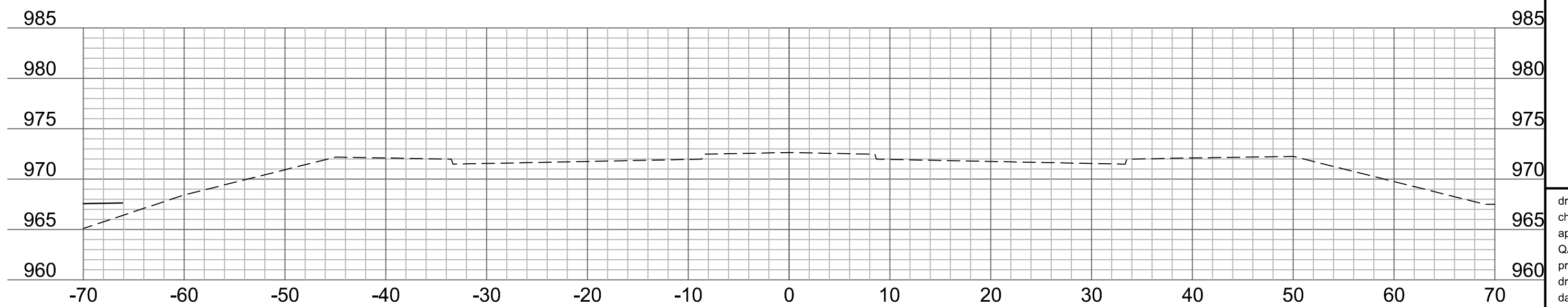
98+75



98+50



98+25



98+00



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

CROSS SECTIONS
COLBERN ROAD

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

LEE'S SUMMIT, MISSOURI

2023

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

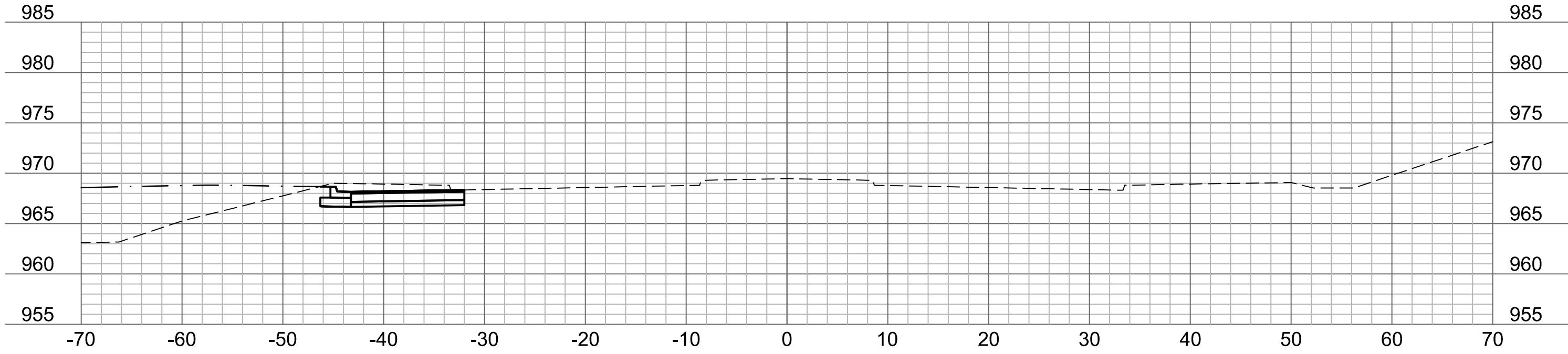
SHEET
74 OF 86

olsson

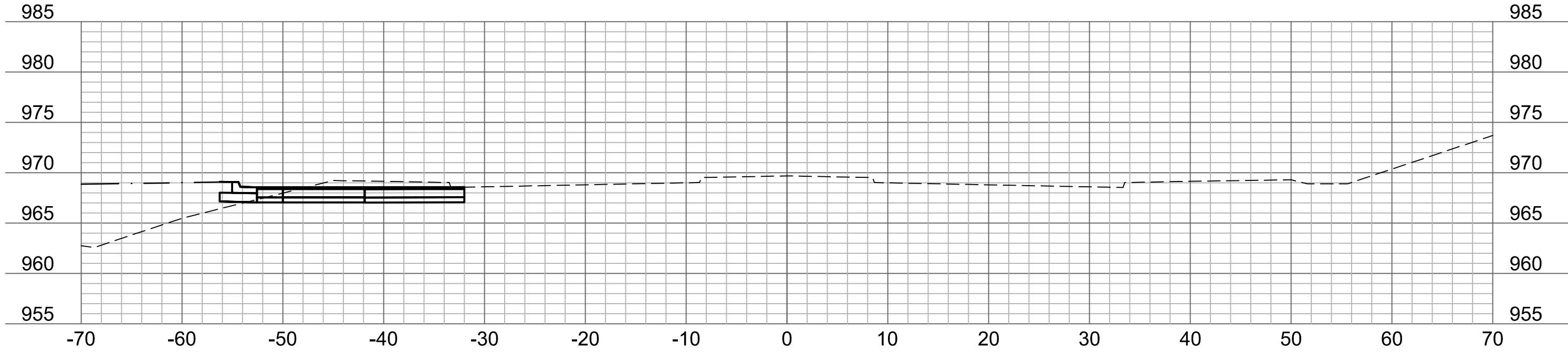
Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177 www.olsson.com

USER: kwilliams2

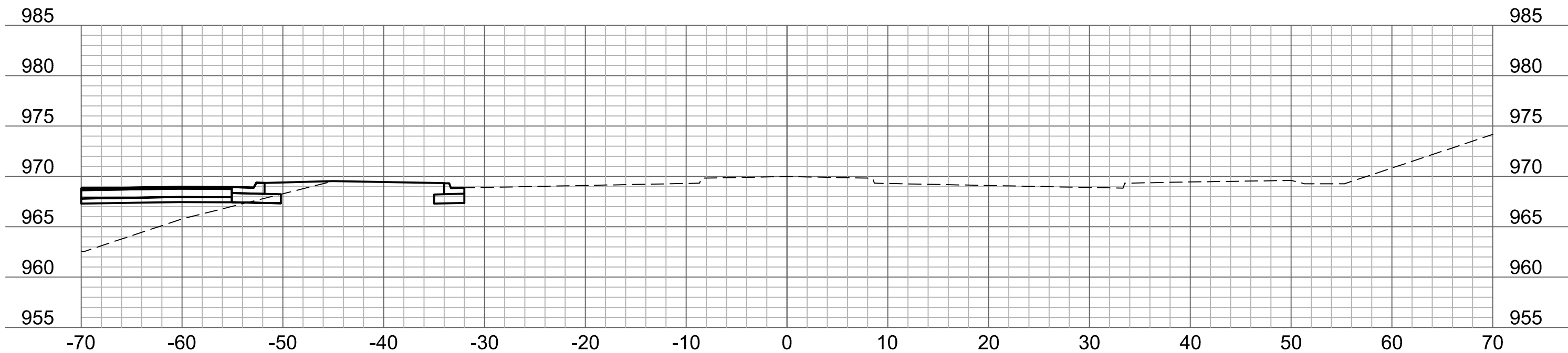
DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_XSC01_D02104643.dwg
DATE: Oct 20, 2023 2:55pm XREFS: T_PBASE_D02104643 T_PBLK_D02104643



