MISSOURI STATE HIGHWAY 150 WIDENING PLANS FOR

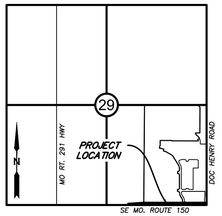
COBEY CREEK - 2ND PLAT

STA. 456+67.28 TO STA. 475+36.91

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SEC. 29, TWP. 47N, RNG. 31W

[PROJECT NOT MODOT FUNDED]

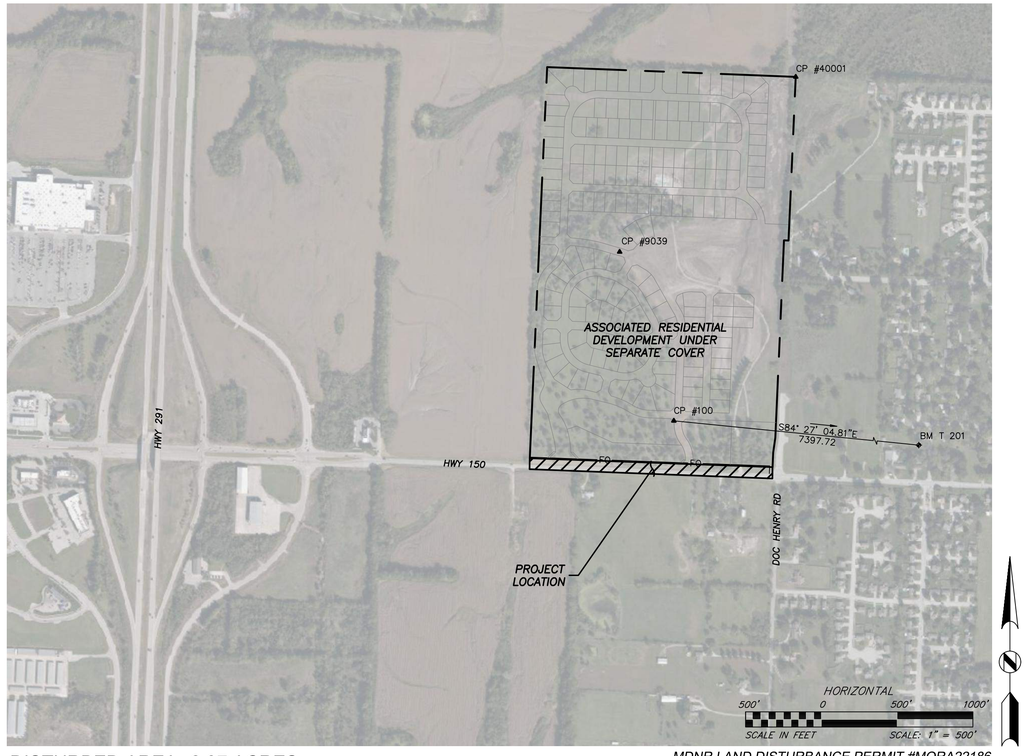


VICINITY MAP

SECTION 29, TOWNSHIP 47, RANGE 31
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI
NOT TO SCALE

ADT: 13,421 (2017)
DESIGN SPEED: 45 MPH
WATERSHED: MIDDLE BIG CREEK

MINOR ARTERIAL
DATE: 4/7/23



DISTURBED AREA: 2.37 ACRES

MDNR LAND DISTURBANCE PERMIT #MORA22186

Know what's below. Call before you dig.

MISSOURI ONE CALL SYSTEM, INC. 1-800-344-7483 STOP-CALL BEFORE YOU DIG!

UTILITY CONTACTS:

SANITARY & WATER:
CITY OF LEE'S SUMMIT
JEFF THORN
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063
PHONE (816) 969-1900

STORMWATER:
CITY OF LEE'S SUMMIT
PUBLIC WORKS
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063
PHONE (816) 969-1800

STREETS:
CITY OF LEE'S SUMMIT
SUSAN BERRY
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063
PHONE (816) 969-1900

AT&T:
RONALD GIPFERT
500 E 8TH STREET
KANSAS CITY, MO 64106
PHONE (816) 275-1550

EVERGY:
DOUG DAVIN
1300 SE HAMBLEN ROAD
LEE'S SUMMIT, MO 64081
PHONE (816) 347-4320

SPIRE GAS ENERGY:
PEGGY BURNS-YOCUM
3025 SW CLOVER DRIVE
LEE'S SUMMIT, MO 64082
PHONE (816) 985-8888

MISSOURI DEPARTMENT OF TRANSPORTATION:
NATHAN M JULIANA
600 NE COLBERN RD.
LEE'S SUMMIT, MO 64086
PHONE (816) 607-2185

FEMA FLOOD INFORMATION:

THE SUBJECT PROPERTY LIES IN ZONE X, OTHER FLOOD AREAS, AREAS DETERMINED TO BE OUTSIDE THE 0.2% CHANCE ANNUAL FLOODPLAIN, AS SHOWN ON FLOOD INSURANCE RATE MAP 29095C0551G EFFECTIVE JANUARY 20, 2017.

BENCHMARK:

PROJECT BENCHMARK T 201
ALUMINUM CAP IN TOP OF CONCRETE BASE OF FIRST PILLAR OF HWY 150 AND MISSOURI PACIFIC RAILROAD.
ELEV=917.39

SURVEY CONTROL:

CP #100
CHISELED "+" ON CURB INLET
CURB INLET AT THE SOUTHWEST CORNER OF SE GILLETTE ROAD AND SE COBEY CREEK DRIVE
N: 978174.32
E: 2827539.80
EL: 1005.17

CP #9039
BAR AND CAP STAMPED 2006016633 CENTERLINE OF SE COBEY CREEK DRIVE AT THE DEAD END
N: 979305.16
E: 2827174.35
EL: 1002.42

CP #40001
ALUMINUM CAP STAMPED KS 1069 MO 2134
NORTHEAST CORNER OF THE PROJECT
N: 980459.77
E: 2828336.04
EL: 967.82

GENERAL NOTES:

1. CONTRACTOR SHALL SATISFY THEMSELVES AS TO THE EXISTING CONDITIONS OF THE SITE AND HAVE ALL UTILITIES MARKED PRIOR TO COMMENCING CONSTRUCTION.
2. CONTRACTOR SHALL POTHOLE ALL CONNECTION POINTS TO EXISTING UTILITIES AND POTENTIAL UTILITY CONFLICT LOCATIONS PRIOR TO ANY CONSTRUCTION ACTIVITIES. NOTIFY ENGINEER IMMEDIATELY IF CONFLICT OR DISCREPANCY EXISTS.
3. CONTRACTOR SHALL PROTECT EXISTING STRUCTURES TO REMAIN FROM DAMAGE DURING DEMOLITION AND CONSTRUCTION. ANY DAMAGE SHALL BE REPAIRED/REPLACED TO PRE-CONSTRUCTION CONDITION AT CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT SERVICES ENGINEERING INSPECTION AND MODOT TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH A FIELD ENGINEERING INSPECTOR PRIOR TO ANY WORK IN THE RIGHT-OF-WAY AT (816) 969-1200.

DEVELOPER:

BRAD KEMPF
SUMMIT HOMES KC
120 SE 30TH STREET
LEE'S SUMMIT, MO 64082
BRADLEY@SUMMITHOMESKC.COM
(816) 927-9711

CIVIL ENGINEER:

PATRICK JOYCE, P.E.
ANDERSON ENGINEERING, INC.
941 W 141ST TERR
KANSAS CITY, MO 64145
PJOYCE@AE-INC.COM
(816) 777-0400 EXT. 508

SHEET INDEX:

PROJECT SPECIFICATIONS:

THE SPECIFICATIONS FOR THIS PROJECT SHALL BE THE FOLLOWING:

1. MOST CURRENT VERSION OF THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

THE STANDARD SPECIFICATIONS THROUGH AND INCLUDING THE LATEST AMENDMENTS SHALL BE PART OF THESE PROJECT DRAWINGS AND SPECIFICATIONS AND ARE INCORPORATED HEREIN BY REFERENCE. THE MORE STRINGENT OF THESE STANDARD SPECIFICATIONS AND THOSE PREPARED BY THE ENGINEER PREPARING THESE PLANS SHALL GOVERN.