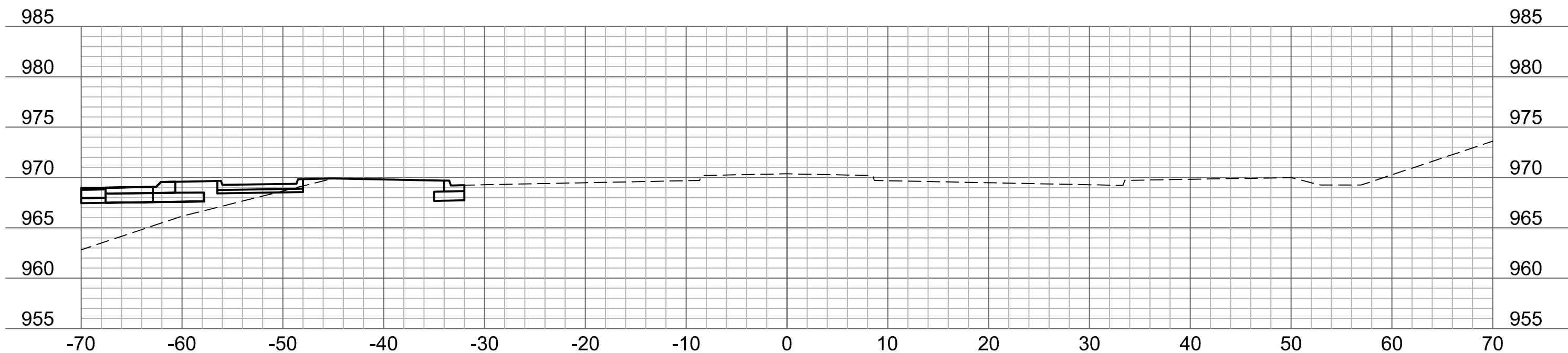
99+75



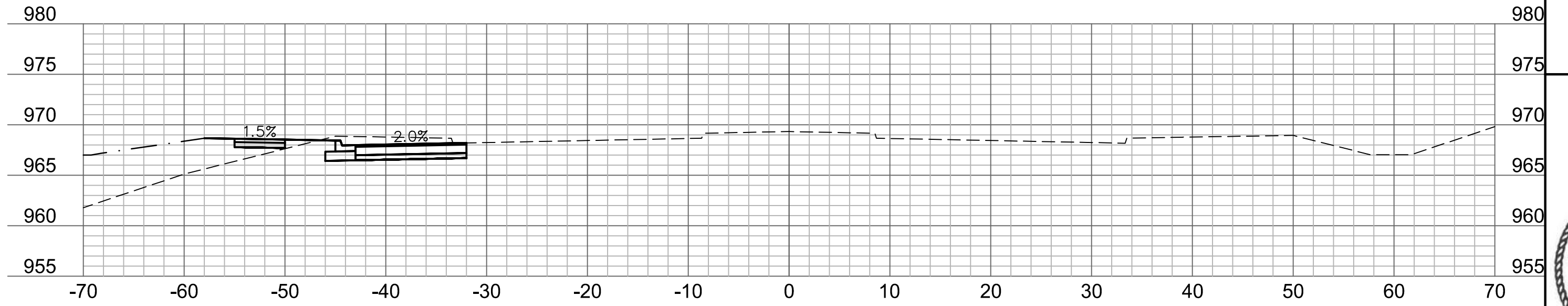
99+50



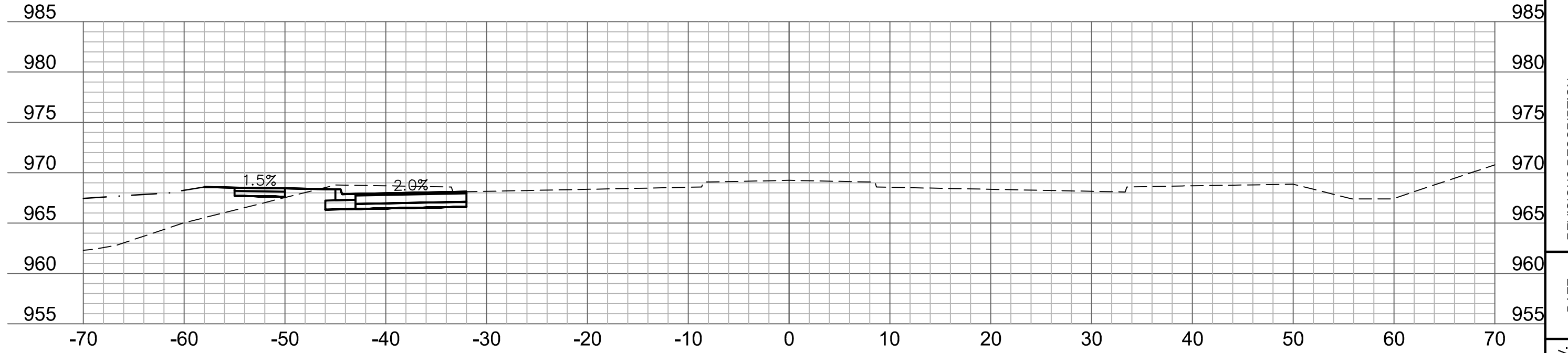
99+25



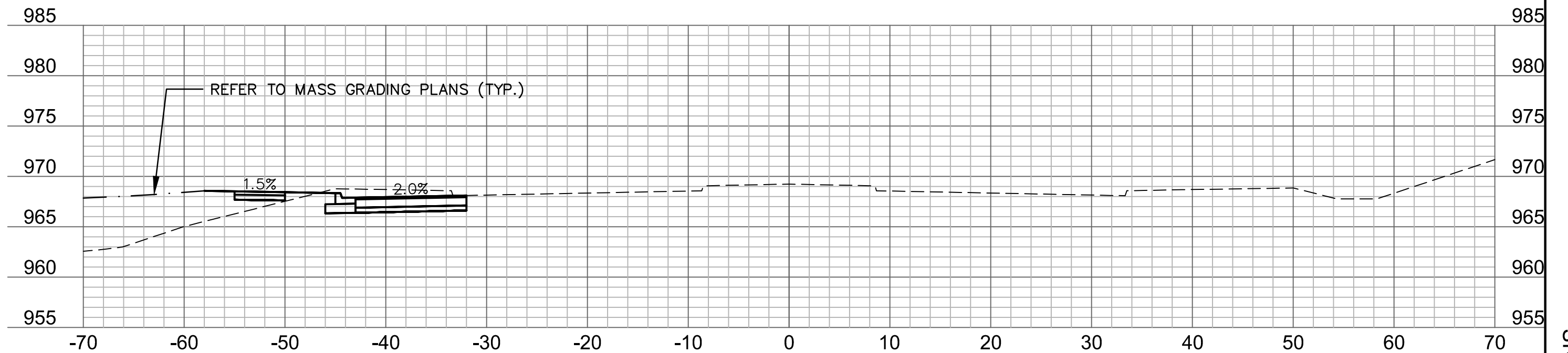
99+00



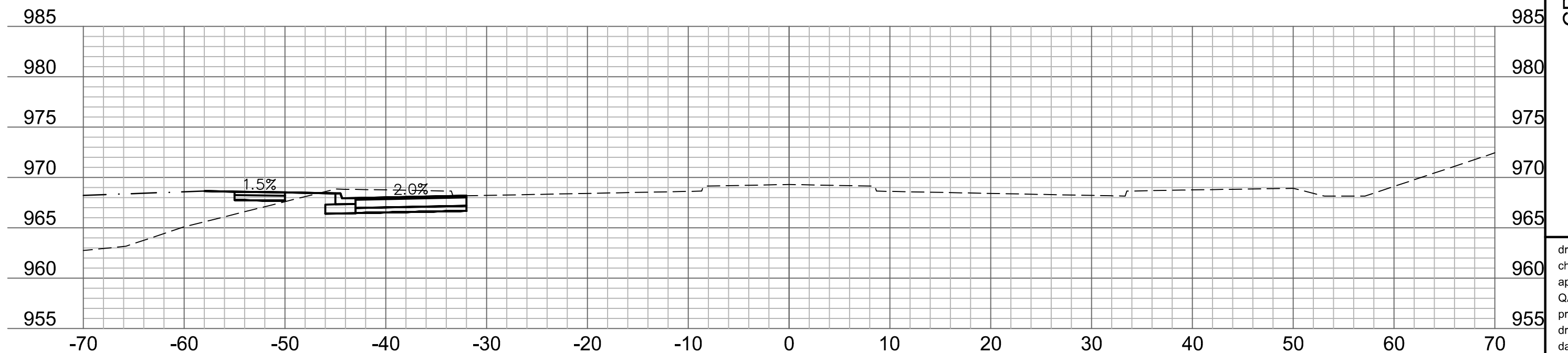
100+75



100+50



100+25



100+00



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

CROSS SECTIONS
COLBURN ROAD

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

LEE'S SUMMIT, MISSOURI

2023

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

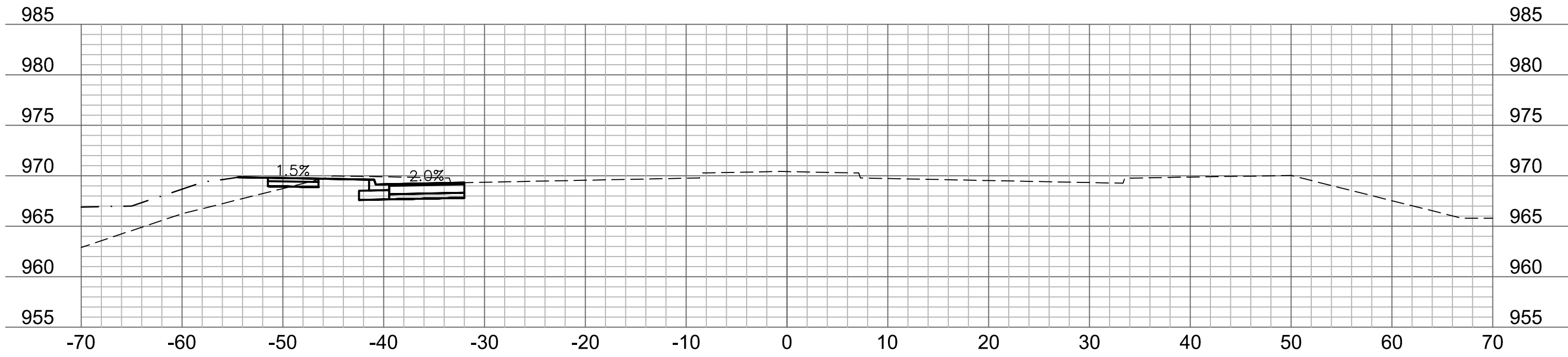
SHEET
75 OF 86

olsson

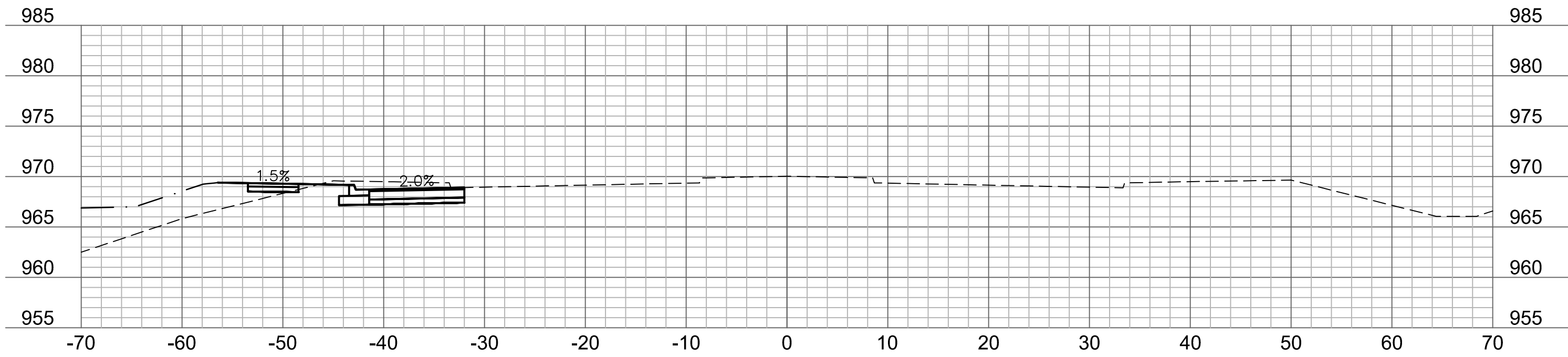
Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177 www.olsson.com

USER: kwilliams2

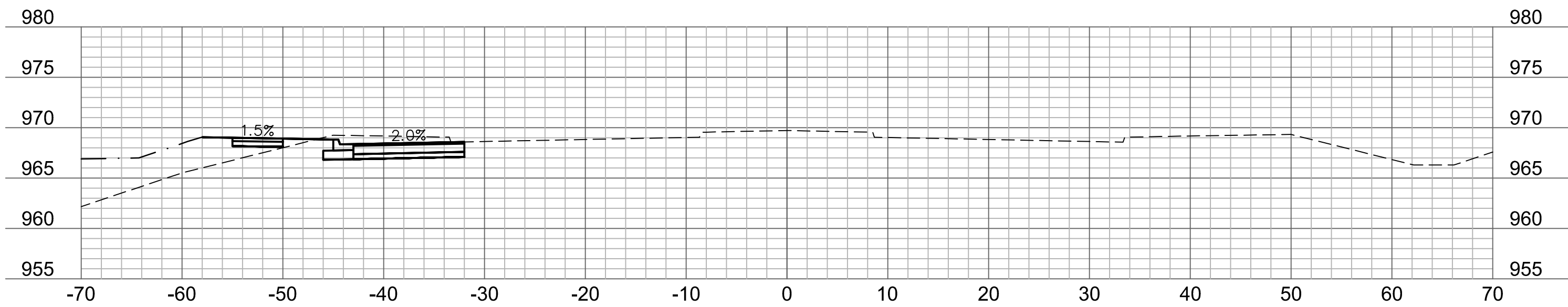
DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_XSC01_D02104643.dwg
DATE: Oct 20, 2023 2:55pm XREFS: T_PBASE_D02104643 T_PBLK_D02104643



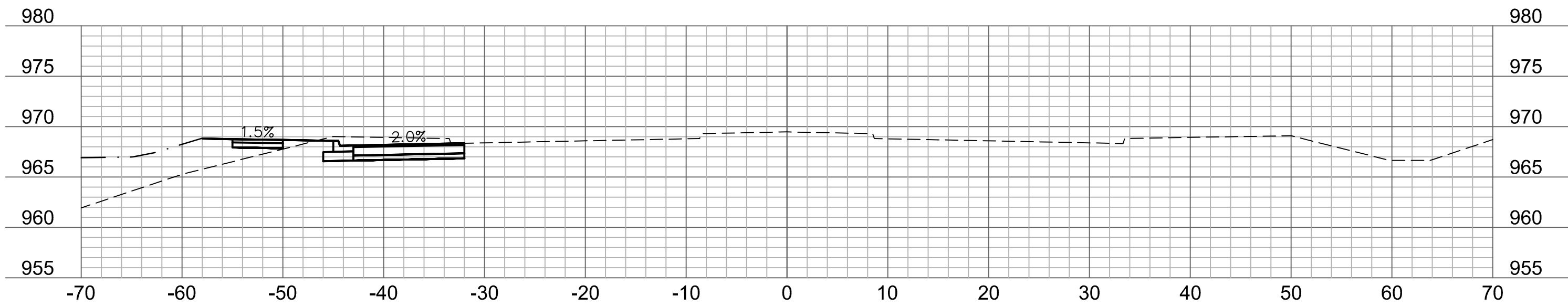
101+75



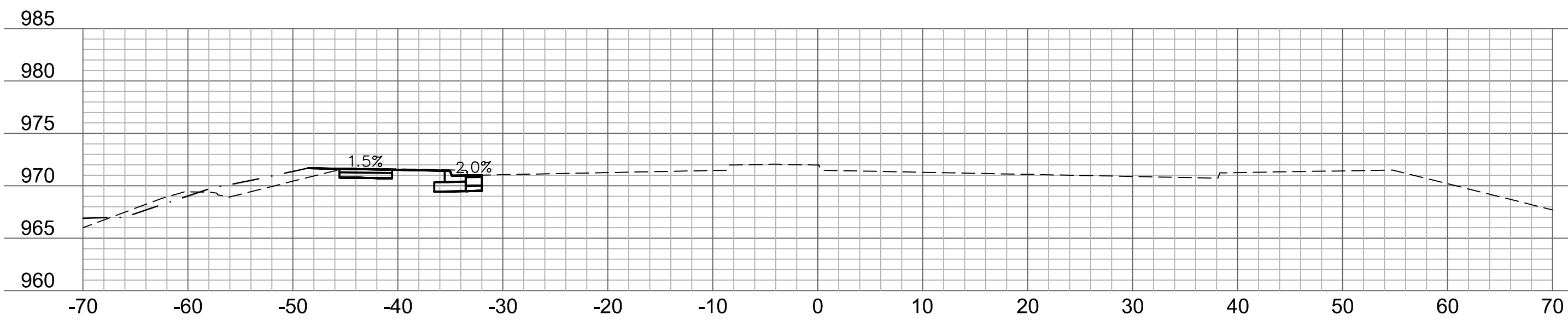
101+50



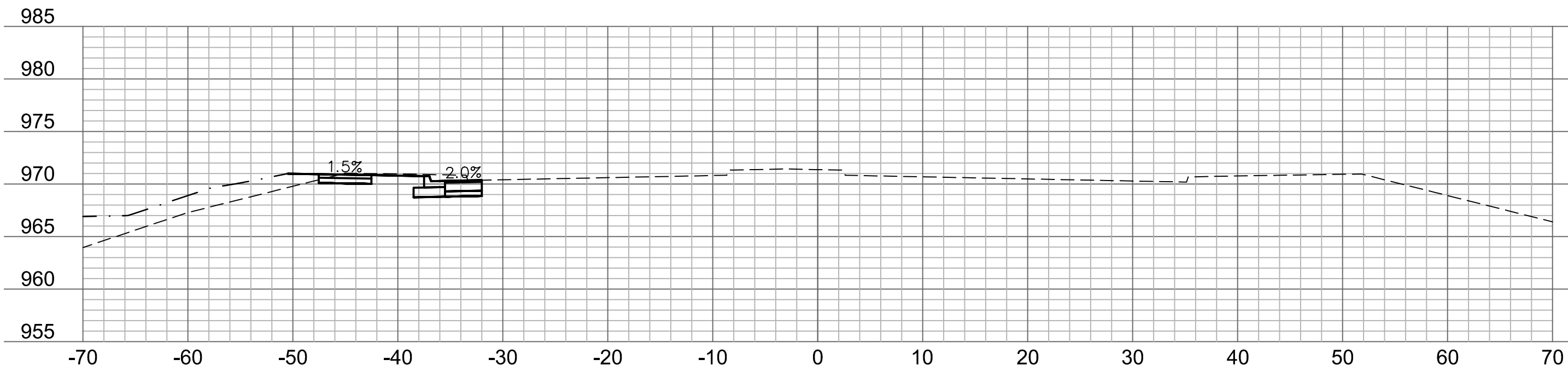
101+25



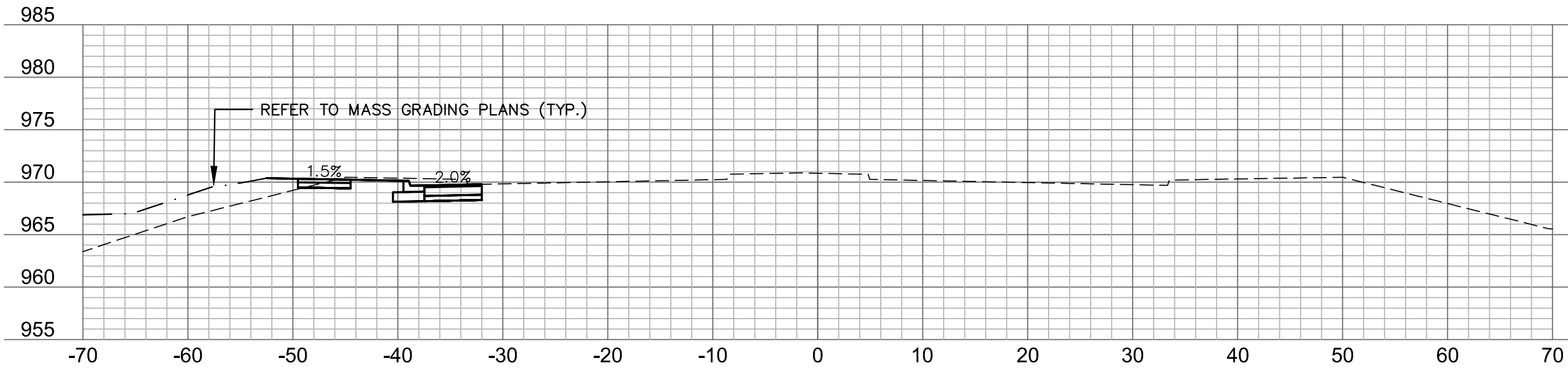
101+00



102+50



102+25



102+00



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

CROSS SECTIONS
COLBERN ROAD

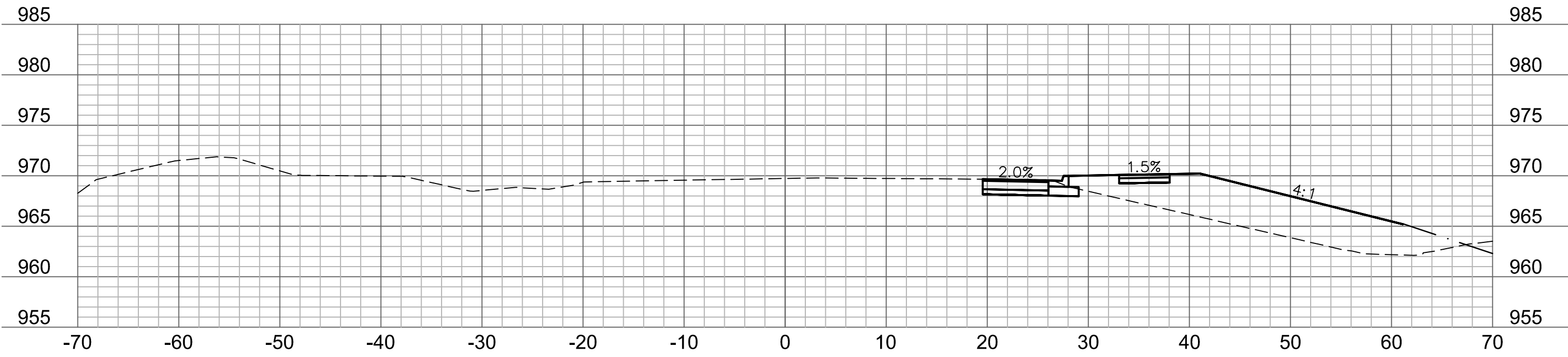
THE VILLAGE AT DISCOVERY PARK
COLBERN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

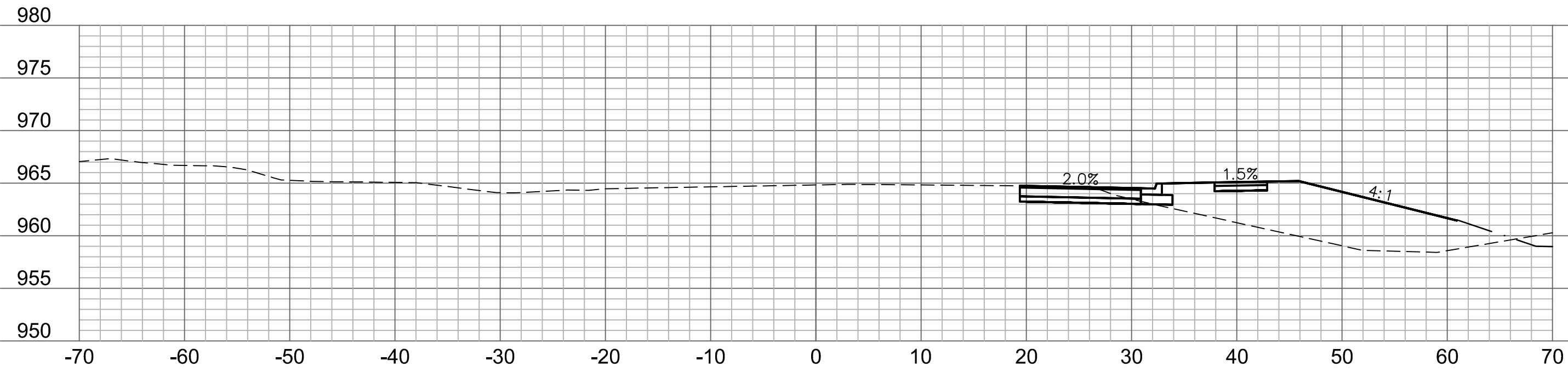
2023

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

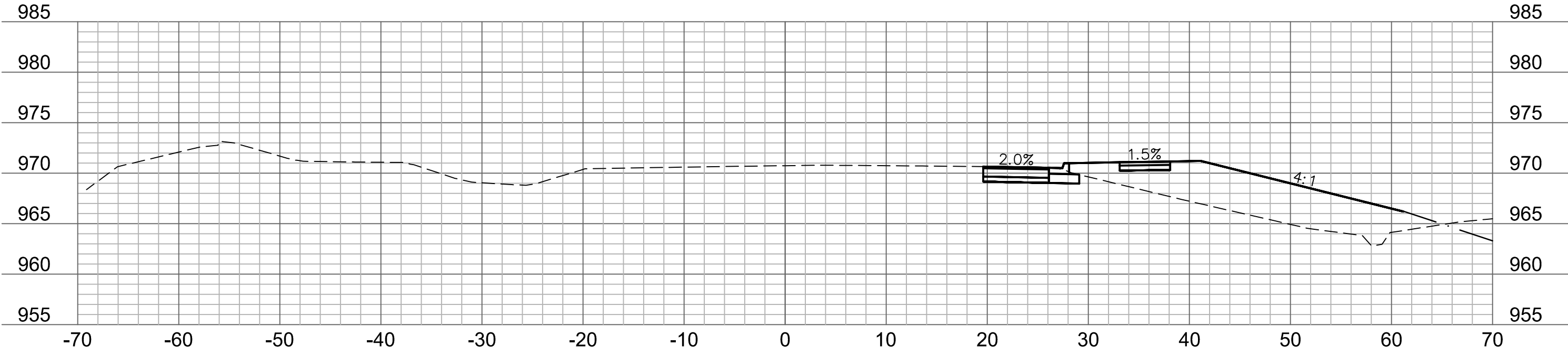
DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final_Plans\Sheets\RDW\T_XSC01_D02104643.dwg
DATE: Sep 28, 2023 4:28am XREFS: T_PTBK_D02104643 USER: kwilliams2



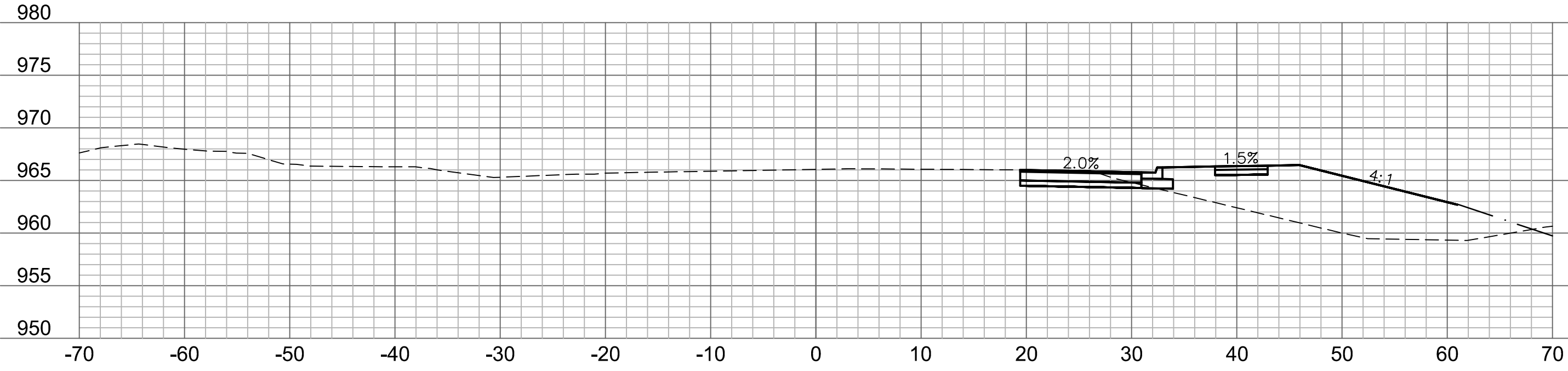
200+75



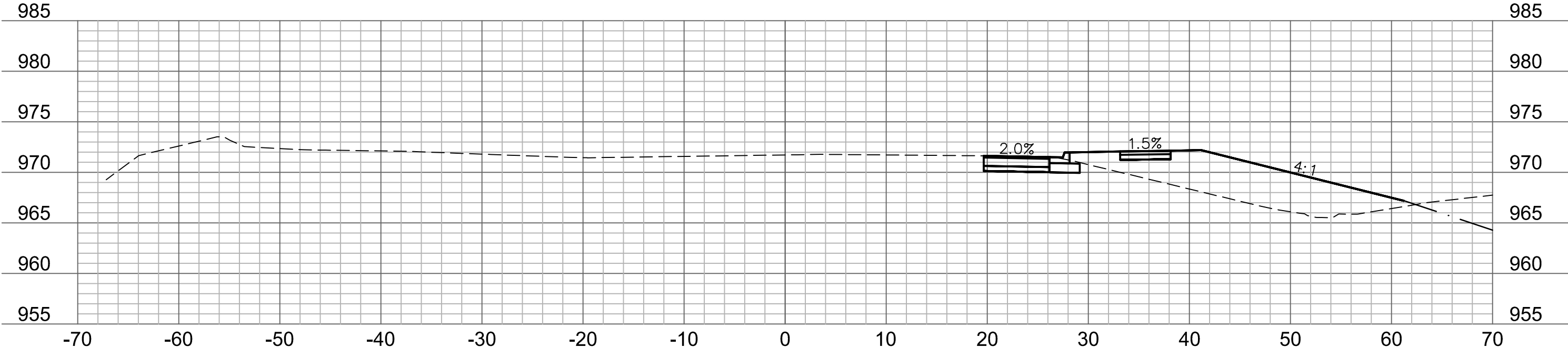
201+75



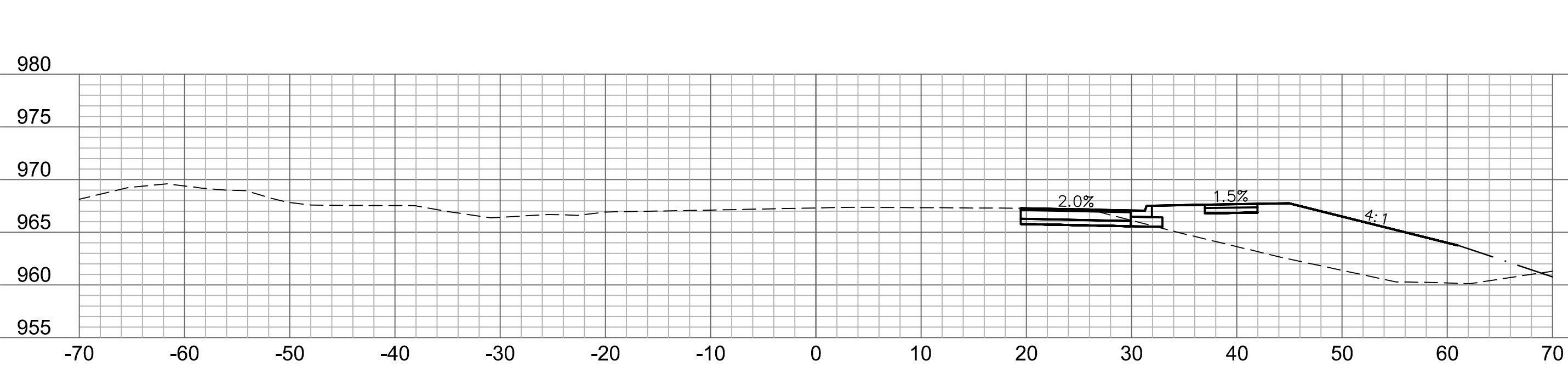
200+50



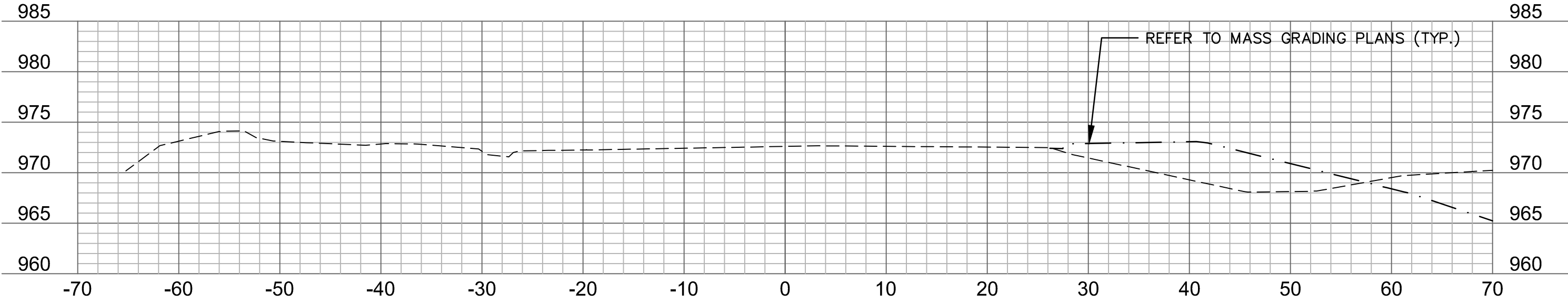
201+50



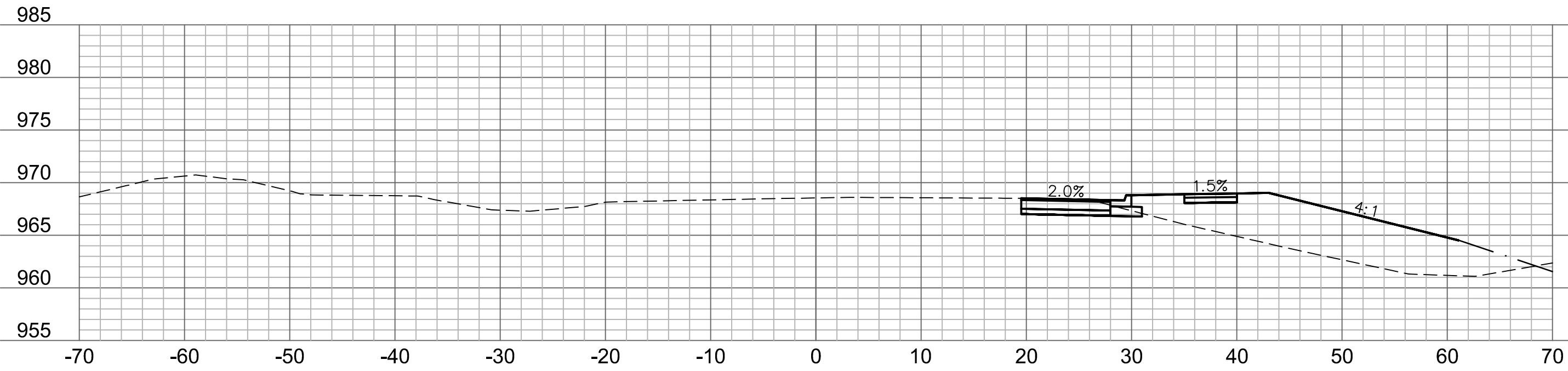
200+25



201+25



200+00



201+00

olsson

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

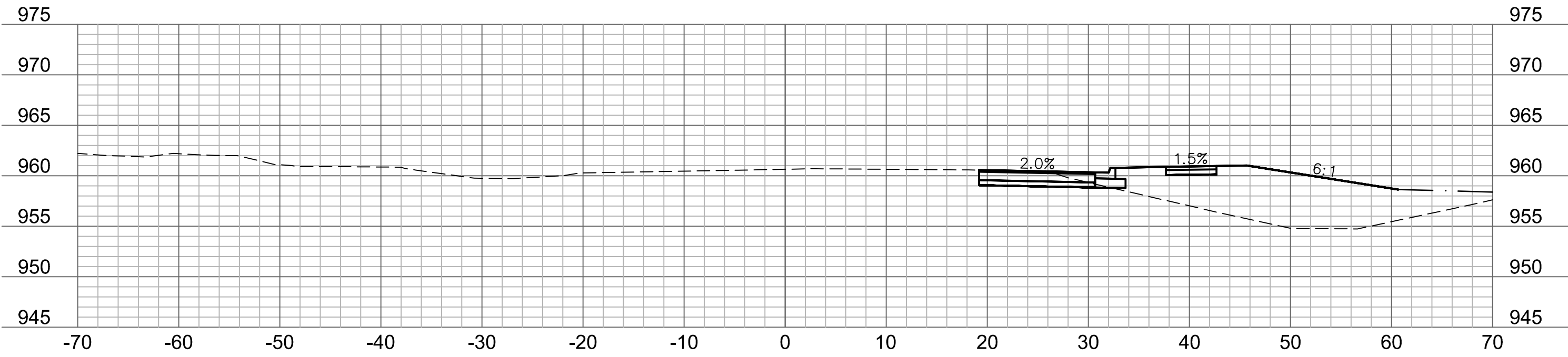


REV. NO.	DATE	REVISIONS DESCRIPTION

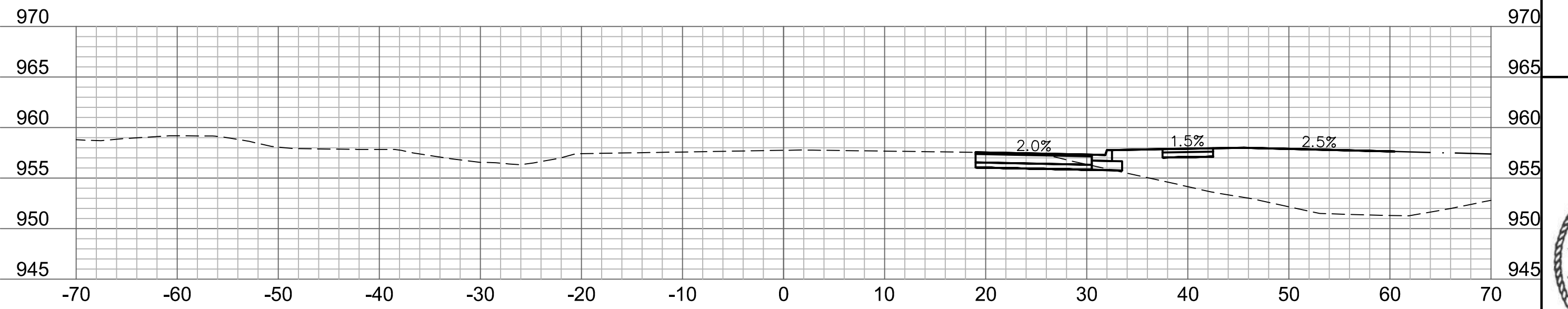
CROSS SECTIONS	THE VILLAGE AT DISCOVERY PARK	2023
DOUGLAS STREET	COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	LEE'S SUMMIT, MISSOURI