PREPARED & SUBMITTED BY:

ANDERSON ENGINEERING INC.
KANSAS CITY, MISSOURI

04/07/2023

PATRICK JOYCE, P.E. — DATE
MISSOURI P.E. NO. 2009030032

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

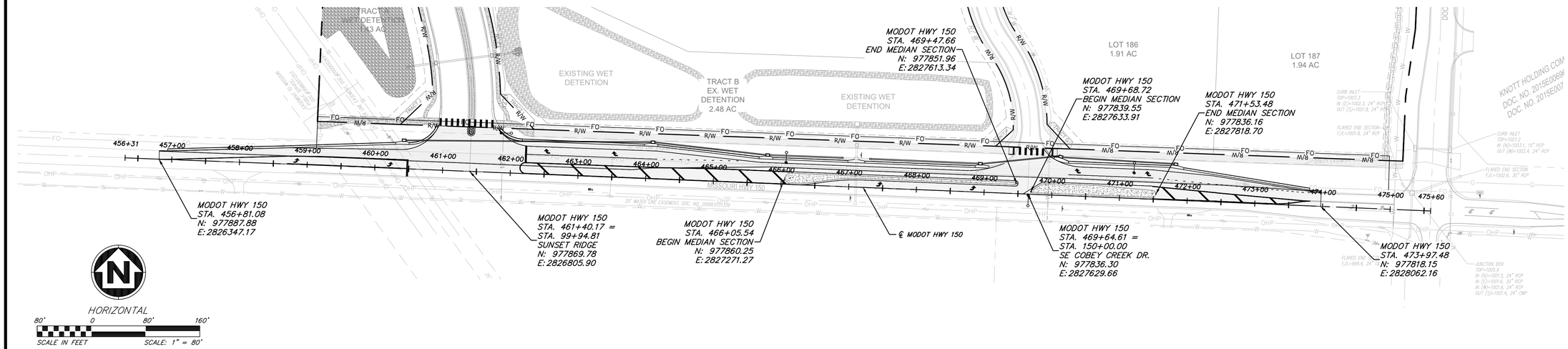
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

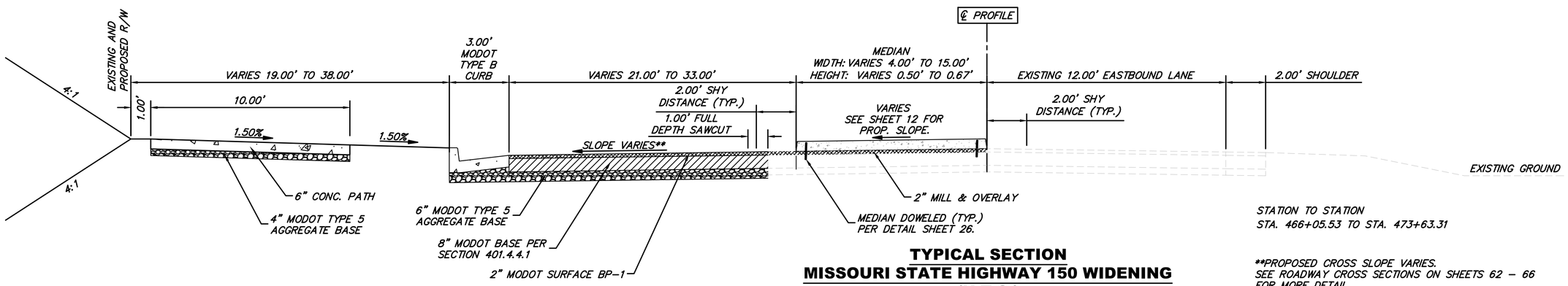
COVER SHEET

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
1
1 OF 66

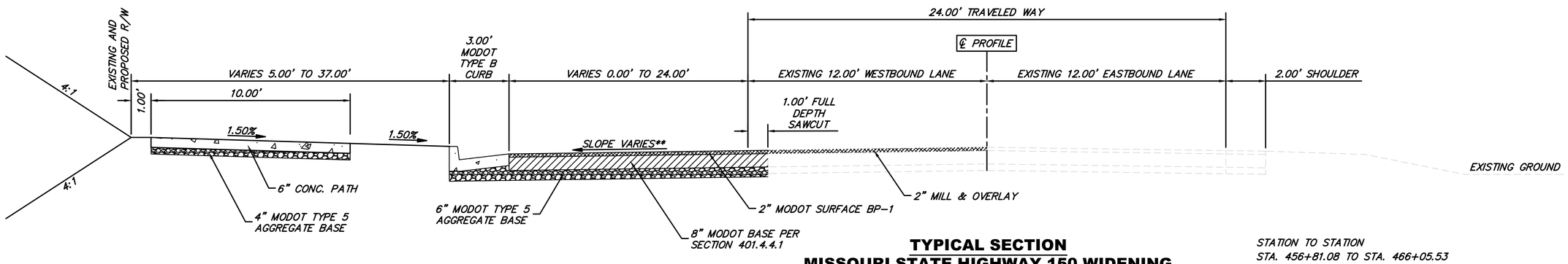




STATION TO STATION
STA. 466+05.53 TO STA. 473+63.31

**PROPOSED CROSS SLOPE VARIES.
SEE ROADWAY CROSS SECTIONS ON SHEETS 62 – 66
FOR MORE DETAIL.

TYPICAL SECTION
MISSOURI STATE HIGHWAY 150 WIDENING
(N.T.S.)



STATION TO STATION
STA. 456+81.08 TO STA. 466+05.53
STA. 473+63.31 TO STA. 475+36.91

TYPICAL SECTION
MISSOURI STATE HIGHWAY 150 WIDENING
(N.T.S.)

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

TYPICAL SECTION

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
2
2 OF 66

SUMMARY OF QUANTITIES

MODOT HIGHWAY 150 - QUANTITIES			
NO.	DESCRIPTION	QUANTITY	UNITS
1	MOBILIZATION	1	LS
2	CLEARING, GRUBBING, AND DEMOLITION	1	LS
3	CONTRACTOR CONSTRUCTION STAKING	1	LS
4	ASPHALT SURFACE (MODOT SURFACE BP-1) (2")	3926	SY
5	ASPHALT BASE (MODOT BASE PER 401.4.4.1) (8")	3926	SY
6	TYPE-5 AGGREGATE (4")	3926	SY
7	CONCRETE PAVEMENT (DRIVES)	397	SY
8	CONCRETE PAVEMENT (MEDIANS)	437	SY
9	2" MILL AND OVERLAY	3096	SY
10	CURB AND GUTTER (3')	1569	LF
11	CURB AND GUTTER (6") (MEDIAN)	1078	LF
12	ASPHALT SIDEWALK (6") (10')	1228	SY
13	TRUNCATED DOMES	2	EA
14	STORM SEWER(15") (RCP)	694	LF
15	STORM SEWER (18") (RCP)	120	LF
16	STORM SEWER (24") (RCP)	314	LF
17	CURB INLET (6'x4')	6	EA
18	R4-7 (24"x30"), KEEP RIGHT SIGN	4	EA
19	R6-1R (36"x12", ONE WAY SIGN	2	EA
20	SIGN POST (1.75" PERFORATED SQUARE STEEL TUBE)	6	EA
21	PAVEMENT MARKING (PAINT) (WHITE) (6")	2125	LF
22	PAVEMENT MARKING (THERMOPLASTIC) (WHITE) (STOP) (24")	46	LF
23	PAVEMENT MARKING (PAINT) (DOUBLE YELLOW) (4")	1714	LF
24	PAVEMENT MARKING (PAINT) (YELLOW) (DIAGONAL) (24")	232	LF
25	PAVEMENT MARKING SYMBOL (THERMOPLASTIC) (WHITE) (RT TURN ARRO	4	EA
26	PAVEMENT MARKING SYMBOL (THERMOPLASTIC) (WHITE) (LT TURN ARRO	4	EA
27	TRAFFIC CONTROL	1	LS
28	TEMPORARY SEEDING	0.57	AC
29	PERMANENT SEEDING	0.57	AC
30	SILT FENCE	1747	LF
31	INLET PROTECTION	7	EA
32	30' ALUMINUM LIGHT POLE	3	EA
33	MODOT LED A LUMINAIRES	3	EA

EARTHWORK QUANTITIES	
ACTIVITY	EXCAVATION AND EMBANKMENT (CY)
CUT	700
FILL	1306
NET	606 (FILL)

NOTE: PROPOSED EARTHWORK QUANTITIES ARE UN-ADJUSTED FOR PAVEMENT SECTIONS.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/11/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

QUANTITIES

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
3
3 OF 66

DEMOLITION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE TO REMOVE ALL ITEMS ENCOUNTERED DURING CONSTRUCTION THAT ARE NOT A REQUIRED PART OF THE PROPOSED PROJECT UPON COMPLETION.
2. THE CONTRACTOR SHALL INSTALL SAFETY FENCING SURROUNDING ALL EXCAVATIONS DURING DEMOLITION OF STRUCTURES, AREAS OF HEAVY EQUIPMENT USAGE FOR SITE GRADING AND GRUBBING, TREE REMOVAL AREAS AND OTHER AREAS WHERE PEDESTRIAN OR VEHICULAR TRAFFIC MAY ENCROACH. THIS FENCING SHALL ALSO BE INSTALLED AT ANY LOCATION DEEMED NECESSARY BY THE ENGINEER OR CITY. THE CONTRACTOR SHALL REPAIR AND MAINTAIN FENCING IN AN ORDERLY MANNER. (CONSTRUCTION FENCING SHALL BE AT MINIMUM TEMPORARY ORANGE CONSTRUCTION FENCING ATTACHED TO STEEL "T" POSTS EVERY 8' O.C.) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOBSITE SAFETY AT ALL TIMES.
3. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
4. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES FOR FIELD VERIFICATION AND DISCONNECTION OF UTILITIES PRIOR TO ANY WORK, THE CONTRACTOR SHALL CONTACT THE DIGSAFE UTILITY INFORMATION SERVICE AND UTILITY COMPANIES FOR UTILITY LOCATES. THE CONTRACTOR SHALL COORDINATE AND ALLOW ACCESS FOR UTILITY COMPANIES TO PERFORM ANY DISCONNECTION OR RELOCATION ACTIVITIES.
5. THE CONTRACTOR SHALL MAINTAIN AT THE DEMOLITION SITE THE REQUIRED DOCUMENTS FOR IMMEDIATE REVIEW (IE. SAFETY PLAN, DEMOLITION PERMITS, STREET CLOSURE PERMITS, CONTRACT DOCUMENTS, DEMOLITION PLANS, SWPPP MANUAL AND PLANS, ETC.). ALL DOCUMENTS SHALL BE KEPT IN AN ORDERLY MANNER FOR EASE OF REVIEW.
6. THE CONTRACTOR SHALL MAINTAIN FOR OWNER'S REVIEW, DUPLICATE (PHOTO COPY) TRUCK TICKETS FOR ALL DEMOLITION DEBRIS, EXCAVATION MATERIAL, TREES AND SURFACE VEGETATION HAULED FROM THE PROJECT SITE.
7. PRIOR TO DEMOLITION OCCURRING, ALL PERIMETER EROSION CONTROL DEVICES ARE TO BE INSTALLED. REFER TO EROSION CONTROL PLANS.
8. DAMAGE TO ANY EXISTING IMPROVEMENTS TO REMAIN WILL BE REPLACED AT THE CONTRACTORS EXPENSE, INCLUDING BUT NOT LIMITED TO PAVEMENTS, CURBS AND GUTTER, SIDEWALKS, FENCING, STREET LIGHTS AND UTILITIES.
9. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO REMOVAL AND/OR RELOCATION OF UTILITIES, IF REQUIRED. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES..
10. REMOVAL OF STRUCTURES SHALL COMPLY WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
11. MISCELLANEOUS STRUCTURES NOT SPECIFICALLY DESIGNATED FOR DEMOLITION BUT THAT ARE WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED. (NO DIRECT PAYMENT)

GENERAL NOTES:

1. ALL EXISTING TOPOGRAPHIC, SURVEY, AND UTILITY INFORMATION SHOWN WAS PROVIDED IN THE FORM OF A TOPOGRAPHIC SURVEY PREPARED BY ANDERSON ENGINEERING. ANDERSON ENGINEERING MAKES NO GUARANTIES AS TO THE ACCURACY OF THE EXISTING INFORMATION SHOWN HEREON. CONTRACTORS SHALL SATISFY THEMSELVES AS TO THE EXISTING CONDITIONS OF THE SITE AND HAVE ALL UTILITIES LOCATED PRIOR TO COMMENCING CONSTRUCTION.
2. THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN ALL FEDERAL, STATE, AND LOCAL PERMITS REQUIRED FOR THIS PROJECT PRIOR TO COMMENCING CONSTRUCTION. CONTACT NATHAN JULIANA (816) 607-2185 FOR MODOT PERMITS.
3. ANY WORK ADJACENT TO OR CROSSING EXISTING STREETS REQUIRES PROPER TRAFFIC CONTROL DEVICES. TRAFFIC CONTROL DEVICES SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). TRAFFIC CONTROL MUST ALSO MEET MODOT STANDARDS AND SPECIFICATIONS.
4. THE CONTRACTOR SHALL BE REQUIRED TO DEMOLISH, REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, PAVEMENTS, AND FEATURES NECESSARY TO CONSTRUCT THE IMPROVEMENTS SHOWN HEREON. ANY WASTE MATERIALS GENERATED DURING CONSTRUCTION SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS GOVERNING SUCH DISPOSAL.
5. THE CONTRACTOR SHALL PREVENT ANY TRASH, DEBRIS, OR LIQUID WASTES FROM BEING DISPOSED OF IN SANITARY SEWERS, STORM SEWERS, OR OPEN DRAINAGE SYSTEMS.
6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO PROTECT ADJACENT PROPERTY, STRUCTURES, AND OTHER IMPROVEMENTS FROM DAMAGE DURING CONSTRUCTION. IN THE EVENT OF DAMAGE TO ADJACENT PROPERTY, STRUCTURES, OR IMPROVEMENTS, THE CONTRACTOR SHALL REPAIR OR REPLACE SUCH DAMAGE TO THE OWNERS'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
7. CONTRACTORS AT THE SITE SHALL BE SOLELY RESPONSIBLE FOR JOBSITE SAFETY FOR ALL ASPECTS OF WORK SHOWN HEREON.
8. ALL WORK AND MATERIALS USED IN THE CONSTRUCTION OF THE IMPROVEMENTS SHOWN HEREON SHALL COMPLY WITH ALL REFERENCED STANDARDS, SPECIFICATIONS, AND PLAN NOTES.
9. COORDINATE WITH FACILITY REPRESENTATIVE AS TO WHEN CONSTRUCTION ACTIVITIES MAY BE PERFORMED TO WORK WITH THE OPERATIONS OF THE FACILITY.
10. ANY AND ALL HAZARDS SHALL BE PROPERLY IDENTIFIED AND BARRICADED FROM ACCESS DURING ALL NON-CONSTRUCTION PERIODS.
11. CONTRACTOR TO MAINTAIN ACCESS TO EXISTING RESIDENTS AT ALL TIMES DURING CONSTRUCTION.

TOP SOIL AND SEEDING NOTES:

1. ALL SLOPES AND OTHER DISTURBED AREAS SHALL BE GRADED SMOOTH AND SIX INCHES OF TOPSOIL SHALL BE APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON-SITE, THE CONTRACTOR SHALL IMPORT TOPSOIL AS NEEDED.
2. ALL DISTURBED AREAS NOTED TO RECEIVE SEED SHALL BE SEEDED WITH "DROUGHT TOLERANT FESCUE BLEND". SEEDED AREAS WILL NOT BE PERMANENTLY IRRIGATED.
3. PRIOR TO SEEDING, CONTRACTOR SHALL INCORPORATE FERTILIZER. FERTILIZER SHALL BE 13-13-13 APPLIED AT A RATE OF 300 LBS PER ACRE.
4. SEED SHALL BE SOWN AT DEPTHS OF 0.25" TO 0.5" AFTER SOIL HAS BEEN TILLED, SCARIFIED, AND PREPARED FOR SEED BED - REFER TO MODOT EPG SECTION 805: SEEDING FOR MORE DETAIL.
5. SEED SHALL BE APPLIED IN TWO DIRECTIONS.
6. ALL SEEDED AREAS SHALL RECIEVE STRAW, MULCH APPLIED AT A RATE OF 300 LBS PER ACRE AND CRIMPED IN PLACE USING DISC.
7. MAINTENANCE OF GRASS COVER SHALL CONSIST OF WATERING, WEEDING, CUTTING, REPAIR OF ALL EROSION AND RESEEDING AS NECESSARY TO ESTABLISH A UNIFORM STAND OF THE GRASS, AND SHALL CONTINUE UNTIL FINAL ACCEPTANCE. AFTER THE SEEDED GRASS HAS BEEN STARTED, ALL OF THE AREAS GRATER THAN 12 INCHES SQUARE WHICH FAIL TO SHOW A UNIFORM STAND OF GRASS FOR ANY REASON WHATSOEVER, SHALL BE RESEEDED UNTIL ALL AREAS ARE COVERED WITH A SATISFACTORY GROWTH OF GRASS. OVERSEEDING THE FOLLOWING SPRING IS LIKELY FOR FULL TURF REPLACEMENT.

GRADING NOTES:

REFERENCED STANDARDS:

THE FOLLOWING STANDARDS ARE REFERENCED DIRECTLY IN THIS SECTION. THE LATEST VERSION OF THESE STANDARDS SHALL BE USED.

ASTM D698 -TEST METHOD FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING STANDARD EFFORT (12,400 FT-LBF/FT^3)

SUMMARY:

THIS SECTION INCLUDES SUBGRADE PREPARATION AT LOCATIONS WHICH HAVE BEEN PREVIOUSLY GRADED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MISSOURI STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.

DEFINITIONS:

1. SUBGRADE: SUBGRADE IS DEFINED AS A WELL GRADED AND COMPACTED LAYER ON WHICH BASE AND SUBSEQUENT COURSES ARE PLACED.
2. SUBGRADE PREPARATION: SUBGRADE PREPARATION IS THE REPEATED OPERATION OF FINE-GRADING AND COMPACTING THE SUBGRADE UNTIL THE SPECIFIED LINES, GRADES, AND CROSS-SECTION, AS INDICATED ON THE PLANS ARE OBTAINED AND THE MATERIALS ARE COMPACTED TO THE SPECIFIED DEPTH AND DENSITY.