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

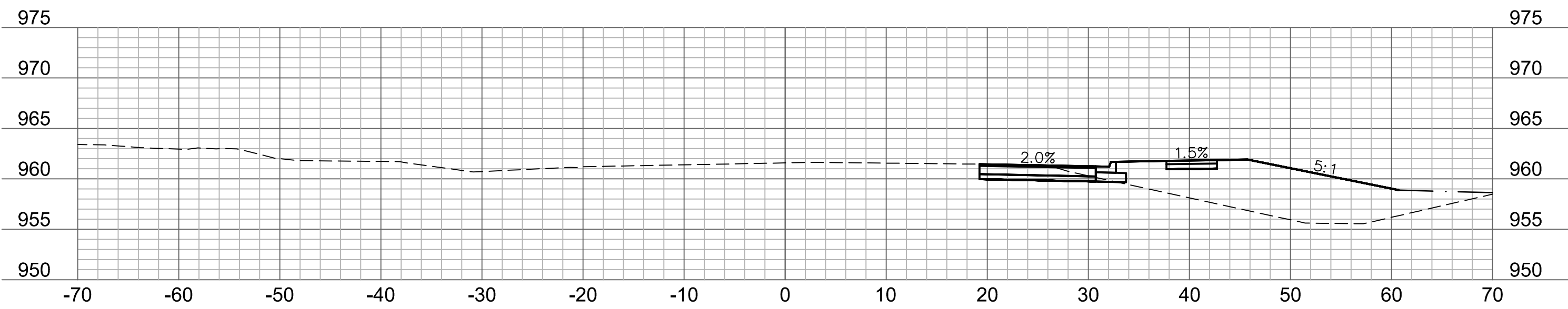
DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final_Plans\Sheets\RDW\T_XSC01_D02104643.dwg
DATE: Sep 28, 2023 4:28am XREFS: T_PTBK_D02104643 USER: kwilliams2