CONSTRUCTION:

1. GENERAL: THE SUBGRADE SURFACE SHALL BE BROUGHT TO THE SPECIFIED LINES, GRADES AND CROSS-SECTION BY ADDING OR REMOVING MATERIAL AND COMPACTING TO THE SPECIFIED DENSITY. TOLERANCE ALLOWED ON ALL LINES, GRADES AND CROSS-SECTIONS SHALL BE NO MORE THAN 1/4 INCH.
2. COMPACTING THE SUBGRADE: UNLESS OTHERWISE SPECIFIED, THE TOP 6 INCHES OF SUBGRADE FOR PAVEMENTS SHALL BE COMPACTED TO 95% OF THE STANDARD PROCTOR MAXIMUM DENSITY FOR THE MATERIAL USED AS DETERMINED BY ASTM D 698 AND WITHIN A TOLERANCE OF PLUS 2% AND MINUS 2% OF THE OPTIMUM MOISTURE CONTENT. THE TOLERANCE APPLIES ONLY TO THE TOP 6 INCHES.
3. PROTECTION AND MAINTENANCE OF SUBGRADE: THE SUBGRADE SHALL BE PROTECTED FROM ACTION OF THE ELEMENTS OR OTHERS. ANY ACTION (E.G. SETTLEMENT OR EROSION) THAT DAMAGES THE SUBGRADE OR ANY SUBGRADE THAT HAS BECOME UNACCEPTABLE PRIOR TO PLACING THE PAVEMENT THEREON, SHALL BE REPAIRED AND THE SPECIFIC LINES, GRADES, CROSSSECTION, TOLERANCE, DENSITY, AND MOISTURE CONTENT RANGE REESTABLISHED.
4. THE CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS FROM DAMAGE RESULTING FROM HIS SUBGRADE OPERATION. ANY IMPROVEMENT DAMAGED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE.
5. CLEANUP: SUBGRADE CLEANUP SHALL FOLLOW THE WORK PROGRESSIVELY. THE CONTRACTOR SHALL REMOVE FROM THE PROJECT SITE ALL RUBBISH, SURPLUS OR DISCARDED MATERIAL, UNSUITABLE MATERIAL, AND ANY EQUIPMENT, TOOLS AND TEMPORARY CONSTRUCTION ITEMS USED FOR THE PREPARATION OF THE SUBGRADE.
6. ROLL TESTING: ONCE THE SUBGRADE HAS BEEN BROUGHT TO THE FINAL PLAN ELEVATION, BUT PRIOR TO APPROVAL OF THE SUBGRADE FOR PAVING, ALL LANES SHALL BE ROLL TESTED IN THEIR ENTIRE LENGTH. THE SUBGRADE WILL NOT BE ACCEPTABLE IF RUTTING, PUMPING, OR DEFORMATION OF THE SUBGRADE RESULTS FROM THE ROLL TEST. THIS TESTING WILL BE DONE BY THE CONTRACTOR, AND WILL BE IN ADDITION TO THE APPLICABLE MOISTURE AND DENSITY TESTING.
7. EQUIPMENT FOR ROLL TESTING SHALL BE A TANDEM DUMP TRUCK (ONE FRONT AND TWO REAR AXLES) CARRYING A MINIMUM LOAD OF TWENTY (20) TONS.
8. THE TRUCK SHALL PROCEED SLOWLY ALONG EACH TRAFFIC LANE, ALLOWING THE ENGINEER TO WALK ALONGSIDE AND OBSERVE THE RESULTS. AREAS FAILING THE ROLL TEST WILL BE REWORKED AND RETESTED PRIOR TO APPROVAL OF THE SUBGRADE FOR PAVING.
9. ALL SUBGRADE AND PAVEMENT SHALL GRADE TO DRAIN.
10. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER. ALL ASPHALT PARKING AREAS SHALL BE A MINIMUM OF 1% SLOPE UNLESS OTHERWISE NOTED. CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO FINAL SUBGRADE CONSTRUCTION OF ANY AREAS NOT WITHIN THIS SLOPE REQUIREMENTS.
11. PRECAST STRUCTURES MAY BE USED AT CONTRACTOR'S OPTION. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED CONCRETE INVERT FROM INVERT IN TO INVERT OUT.
12. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
13. EXISTING GRADE CONTOURS SHOWN AT 1 FOOT INTERVALS. PROPOSED GRADE CONTOURS SHOWN AT 1 FOOT INTERVALS.
14. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER".
15. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
16. ALL UNSURFACED AREAS THAT ARE DISTURBED BY GRADING OPERATION SHALL RECEIVE 6 INCHES MINIMUM OF TOPSOIL. TOPSOIL SHALL BE BLACK SOIL FROM THE LOCAL VICINITY THAT PRODUCES HEAVY GROWTH. TOPSOIL SHALL HAVE A pH RANGE BETWEEN 5.5 TO 7.4 AND BE FREE FROM SUBSOIL, ROOTS, TRASH, AND TOXIC SUBSTANCES. TOPSOIL SHALL HAVE A MINIMUM OF 5% ORGANIC MATERIAL.
17. IN AREAS WHERE THE THICKNESS OF THE ENGINEERED FILL IS GREATER THAN FIVE FEET, CONSTRUCTION SHOULD NOT COMMENCE UNTIL SO AUTHORIZED BY THE GEOTECHNICAL ENGINEER TO EVALUATE FOR CONSOLIDATION.
18. UNLESS OTHERWISE APPROVED BY THE GEOTECHNICAL ENGINEER, EARTHWORK OPERATIONS SHOULD NOT BE ALLOWED TO PROCEED IF AMBIENT TEMPERATURES ARE AT 40°F AND ARE DROPPING. THEY CAN BE RE-STARTED WHEN TEMPERATURES ARE 34°F AND RISING.
19. REFER TO PAVING DETAILS FOR UNDERCUT AND SUBGRADE COMPACTION REQUIREMENTS UNDER PAVED AREAS.
20. ALL GRASSED AREAS SHALL BE GRADED TO WITHIN 0.10± FEET OF FINAL ELEVATION.
21. PRIOR TO BEGINNING PREPARATION OF SUBGRADE, ALL AREAS UNDER PAVEMENTS SHALL BE STRIPPED OF ALL TOPSOIL, VEGETATION, LARGE ROCK FRAGMENTS (GREATER THAN 6 INCHES IN ANY DIMENSION) AND ANY OTHER DELETERIOUS MATERIAL. ALL VEGETATION SHALL BE HAULED OFF. TOPSOIL MAY BE RESPREAD AT THE END OF GRADING OPERATIONS. THE ACTUAL STRIPPING DEPTH SHOULD BE BASED ON VISUAL EXAMINATION DURING CONSTRUCTION AND THE RESULTS OF PROOF-ROLLING OPERATIONS. THE ROOT SYSTEMS OF ALL TREES (NOT DESIGNATED TO REMAIN) SHALL BE REMOVED IN THEIR ENTIRETY.

UTILITY NOTES:

1. ALL FILL MATERIAL IS TO BE IN PLACE, COMPACTED, AND CONSOLIDATED BEFORE INSTALLATION OF PROPOSED UTILITIES. ALL UTILITIES ARE TO BE PLACED IN TRENCH CONDITIONS.
2. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
3. ALL UNDERGROUND STORM AND OTHER UTILITY LINES SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING. FAILURE TO HAVE INSPECTION APPROVAL PRIOR TO BACKFILL WILL CONSTITUTE REJECTION OF WORK.
4. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS OR FINISH GRADE ELEVATIONS IN NON-PAVED AREAS, WHETHER CALLED OUT SPECIFICALLY OR NOT. THIS INCLUDES ANY MONITORING WELLS IN THE 32ND STREET SIDEWALK EXPANSION AREA.
5. DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
6. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH AND RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
7. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES.
8. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE RELOCATION OR REMOVAL OF EXISTING POWER POLES, TELEPHONE POLES AND GUYS WITH RESPECTIVE UTILITY COMPANIES. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS REGARDING UTILITY SERVICES.
9. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITION OF ALL STORM SEWERS ADJACENT TO THE PROJECT LIMITS TO DETERMINE IF ANY EXISTING STORM SEWERS ARE PLUGGED. NOTIFY THE ENGINEER OF ANY PRE-EXISTING CONDITIONS WHICH NEED ATTENTION. ONCE CONSTRUCTION BEGINS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EXISTING AND ADJACENT STORM SEWERS IN GOOD WORKING ORDER UNTIL SUBSTANTIAL COMPLETION.

STORM SEWER NOTES:

1. PIPE LENGTHS SHOWN ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE OR TO THE END OF END SECTION. ALL PIPES SHALL BE FIELD STAKED TO THE INSIDE WALL FACE OF THE STRUCTURE.
2. ALL PIPE SHALL BE PLACED IN TRENCH CONDITIONS. PLACE A MINIMUM OF 2 FEET OF FILL OVER PROPOSED PIPE BEFORE TRENCHING AND PIPE INSTALLATION. PROPOSED FILL SHALL BE PLACED IN ACCORDANCE WITH PROJECT REQUIREMENTS.
3. UTILITY LINES AND STRUCTURES IN FILL AREAS BELOW PIPE GRADE SHALL NOT BE CONSTRUCTED UNTIL ALL CONSOLIDATION OF THE FILL IS COMPLETE AND SO APPROVED BY THE ON-SITE GEOTECHNICAL ENGINEER
4. THE DIMENSIONS FOR ALL STRUCTURES ARE FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE.
5. PUBLIC STORM SEWER PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED: REINFORCED CONCRETE PIPE (RCP), CLASS III PER ASTM C-76, WITH "O-RING" OR SINGLE OFFSET RUBBER GASKETED JOINT (TYLOX SUPERSEAL OR AN APPROVED EQUAL)
6. ALL REINFORCING STEEL SHALL COMPLY WITH ASTM-615 GRADE 60.
7. ALL CURB INLETS AND OTHER STRUCTURES SET AT LOW POINTS ARE TO BE SET LEVEL. ALL OTHER CURB INLETS ARE TO BE SET WITH THE THE GRADE OF THE TOP OF CURB OR PAVEMENT.
8. PRECAST STRUCTURES MAY BE USED AT CONTRACTOR'S OPTION. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED CONCRETE INVERT FROM INVERT IN TO INVERT OUT.
9. THE LIDS OF ALL PRECAST STRUCTURES SHALL BE GROUTED TO THE TOP OF THE WALLS.
10. NORTHINGS AND EASTINGS SHOWN ARE TO CENTER OF STRUCTURE, OR END OF END SECTION
11. THE FIRST DIMENSION SHOWN IS THE "L" DIMENSION AND THE SECOND IS THE "W" DIMENSION, SEE DETAILS.
12. THE PIPE BEDDING SHALL BE PER STANDARD DETAIL. RE: CONSTRUCTION DETAILS