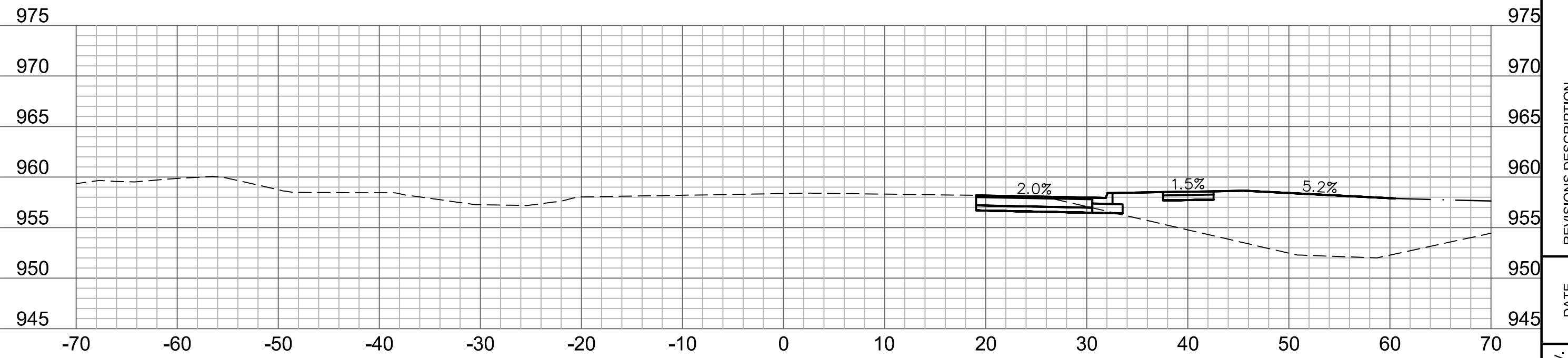
202+75



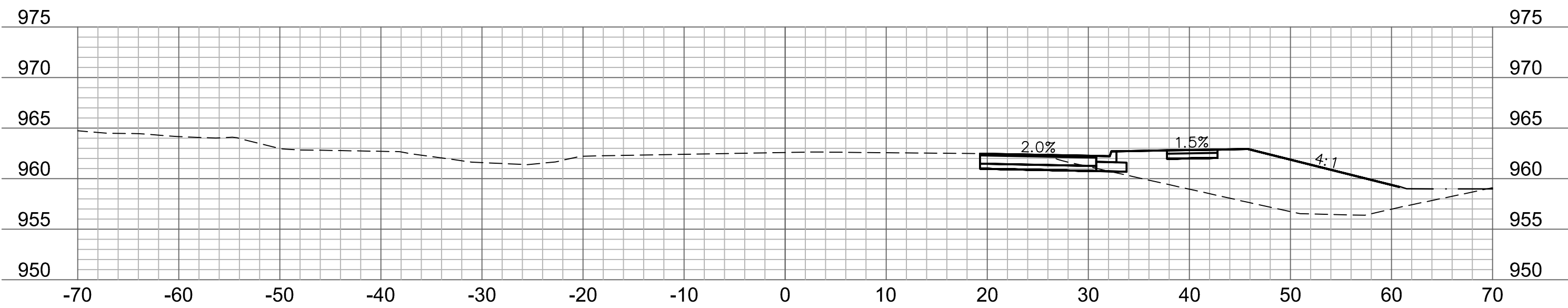
203+75



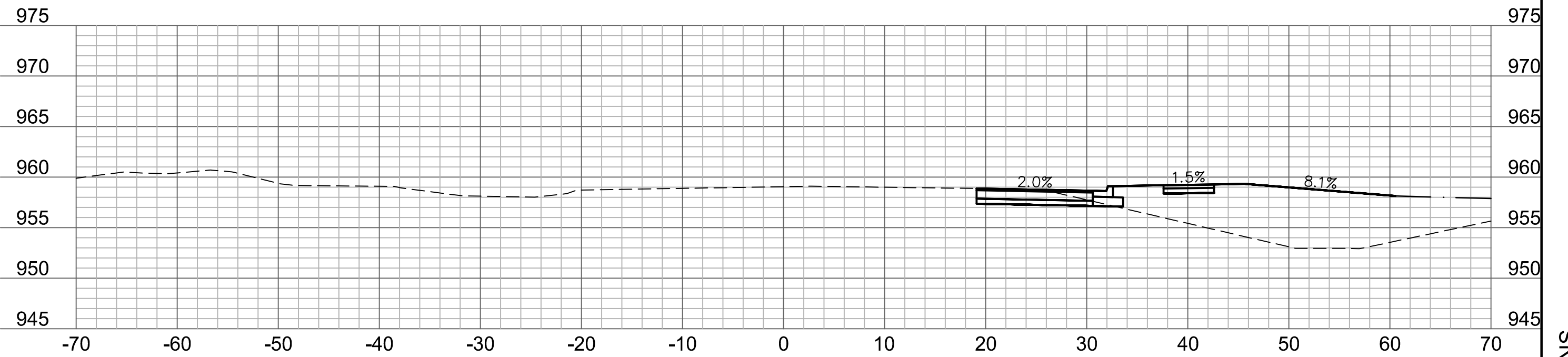
202+50



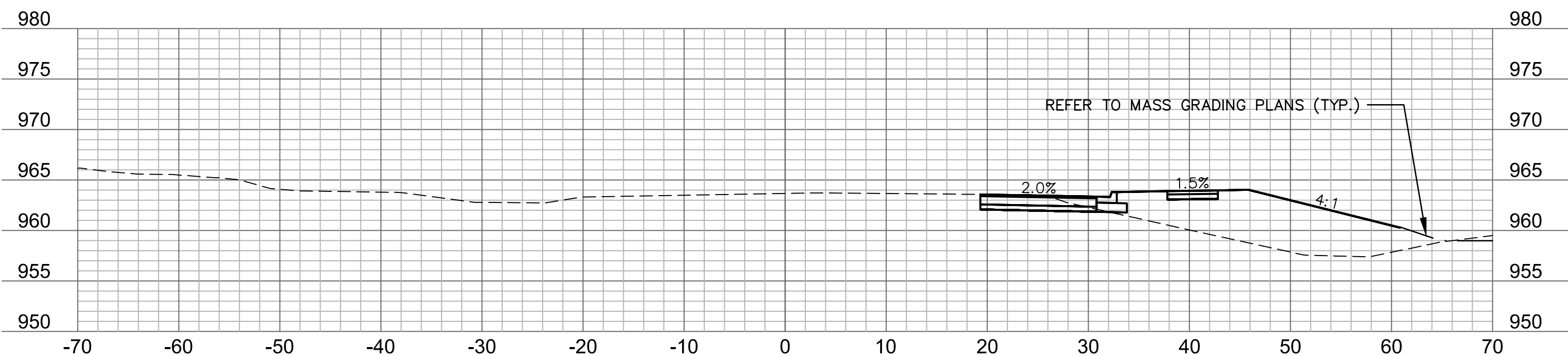
203+50



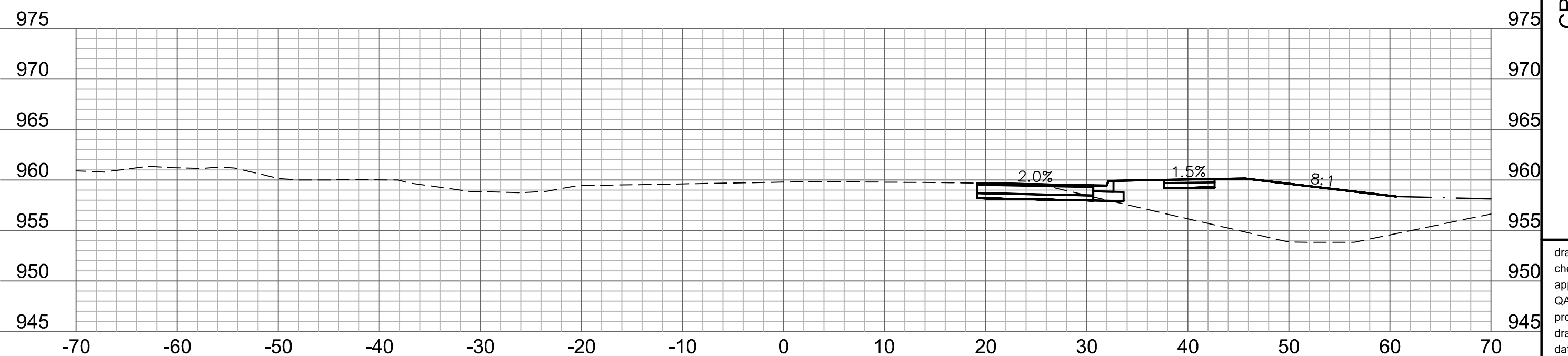
202+25



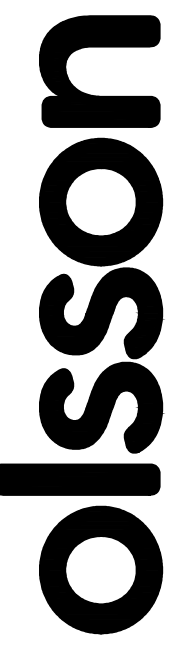
203+25



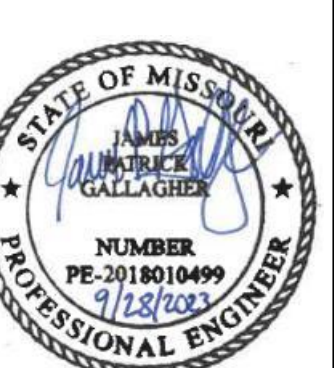
202+00



203+00



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



REV. NO.		DATE	REVISIONS DESCRIPTION

CROSS SECTIONS
DOUGLAS STREET

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

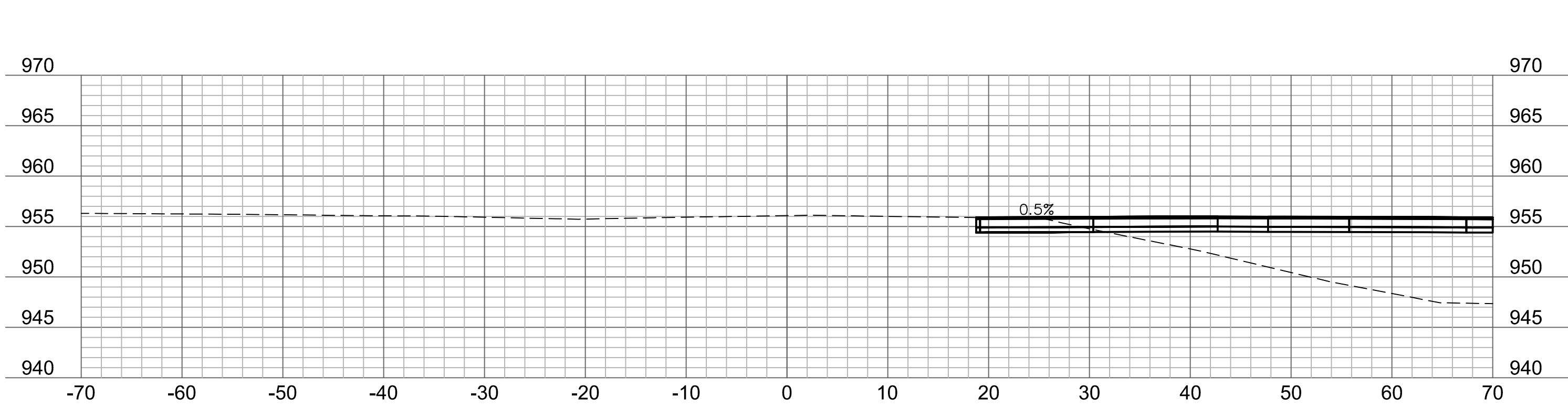
LEE'S SUMMIT, MISSOURI

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

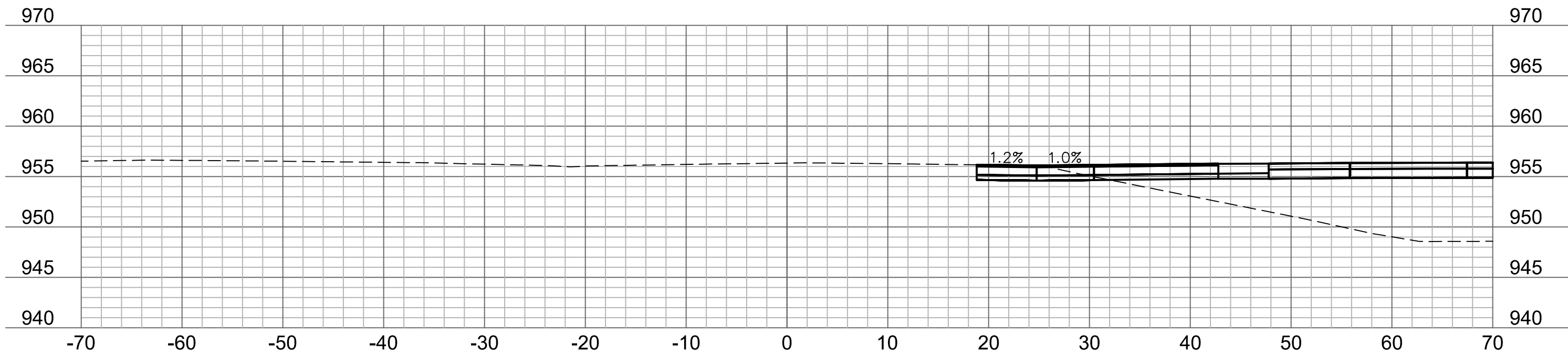
SHEET
78 OF 86

USER: kwilliams2

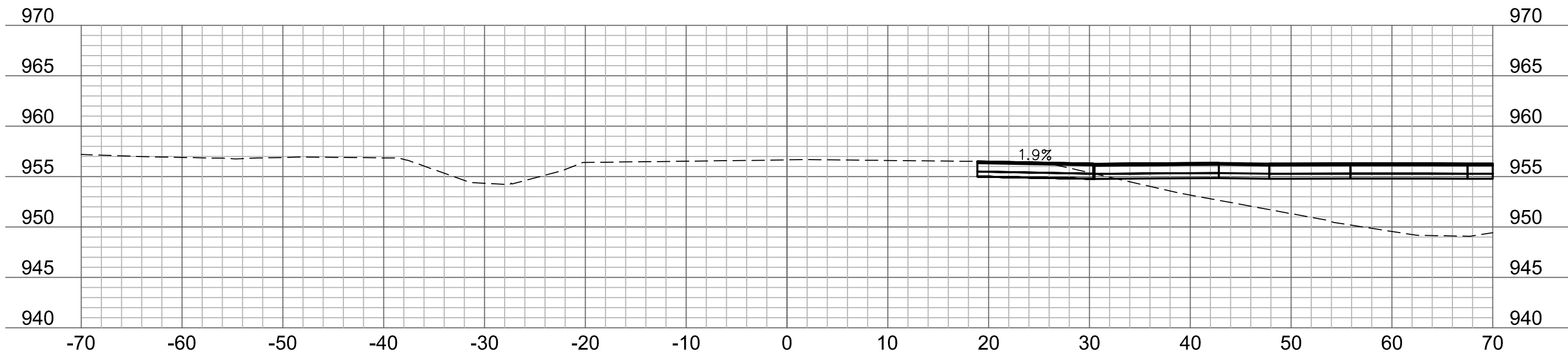
DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final Plans\Sheets\RDW\T_XSC01_D02104643.dwg
DATE: Oct 20, 2023 2:55pm XREFS: T_PBASE_D02104643 T_PBLK_D02104643