INSPECTION NOTES:

1. CONTRACTOR SHALL COORDINATE ALL THIRD-PARTY INSPECTIONS WITHIN STATE RIGHT-OF-WAY AT THEIR OWN COST. INSPECTION REPORTS SHALL BE PROVIDED TO MODOT UPON REQUEST.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/11/22
3	PER MODOT COMMENT	JGD	01/18/23
4	PER MODOT COMMENT	JGD	04/07/23

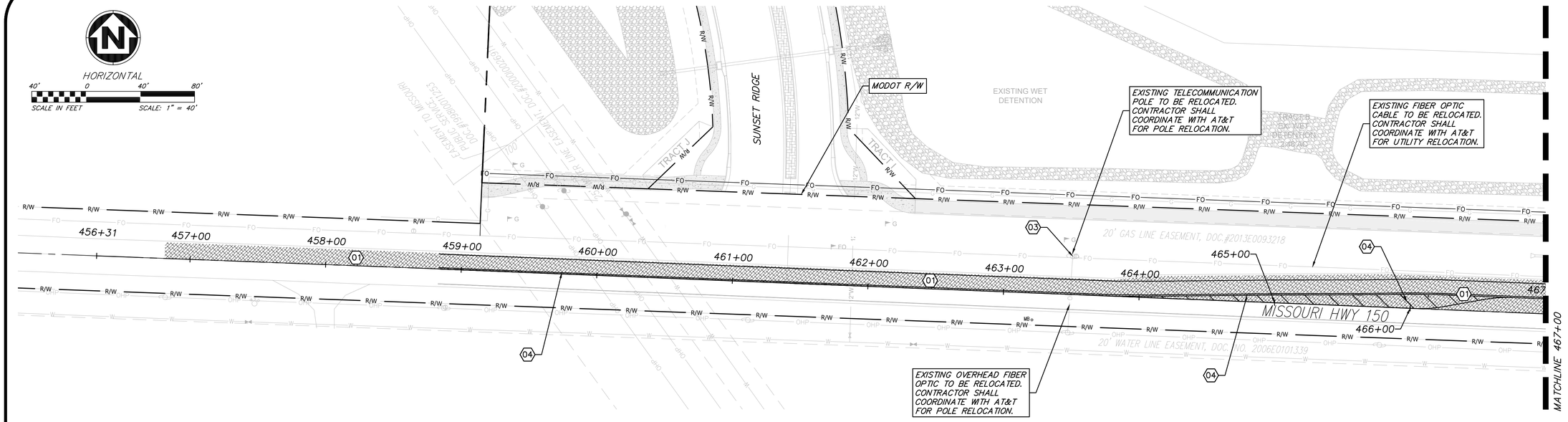
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

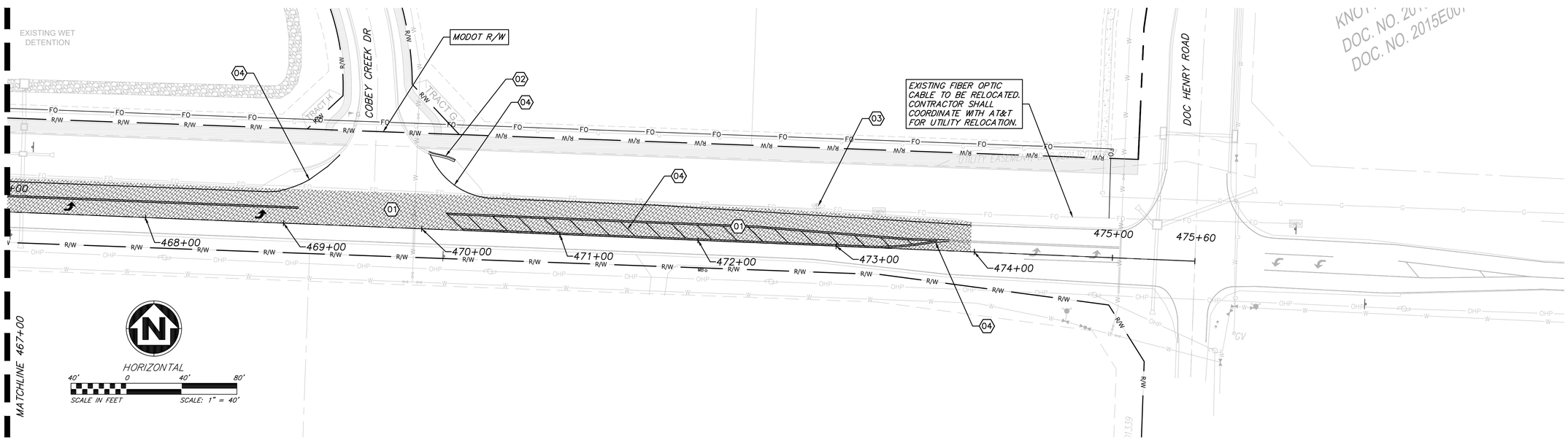
GENERAL NOTES

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
4
4 OF 66





DEMOLITION PLAN KEY NOTES

01 MILL 2" EXISTING PAVEMENT DEPTH AND DISPOSE OF EXISTING ASPHALTIC CONCRETE PAVEMENT. REFERENCE SHEET 18 FOR MILLING OPERATION SEQUENCE AND TRAFFIC CONTROL.

02 REMOVE AND DISPOSE OF EXISTING CURB AND GUTTER.

03 REMOVE AND DISPOSE OF EXISTING TELECOM POLE. COORDINATE WITH AT&T ON EXISTING FIBER LINE RELOCATION AND POLE DEMOLITION.

04 OBLITERATE EXISTING PAVEMENT MARKINGS AS NECESSARY TO ACCOMMODATE TRAFFIC CONTROL PHASING.

LEGEND

EXISTING PAVEMENT TO BE MILLED (2" DEPTH)

DEMOLITION PLAN GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS BY DETAILED SITE INSPECTION PRIOR TO BEGINNING CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL ITEMS ENCOUNTERED DURING CONSTRUCTION THAT ARE NOT A REQUIRED PART OF THE PROPOSED PROJECT UPON COMPLETION.
3. CONTRACTOR SHALL COORDINATE WITH OWNER ON SALVAGING AND DISPOSAL OF DEMOLISHED/REMOVED ITEMS.
4. CONTRACTOR SHALL PROTECT OFFSITE IMPROVEMENTS (INCLUDING BUT NOT LIMITED TO SIDEWALKS, DRIVES, UTILITIES, CURBS, AND PAVING) SURROUNDING THE PROJECT BOUNDARY FROM DAMAGE DURING DEMOLITION ACTIVITY. ALL PAVEMENT REMOVALS SHALL BE SAWCUT WITH CLEAN FULL DEPTH CUTS ADJACENT TO EXISTING PAVEMENT TO REMAIN. CONTRACTOR SHALL INSTALL AND MAINTAIN PEDESTRIAN AND VEHICULAR TRAFFIC CONTROL SIGNAGE IN COMPLIANCE WITH THE MISSOURI DEPARTMENT OF TRANSPORTATION AND CITY OF LEE'S SUMMIT REQUIREMENTS. CONTRACTOR SHALL NOT OBSTRUCT ACCESS TO EXISTING BUSINESSES.
5. CONTRACTOR SHALL INSTALL SAFETY FENCING SURROUNDING ALL EXCAVATIONS DURING DEMOLITION OF STRUCTURES, AREAS OF HEAVY EQUIPMENT USAGE FOR SITE GRADING AND GRUBBING, TREE REMOVAL AREAS, AND ANY OTHER AREAS WHERE PEDESTRIAN OR VEHICULAR TRAFFIC MAY ENCROACH. THIS FENCING SHALL BE INSTALLED NO LATER THAN THE END OF EACH WORKING DAY. CONTRACTOR SHALL REPAIR AND MAINTAIN FENCING IN AN ORDERLY MANNER. CONTRACTOR MAY RE-USE FENCING MATERIALS AFTER ALL DEMOLITION ACTIVITIES HAVE BEEN COMPLETED FOR THAT AREA OF WORK.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/15/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