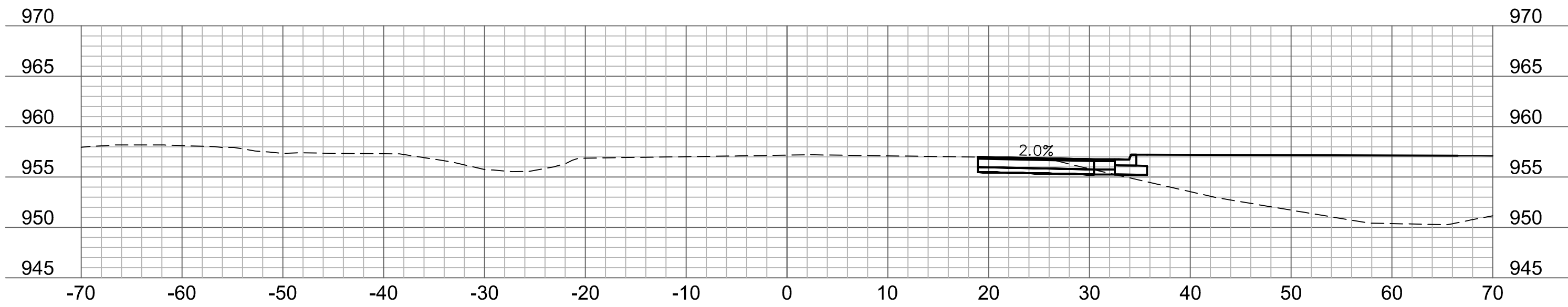
204+75



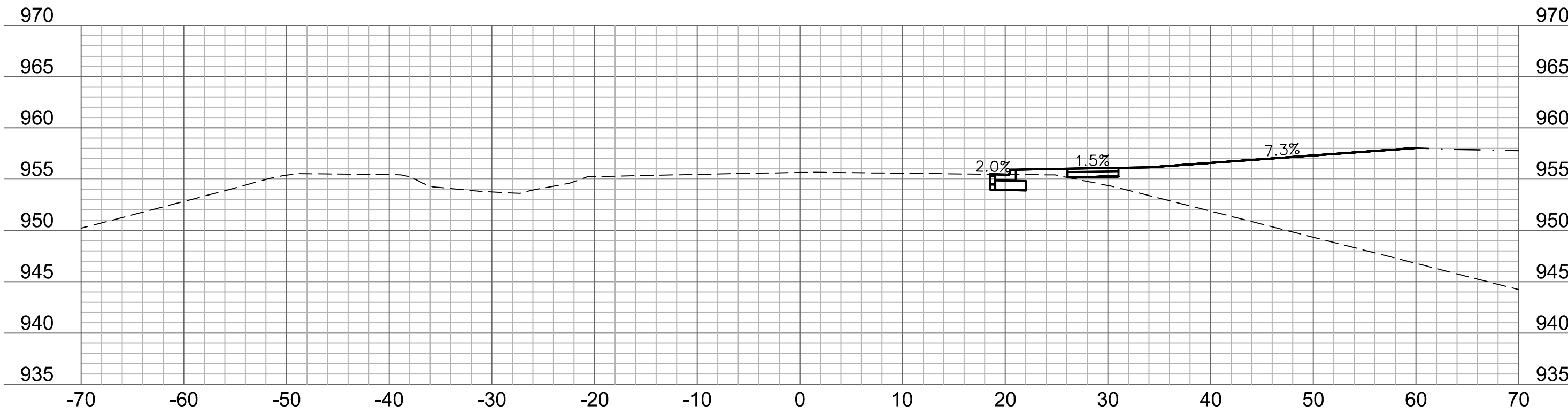
204+50



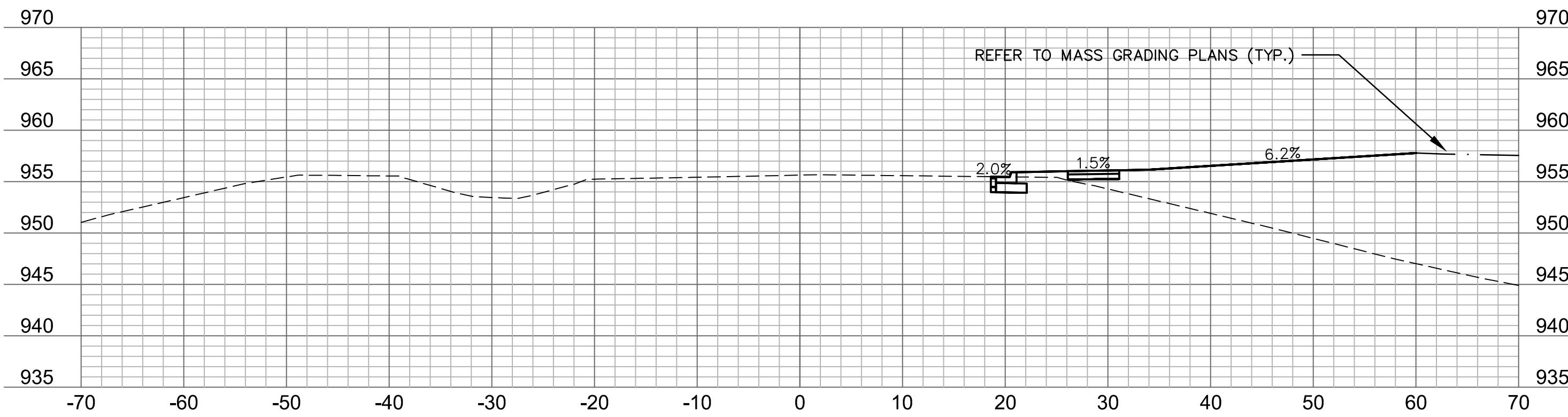
204+25



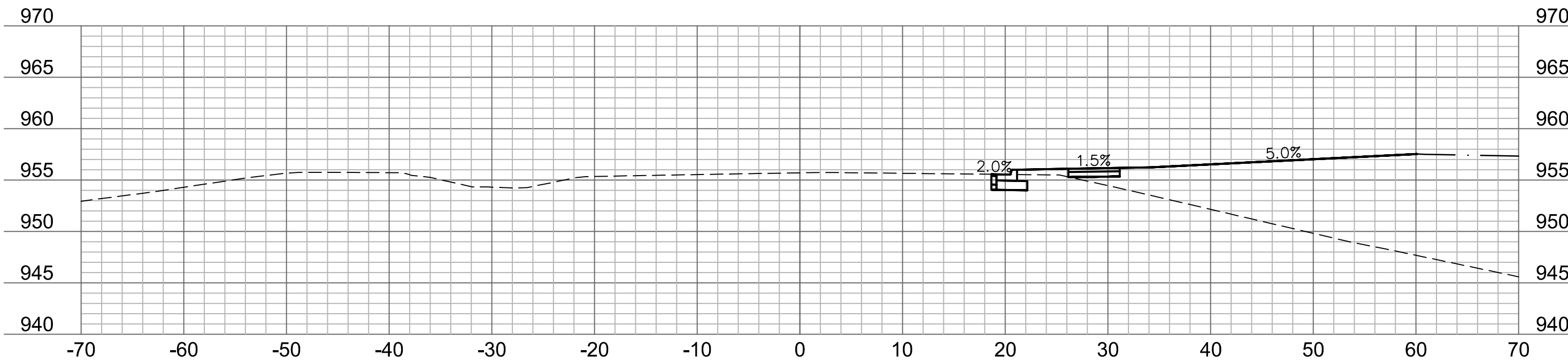
204+00



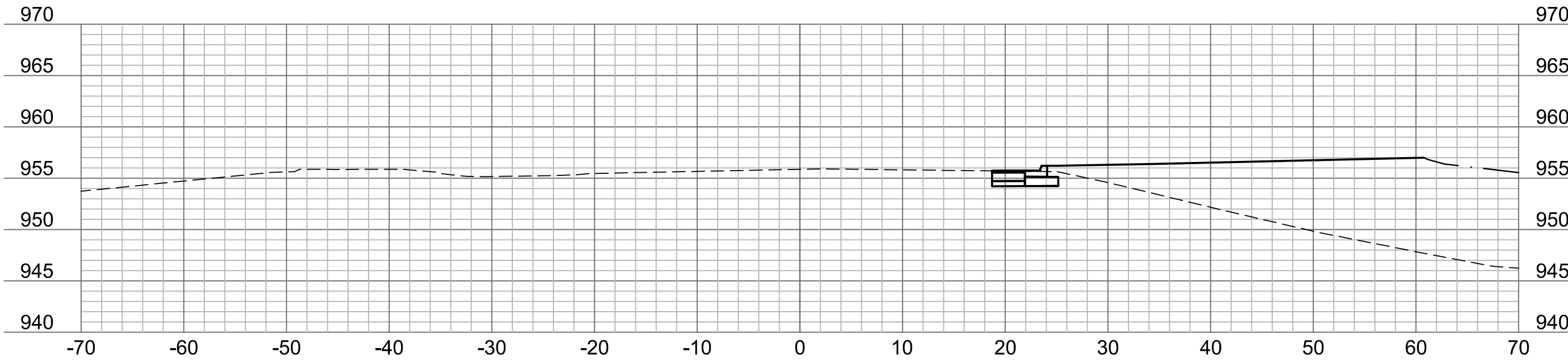
205+75



205+50



205+25



205+00

olsson

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



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

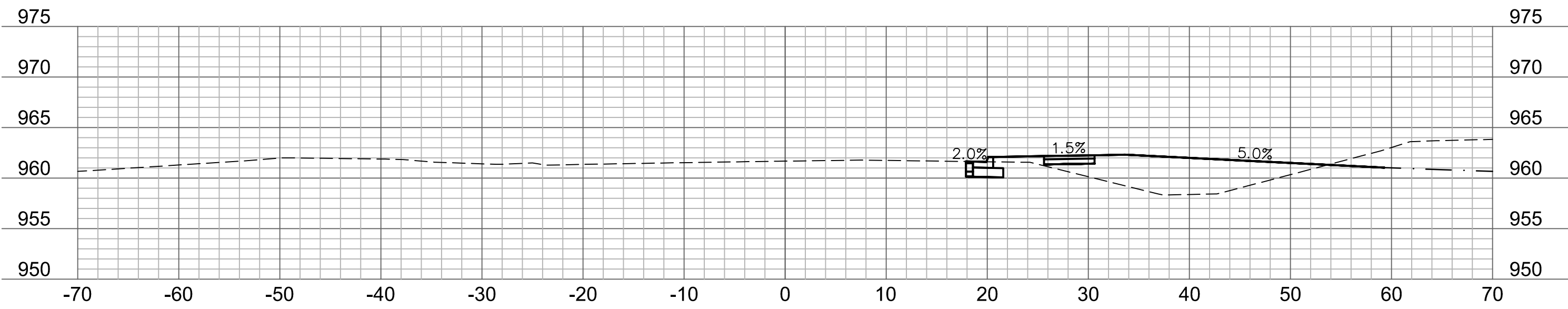
CROSS SECTIONS
DOUGLAS STREET

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

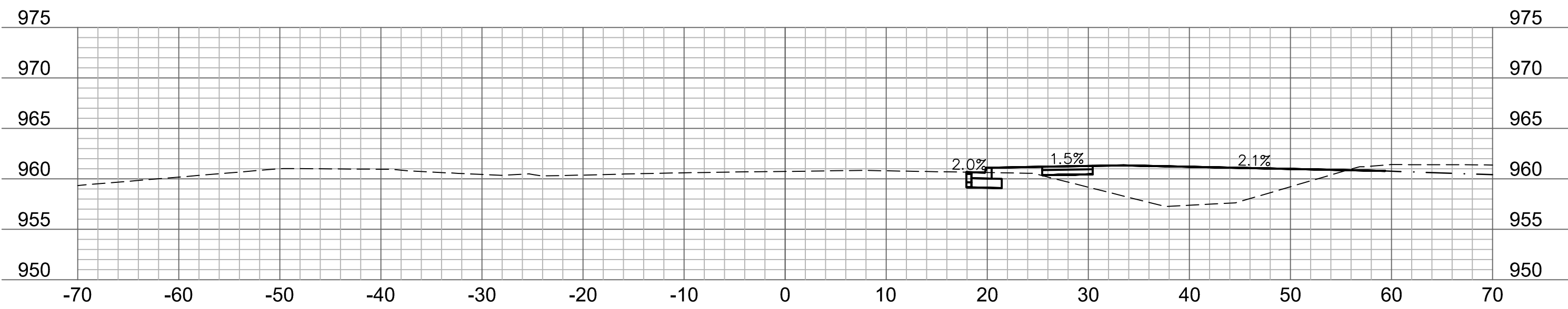
LEE'S SUMMIT, MISSOURI

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

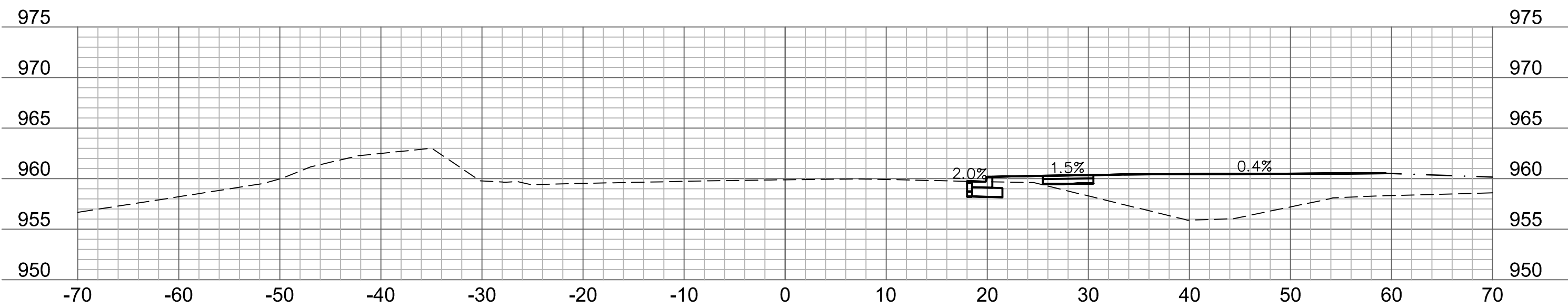
DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final_Plans\Sheets\RDW\T_XSC01_D02104643.dwg
DATE: Oct 20, 2023 2:56pm
XREFS: T_PBASE_D02104643
USER: kwilliams2



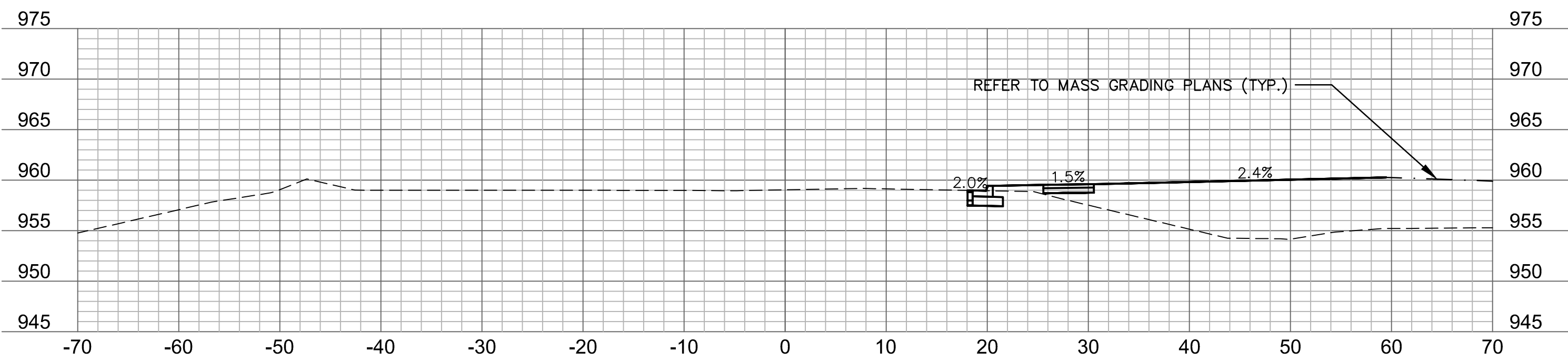
208+75



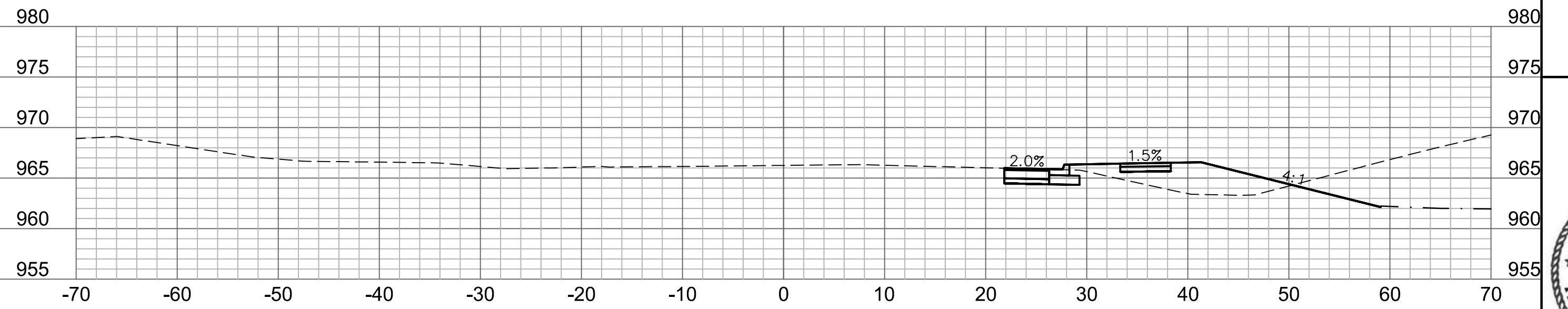
208+50



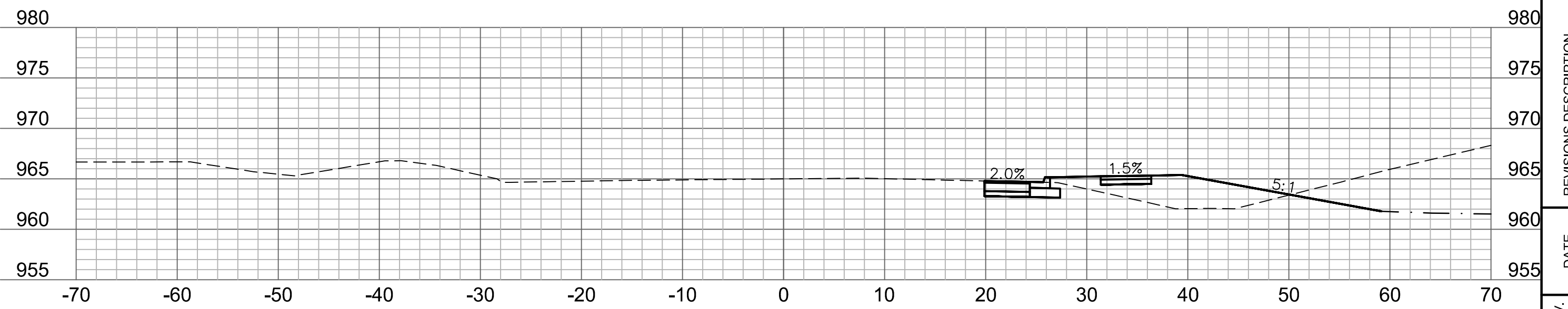
208+25



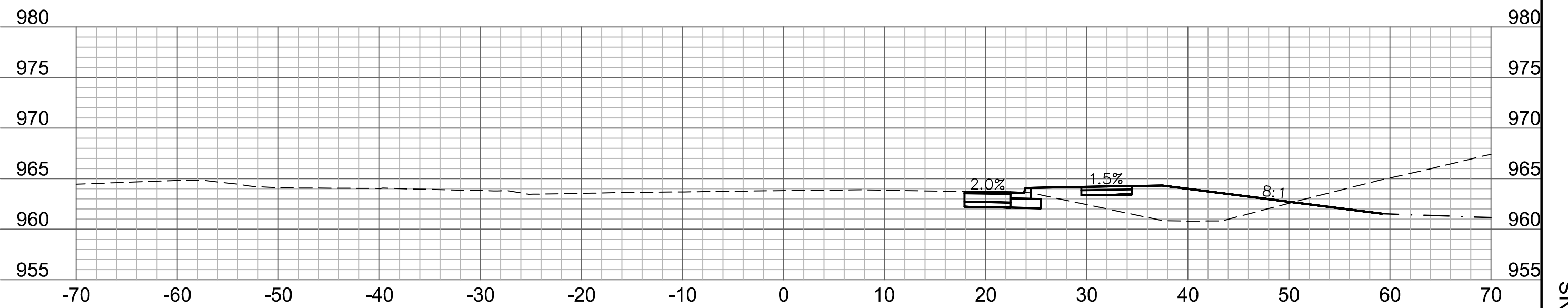
208+00



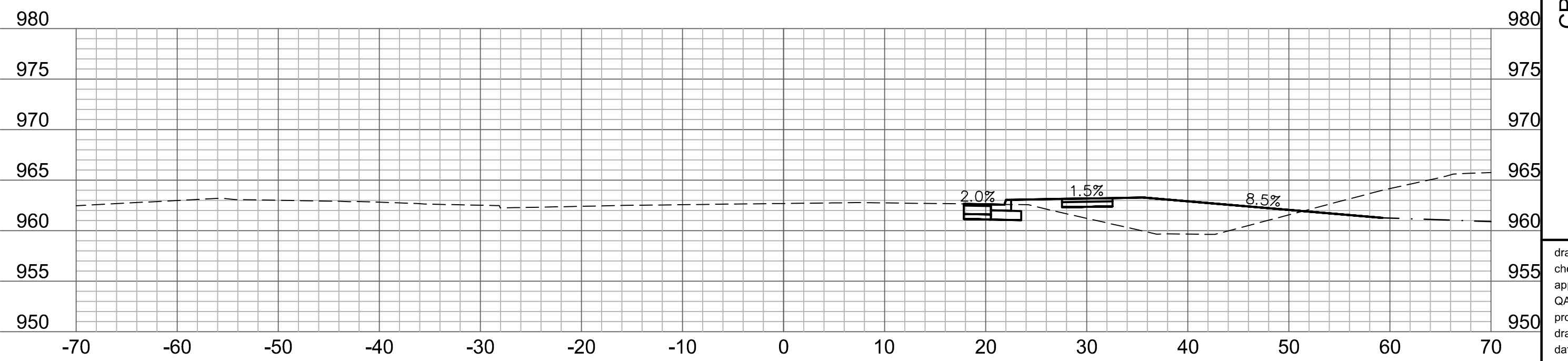
209+75



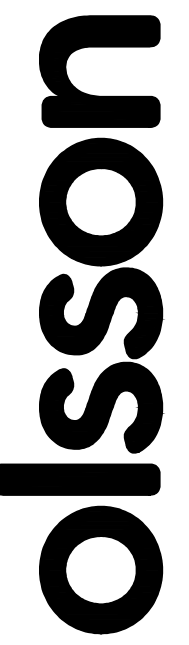
209+50



209+25



209+00



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



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

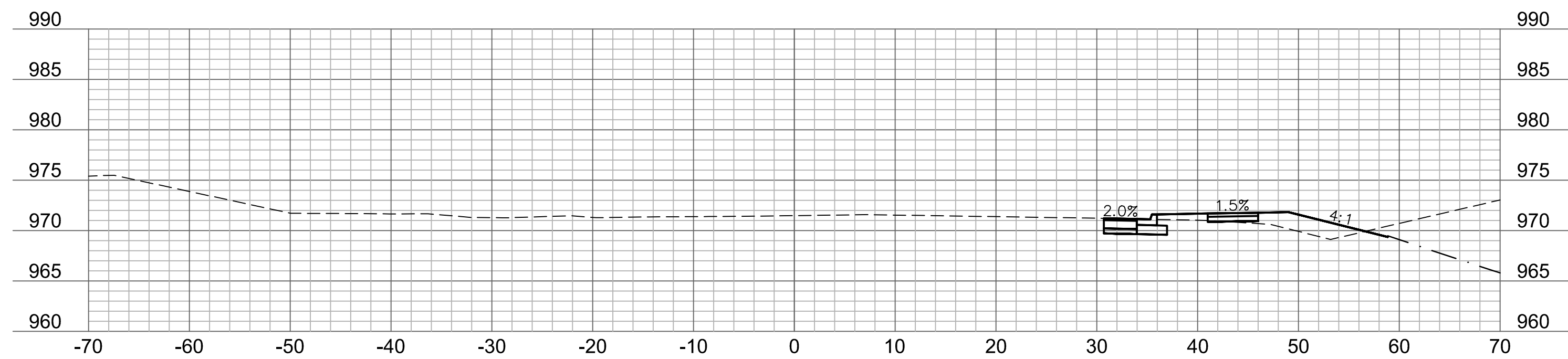
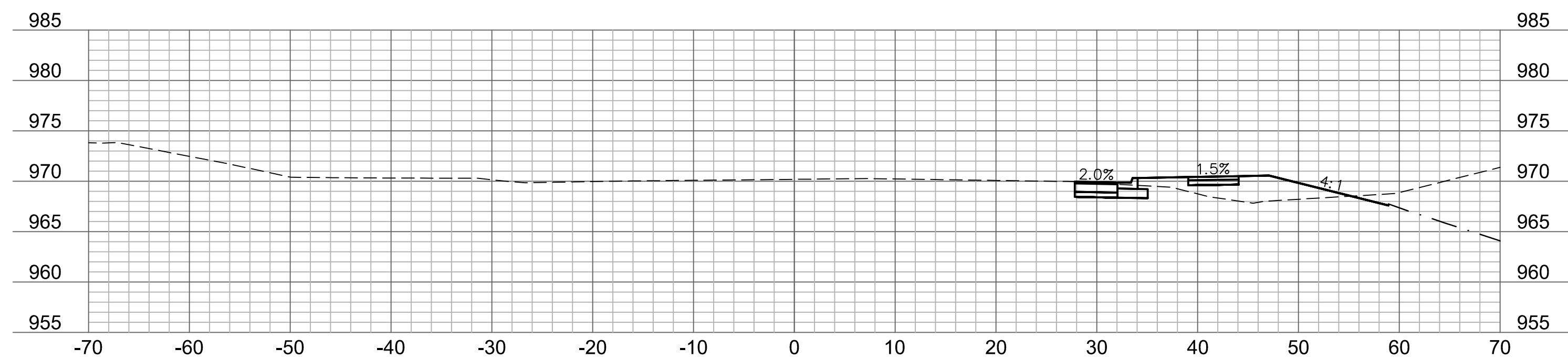
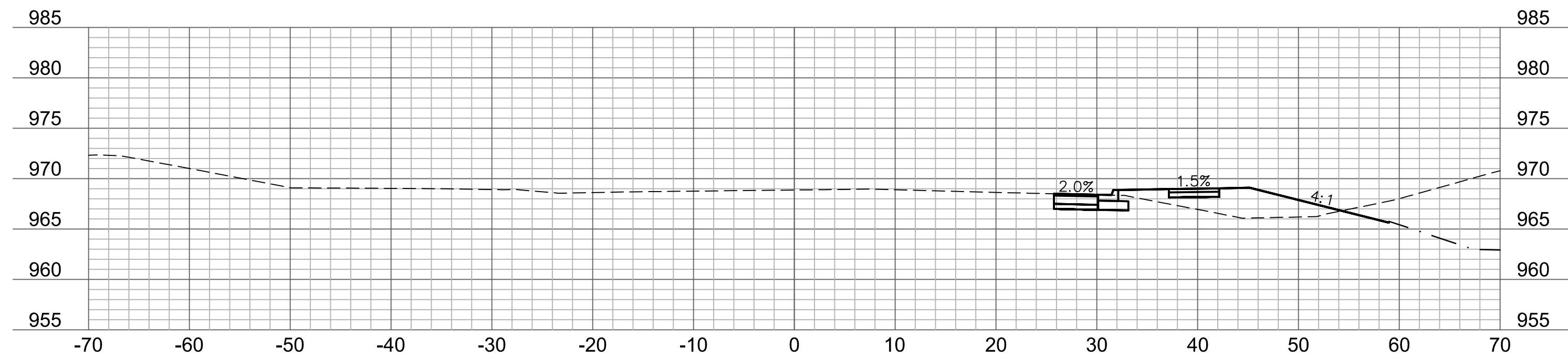
CROSS SECTIONS
DOUGLAS STREET