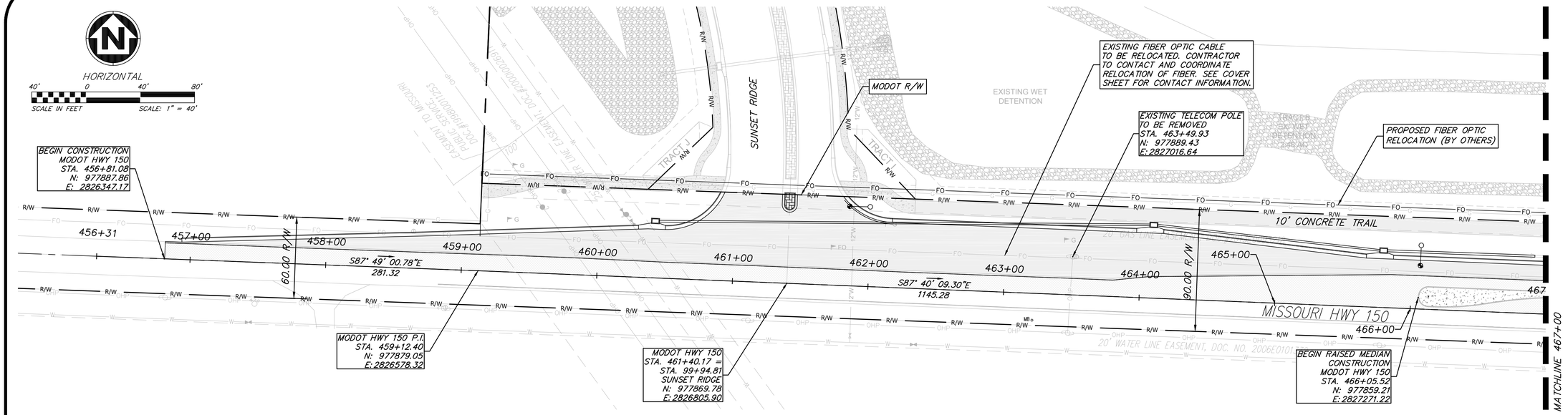
DEMO SHEET

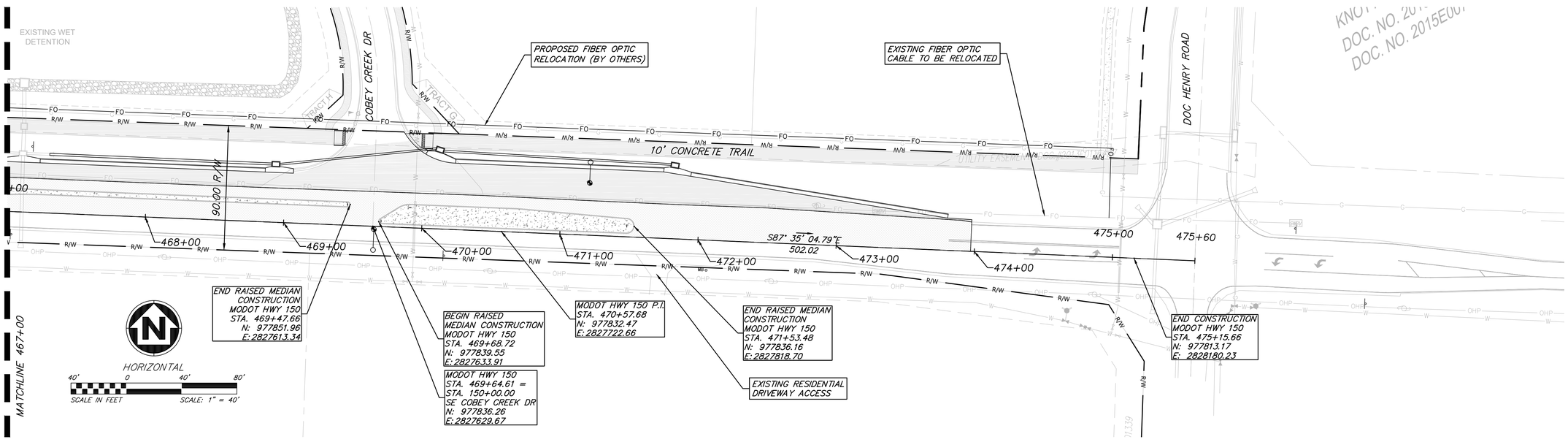
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
5
5 OF 66

Apr 07, 2023 - 1:44pm Plotted By: jgold G:\Shared drives\KC10 - Land Development\Projects\2021\21KC10060 Cobey Creek Residential\01 CIVIL\03-DWG\Sheet\MoDOT 150 HWY WIDENING\21KC10060-C11-DEMO.dwg Layout: DEMO SHEET





LEGEND

- PROPOSED ASPHALTIC CONCRETE PAVEMENT
- PROPOSED MILL & OVERLAY PAVEMENT SECTION
- EXISTING ASPHALTIC CONCRETE PAVEMENT
- PROPOSED CURB AND GUTTER
- PROPOSED CONCRETE MEDIAN

MODOT HIGHWAY 150 SURVEY AND ALIGNMENT CONTROL TABLE

NUMBER	LENGTH	DIRECTION	START STATION	START NORTHING	START EASTING	END STATION	END NORTHING	END EASTING
L1	281.32	S87°49'00.78"E	456+31.08	977889.76	2826297.21	459+12.40	977879.05	2826578.32
L2	1145.29	S87°40'09.30"E	459+12.40	977879.05	2826578.32	470+57.68	977832.47	2827722.66
L3	502.02	S87°35'04.79"E	470+57.68	977832.47	2827722.66	475+57.68	977811.32	2828224.23

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

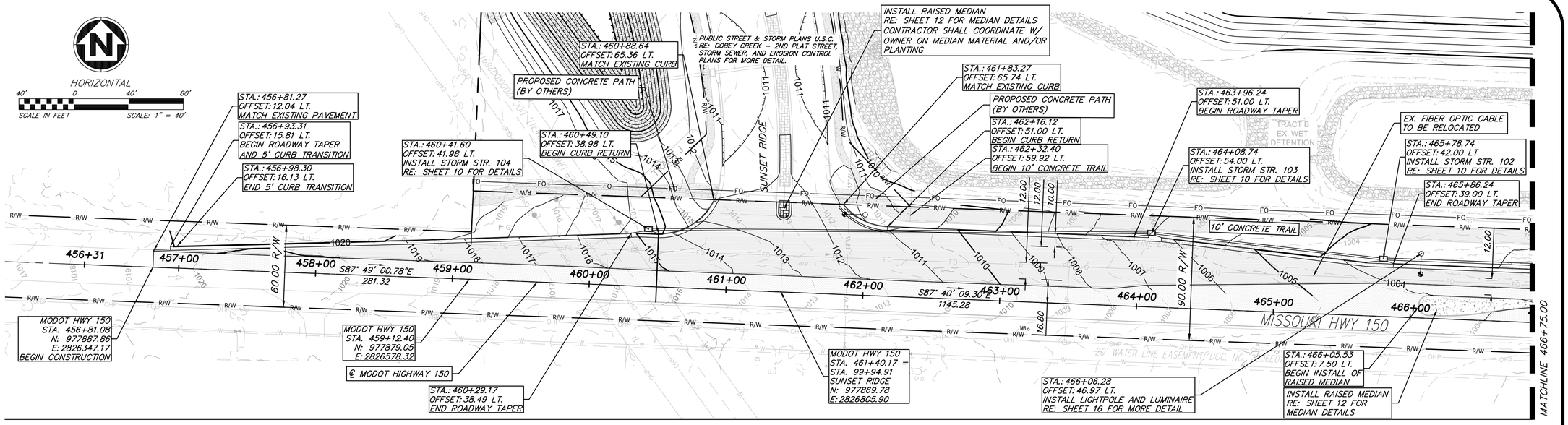
GENERAL LAYOUT

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

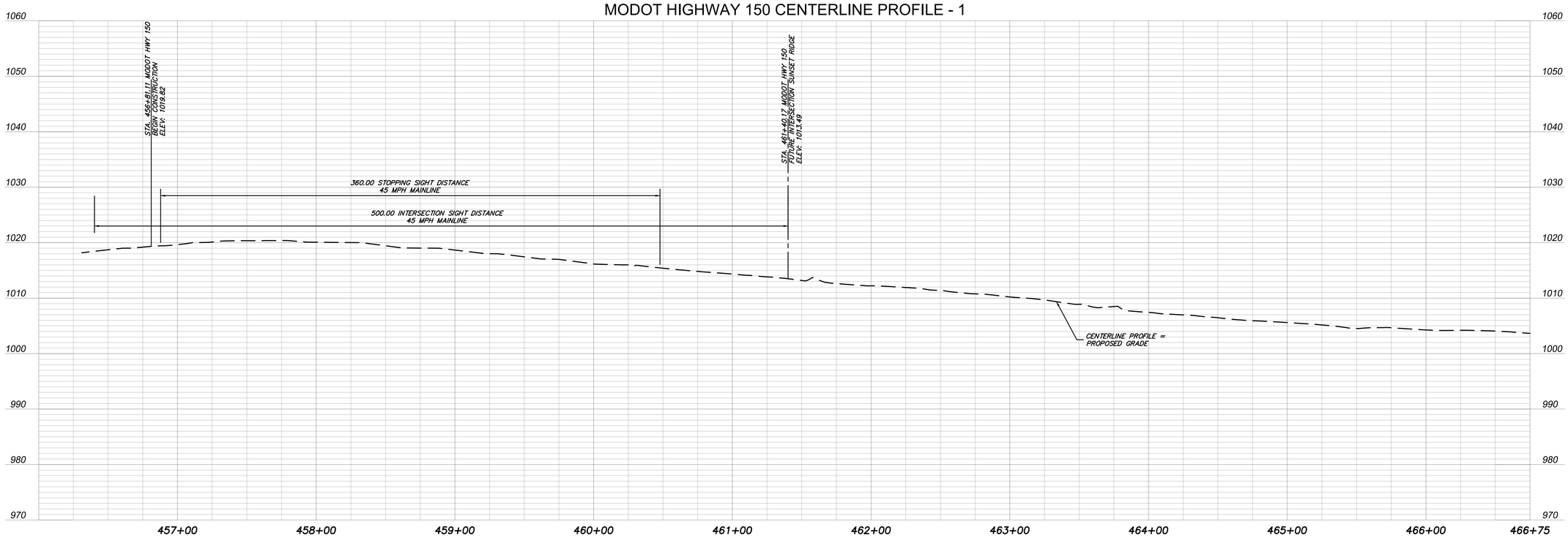
STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
6
6 OF 66

Apr 07, 2023 – 1:45pm Plotted By: jgold G:\Shared drives\KC10 – Land Development\Projects\2021\21KC10060 Cobey Creek Residential\01 CIVIL\03-DWG\Sheet\MoDOT 150 HWY WIDENING\21KC10060-C11-GENL.dwg Layout: GENERAL LAYOUT



MODOT HIGHWAY 150 CENTERLINE PROFILE - 1



ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.	
DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

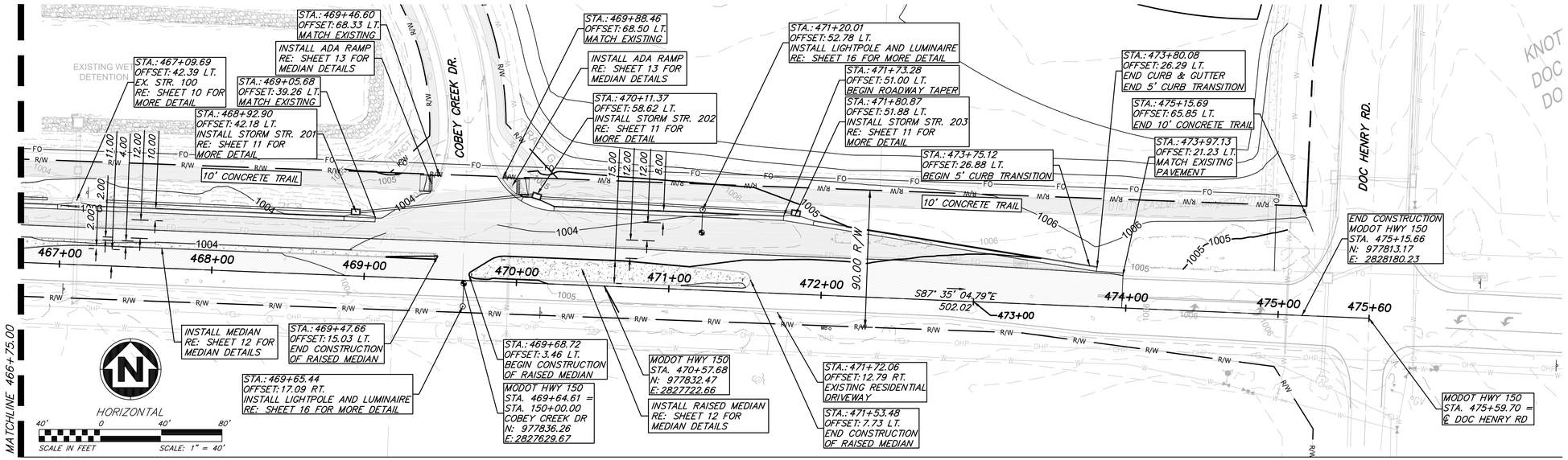
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

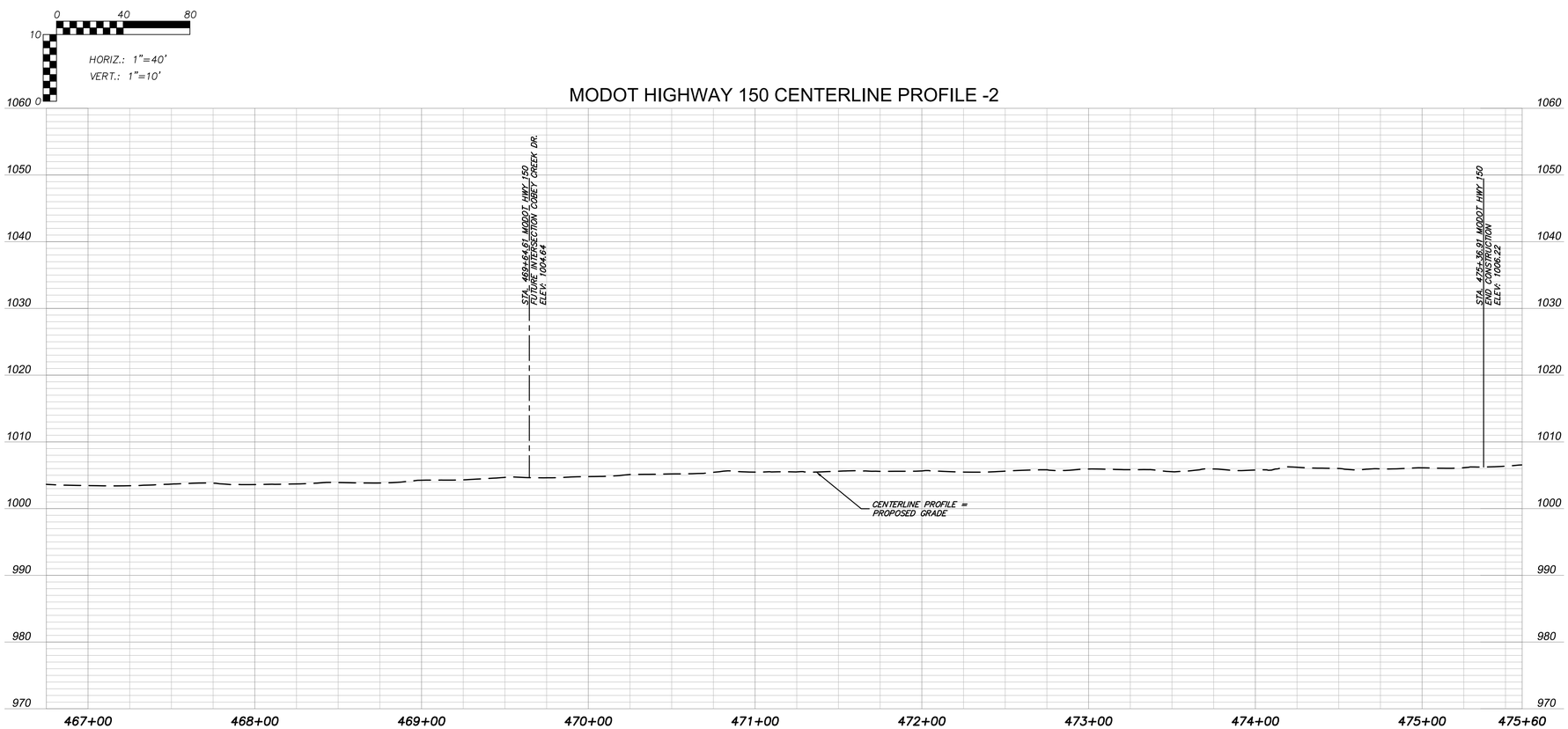
PLAN & PROFILE-1

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. BOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
7
7 OF 66





ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.	
DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