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

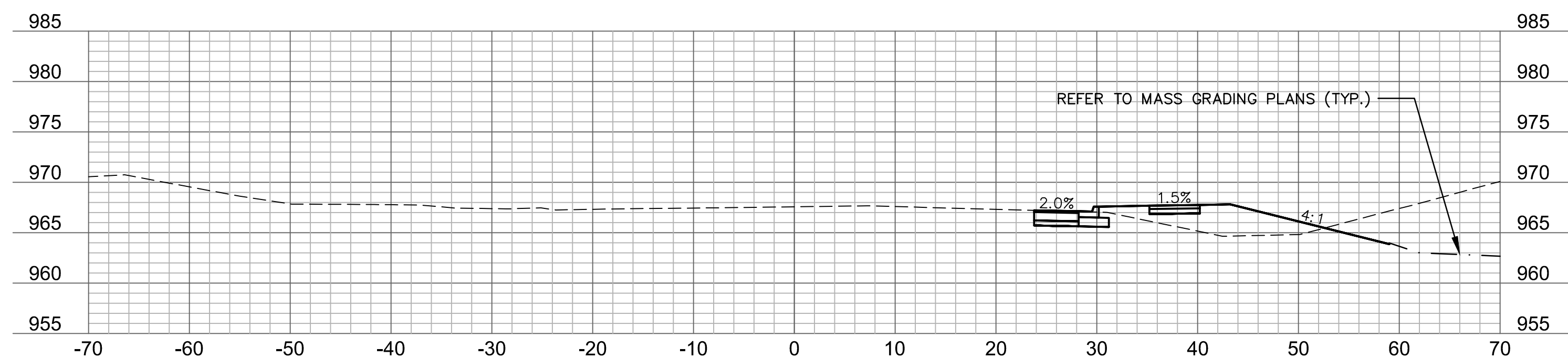
LEE'S SUMMIT, MISSOURI

2023

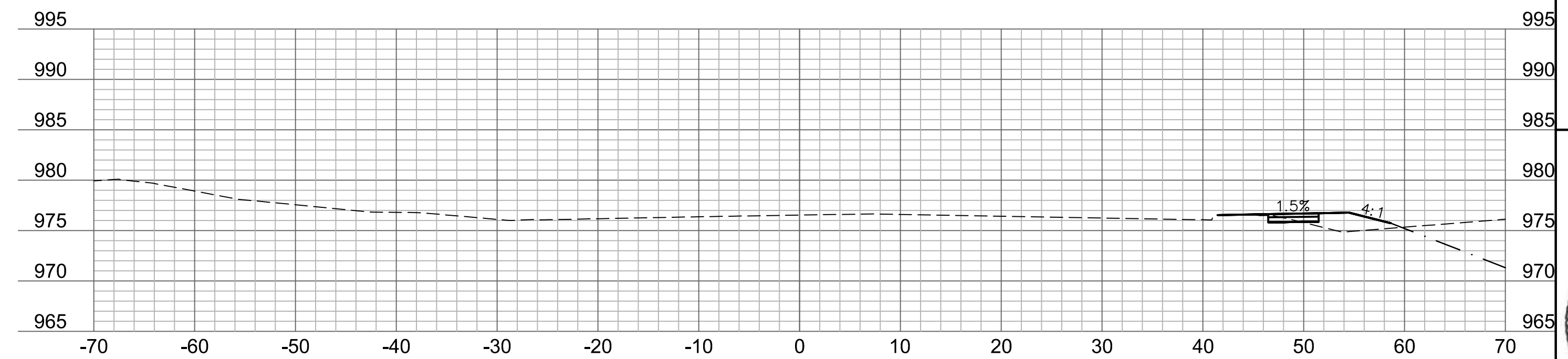
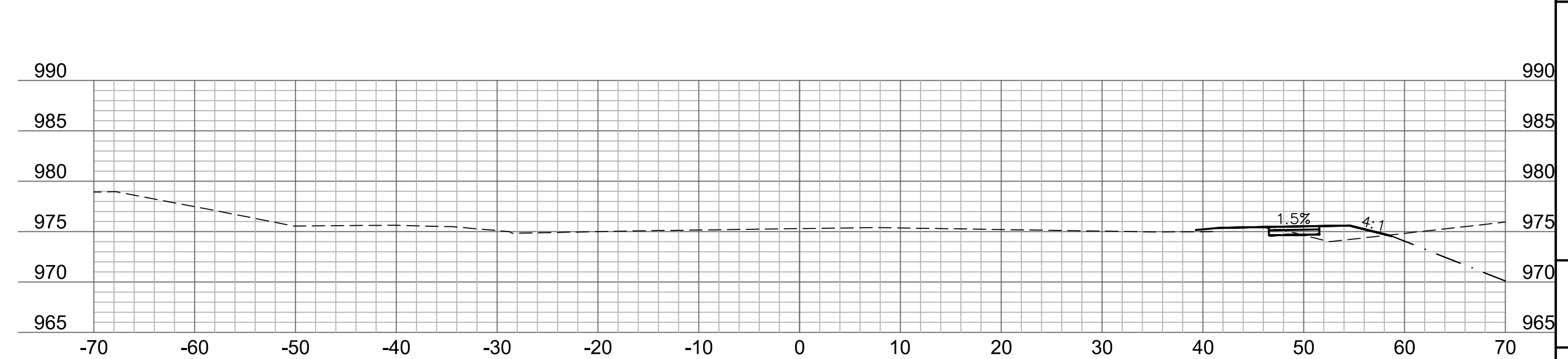
drawn by: BJW
checked by: KLIW
approved by: JFG
QA/QC by: JJW
project no.: 021-04643
drawing no.: XSC01_D02104643
date: 7/14/2023

 $210+75$  $210+50$ 

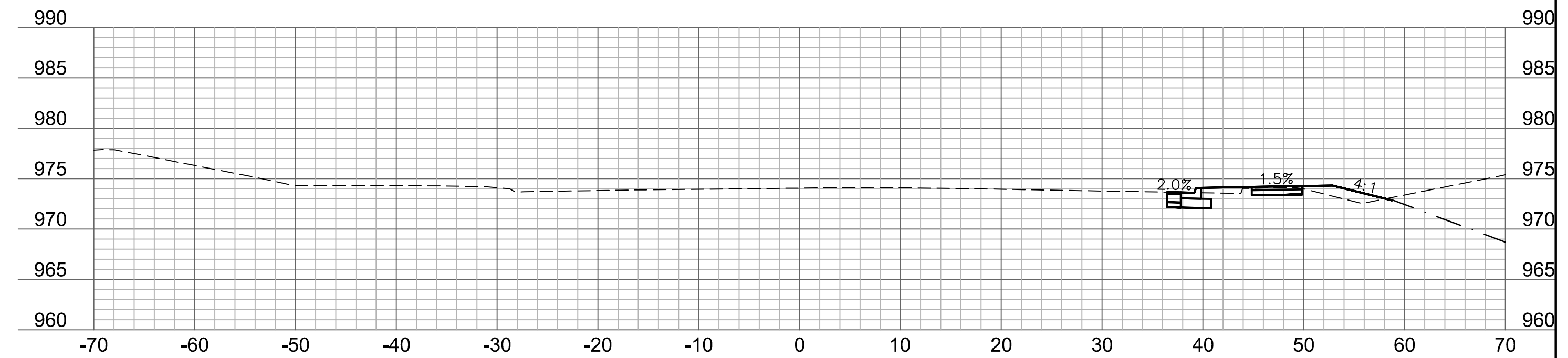
210+25



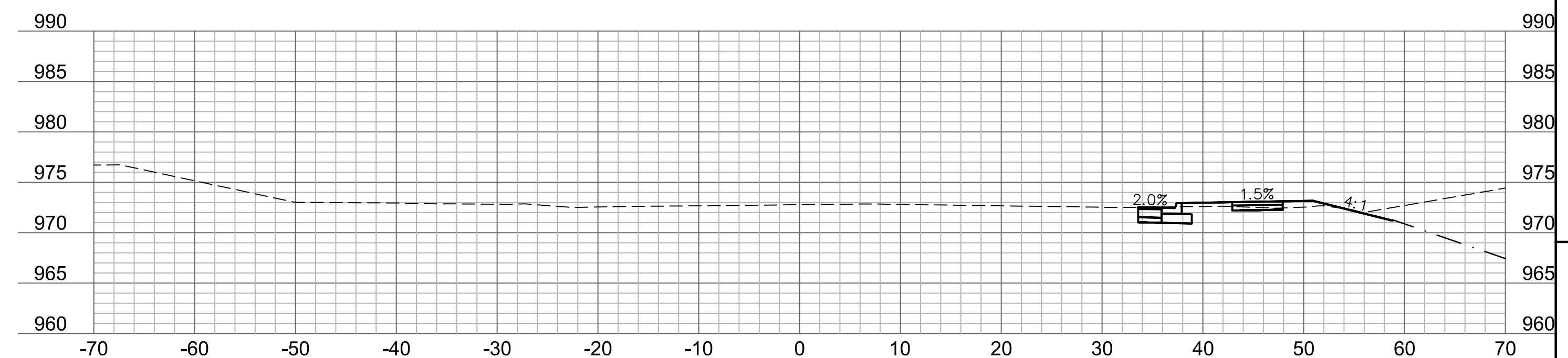
210+00

 $211+75$ 

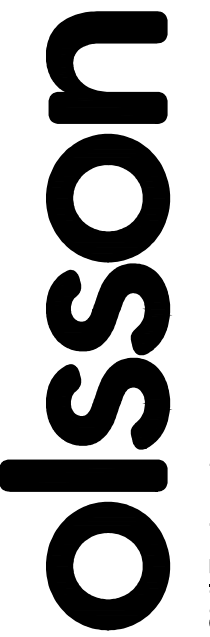
211+50



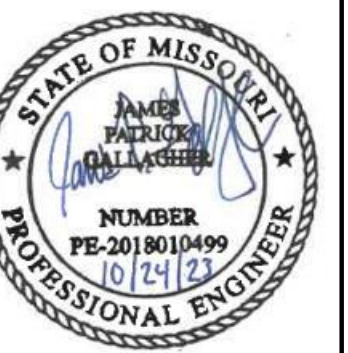
211+25



211+00



Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116 TEL 816-451-1100

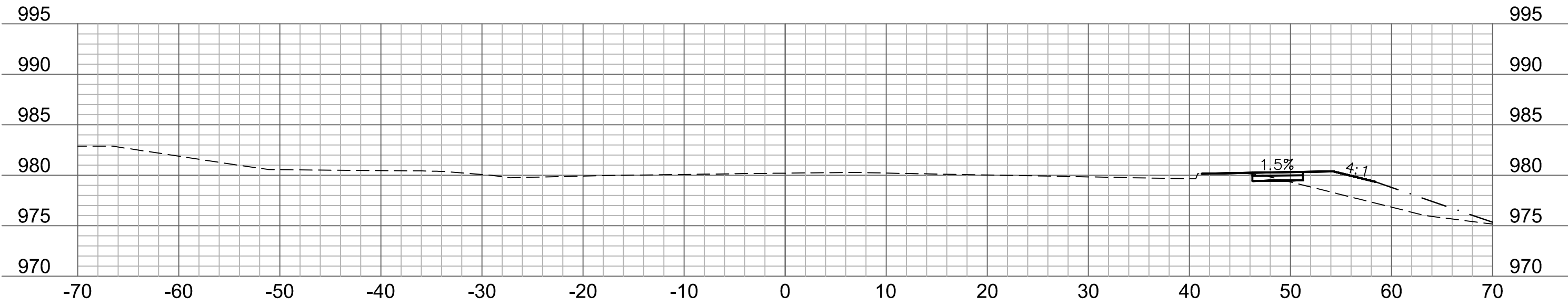
[illegible]

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

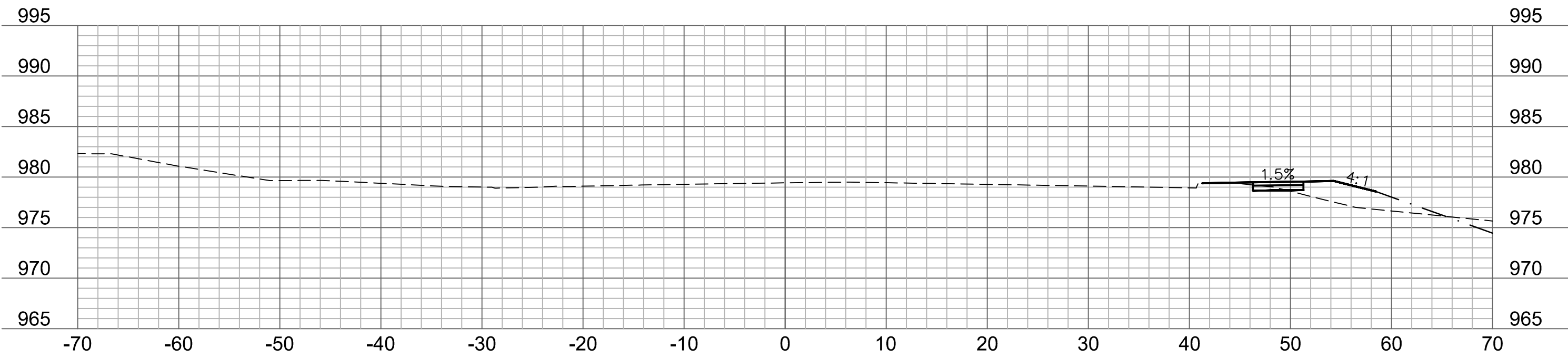
Drawn by: BJW
 Checked by: KLW
 Approved by: JPG
 QA/QC by: JJW
 Project no.: 021-04643
 Drawing no.: XSC01 D02104643
 Date: 7/14/2023

SHEET
2 OF 86

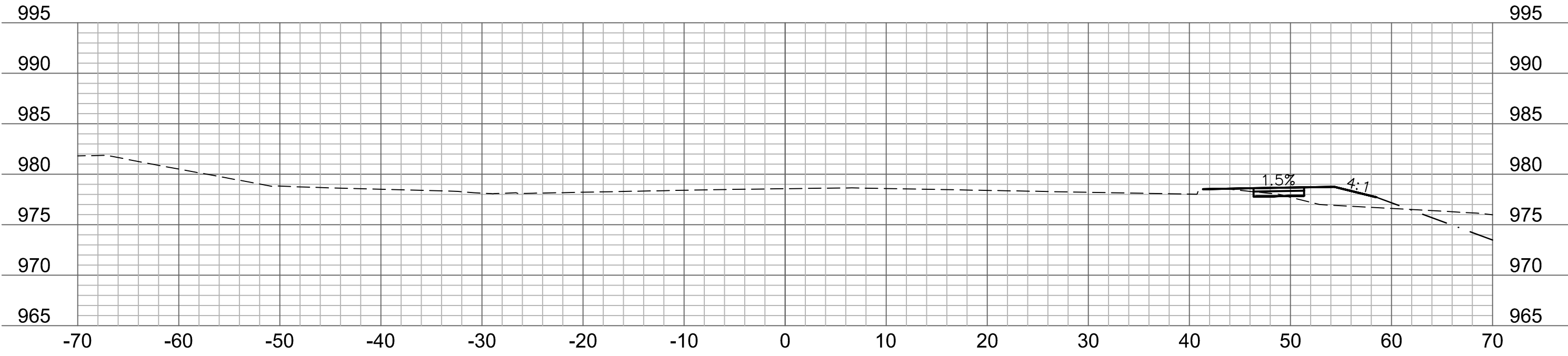
DWG: F:\2021\04501-05000\021-04643-D\40-Design\AutoCAD\Final_Plans\Sheets\RDW\T_XSC01_D02104643.dwg
DATE: Sep 28, 2023 4:28am XREFS: T_PTBK_D02104643 USER: kwilliams2



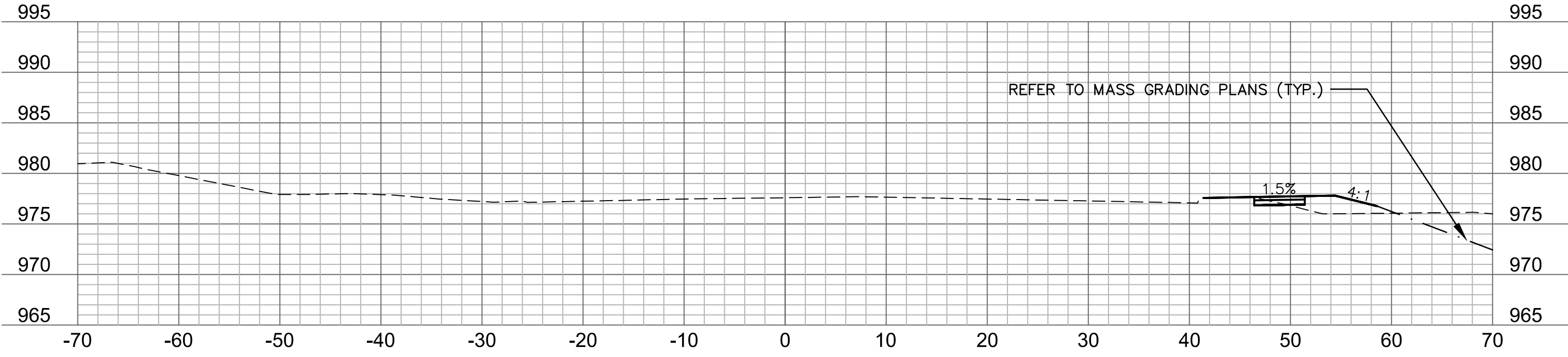
212+75



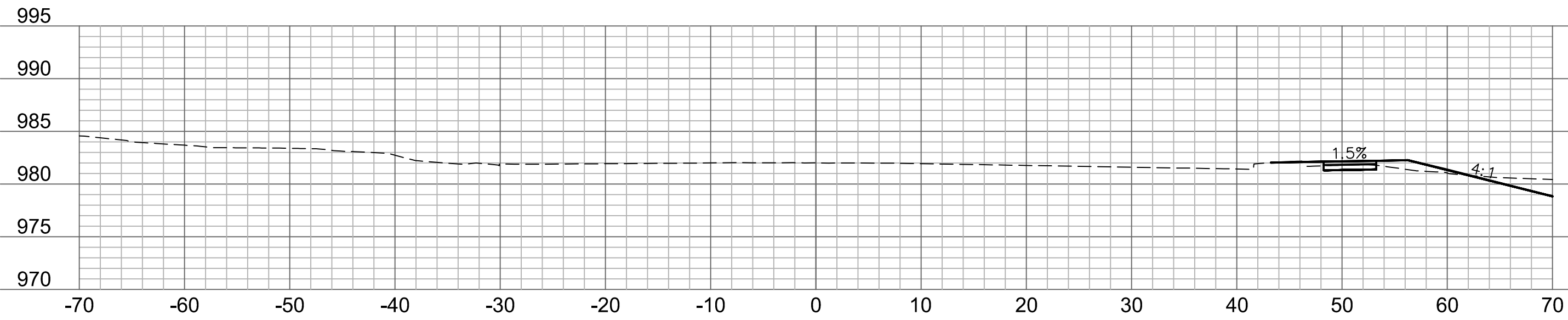
212+50



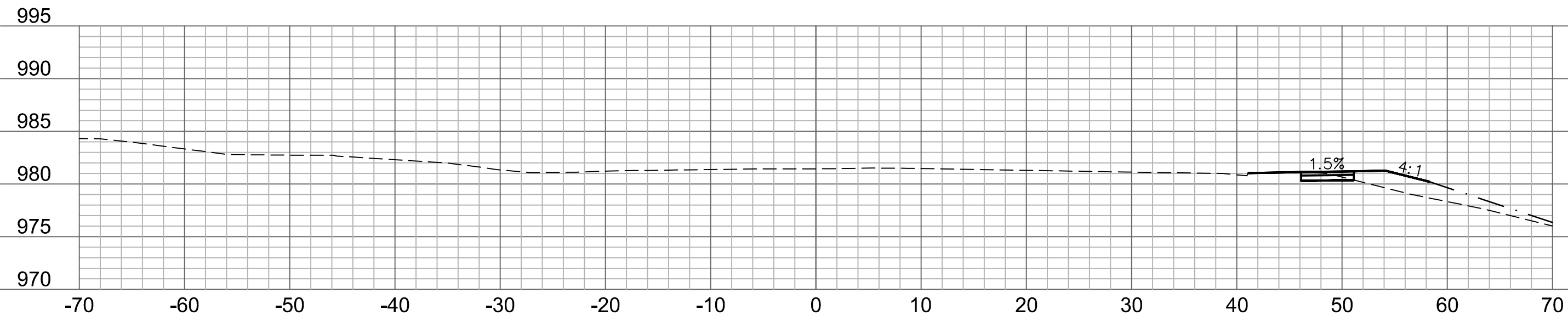
212+25



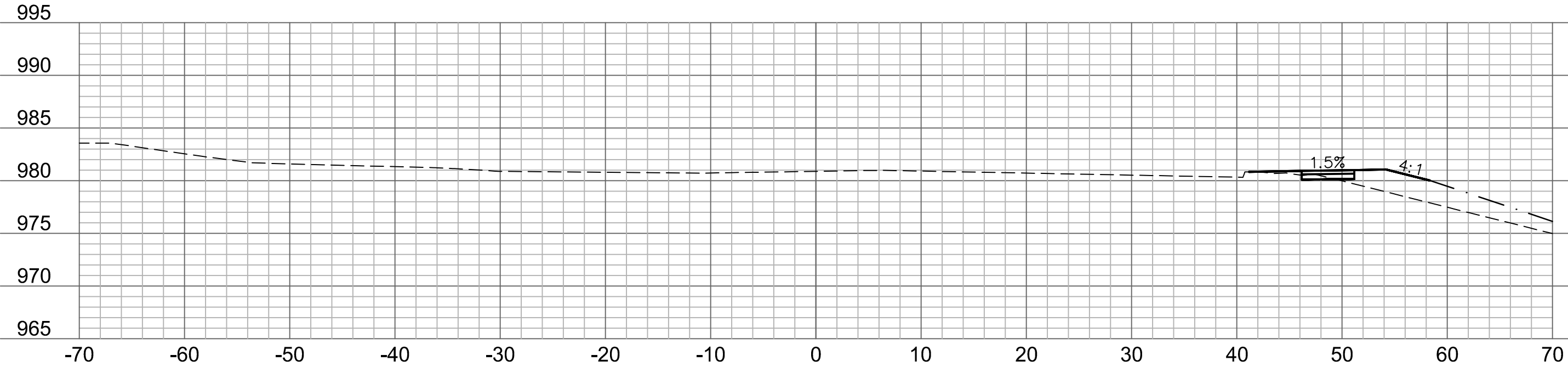
212+00



213+50



213+25



213+00

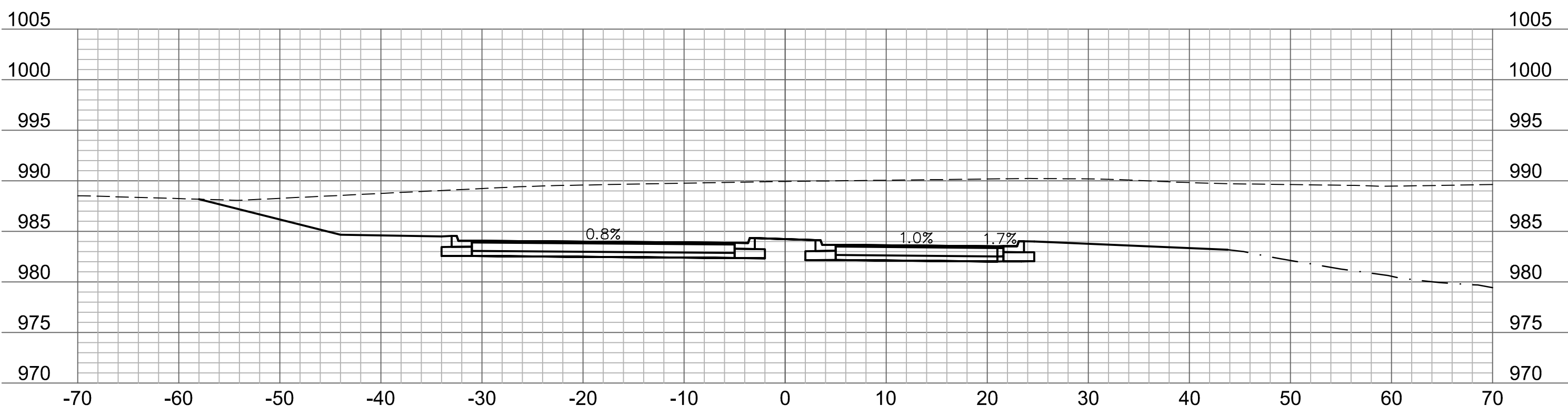
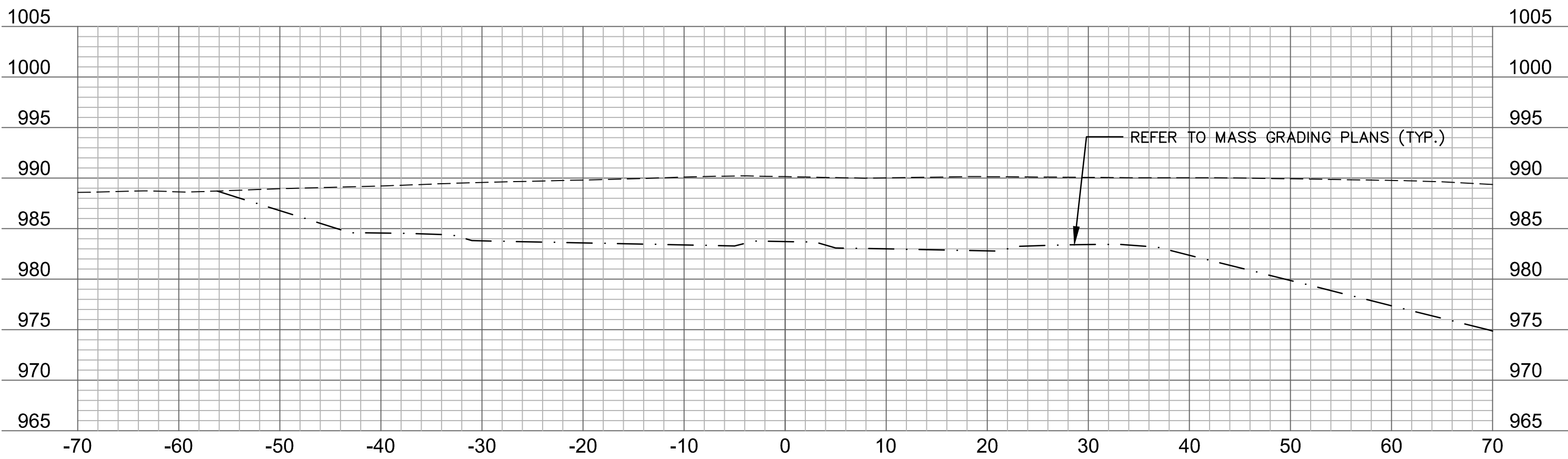


REV. NO.	DATE	REVISIONS DESCRIPTION

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

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

USER: kwilliams2



olsson

Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116 TEL 816-441-1111

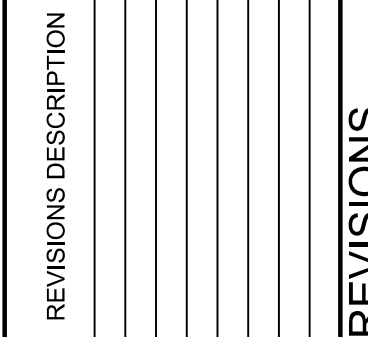
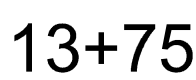
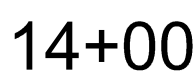
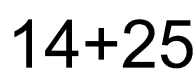
[illegible]

CROSS SECTIONS TRAILSEDGE BOULEVARD	
THE VILLAGE AT DISCOVERY PARK COLBURN ROAD AND DOUGLAS STREET PUBLIC ROAD IMPROVEMENTS	
LEE'S SUMMIT MISSOURI	202

drawn by: _____ BJW
checked by: _____ KLW
approved by: _____ JPG
QA/QC by: _____ JJW
project no.: _____ 021-04643
drawing no.: _____ XSC01 D02104643
date: _____ 7/14/2023

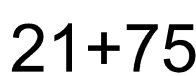
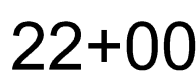
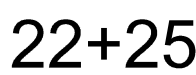
SHEET
84 OF 86

DWG:



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

drawn by: _____ BJW
checked by: _____ KLW
approved by: _____ JPG
QA/QC by: _____ JJW
project no.: _____ 021-04643
drawing no.: _____ XSC01 D02104643
date: _____ 7/14/2023



Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116 TEL 816-441-1111

[illegible]

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

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