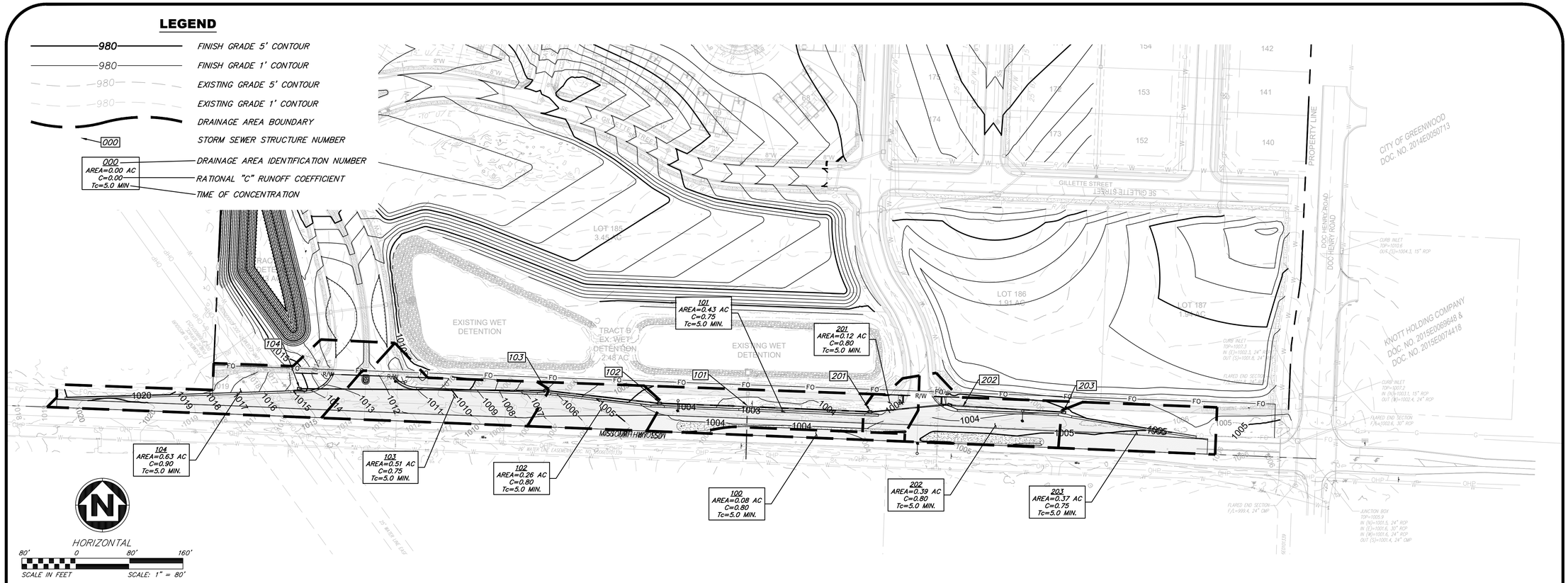
PLAN & PROFILE-2

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
8
8 OF 66

Apr 07, 2023 – 1:48pm Plotted By: jgold G:\Shared drives\KC10 – Land Development\Projects\2021\21KC10060 Cobey Creek Residential\01 CIVIL\05–DWG\Sheet\MoDOT 150 HWY WIDENING\21KC10060–CIV–P&P.dwg Layout: PLAN & PROFILE–2



Highway 150 Widening: 10-Yr Storm Summary

LineNo.	LineID	DnStrmLine No.	RunoffCoeff	DrainageArea	IncrCxA	TotalArea	Tc	iSys	InletTime	IncrQ	TotalRunoff	InvertUp	InvertDn	LineLength	LineSlope	LineSize	n-valuePipe	FlowRate	CapacityFull	VelAve	HGLUp	HGLDn	EGLUp	EGLDn	GutterSpread	QCaptured	QBypass
			(C)	(ac)		(ac)	(min)	(in/hr)	(min)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)
1	99	Outfall	0.30	0.01	0.00	2.29	9.10	6.56	5.00	0.03	11.66	997.66	997.20	63.15	0.73	27.00	0.013	11.66	26.43	5.00	998.84	998.60	999.31	999.07	0.05	0.03	0.00
2	101	1	0.80	0.26	0.21	1.40	7.40	7.17	5.00	1.74	7.80	998.65	998.16	131.00	0.37	24.00	0.013	7.80	13.83	4.54	999.72	999.24	1000.04	999.55	0.08	1.74	0.00
3	102	2	0.80	0.51	0.41	1.14	6.90	7.40	5.00	3.41	6.51	1002.20	999.40	170.42	1.64	15.00	0.013	6.51	8.28	6.75	1003.23	1000.24	1003.79	1000.80	0.10	3.41	0.00
4	103	3	0.75	0.63	0.47	0.63	5.00	8.36	5.00	3.95	3.95	1010.20	1002.40	367.34	2.12	15.00	0.013	3.95	9.41	4.66	1011.00	1003.23	1011.35	1003.58	0.05	3.95	0.00
5	200	1	0.80	0.12	0.10	0.88	7.30	7.25	5.00	0.80	4.97	999.25	998.36	183.03	0.49	24.00	0.013	4.97	15.77	4.40	1000.03	999.13	1000.33	999.42	0.08	0.80	0.00
6	201	5	0.80	0.39	0.31	0.76	6.50	7.58	5.00	2.61	4.47	1000.05	999.45	119.18	0.50	18.00	0.013	4.47	7.45	4.41	1000.89	1000.29	1001.19	1000.59	0.12	2.61	0.00
7	202	6	0.75	0.37	0.28	0.37	5.00	8.36	5.00	2.32	2.32	1001.10	1000.25	170.14	0.50	15.00	0.013	2.32	4.56	3.38	1001.71	1001.04	1001.95	1001.16	0.12	2.32	0.00

Highway 150 Widening: 100-Yr Storm Summary

LineNo.	LineID	DnStrmLine No.	RunoffCoeff	DrainageArea	IncrCxA	TotalArea	Tc	iSys	InletTime	IncrQ	TotalRunoff	InvertUp	InvertDn	LineLength	LineSlope	LineSize	n-valuePipe	FlowRate	CapacityFull	VelAve	HGLUp	HGLDn	EGLUp	EGLDn	GutterSpread	QCaptured	QBypass
			(C)	(ac)		(ac)	(min)	(in/hr)	(min)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)
1	99	Outfall	0.30	0.01	0.00	2.29	7.70	10.55	5.00	0.04	18.75	997.66	997.20	63.15	0.73	27.00	0.013	18.75	26.43	6.90	999.17	998.60	999.85	999.28	0.05	0.04	0.00
2	101	1	0.80	0.26	0.21	1.40	6.60	11.27	5.00	2.62	12.27	998.65	998.16	131.00	0.37	24.00	0.013	12.27	13.83	4.97	1000.12	999.63	1000.50	1000.01	0.10	2.52	0.09
3	102	2	0.80	0.51	0.41	1.14	6.30	11.53	5.00	5.14	10.16	1002.20	999.40	170.42	1.64	15.00	0.013	10.16	8.28	8.28	1004.87	1000.65	1005.93	1001.72	0.12	4.95	0.18
4	103	3	0.75	0.63	0.47	0.63	5.00	12.59	5.00	5.95	5.95	1010.20	1002.40	367.34	2.12	15.00	0.013	5.95	9.41	5.29	1011.19	1005.40	1011.70	1005.76	0.05	5.95	0.00
5	200	1	0.80	0.12	0.10	0.88	6.50	11.36	5.00	1.21	7.79	999.25	998.36	183.03	0.49	24.00	0.013	7.79	15.77	4.99	1000.25	999.35	1000.63	999.74	0.09	1.16	0.04
6	201	5	0.80	0.39	0.31	0.76	6.00	11.74	5.00	3.93	6.92	1000.05	999.45	119.18	0.50	18.00	0.013	6.92	7.45	4.79	1001.19	1000.59	1001.55	1000.95	0.14	3.79	0.14
7	202	6	0.75	0.37	0.28	0.37	5.00	12.59	5.00	3.49	3.49	1001.10	1000.25	170.14	0.50	15.00	0.013	3.49	4.56	3.60	1001.91	1001.37	1002.18	1001.51	0.14	3.37	0.13

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/11/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

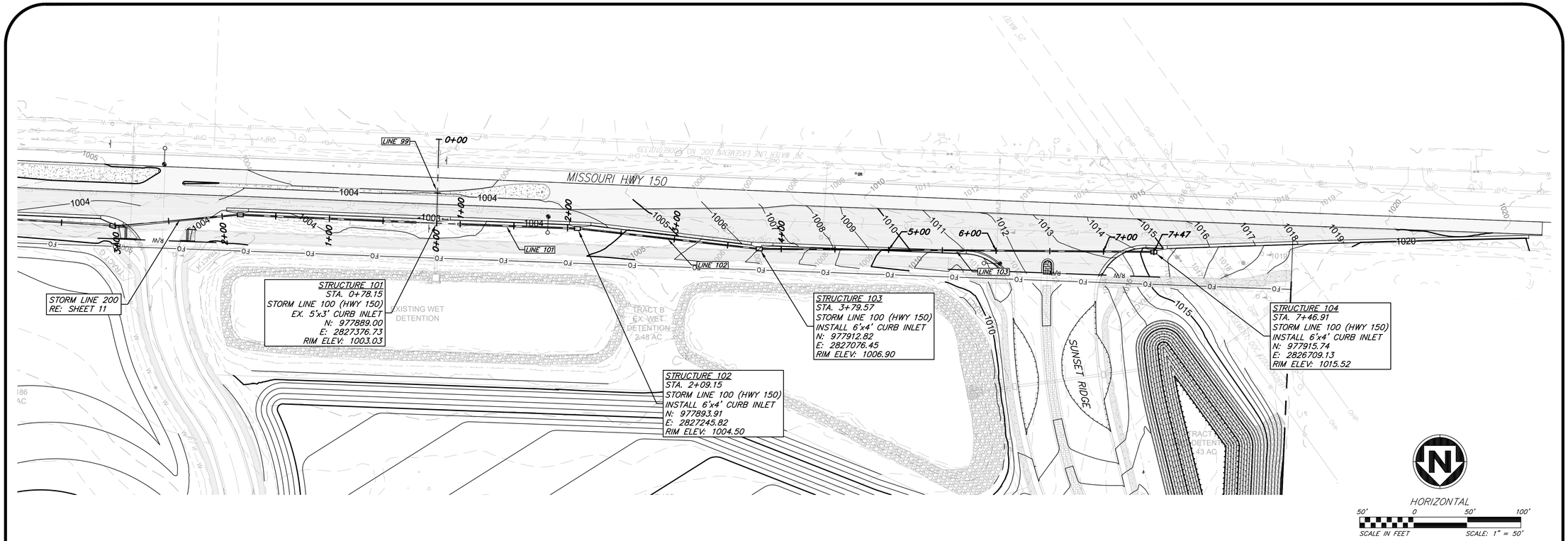
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

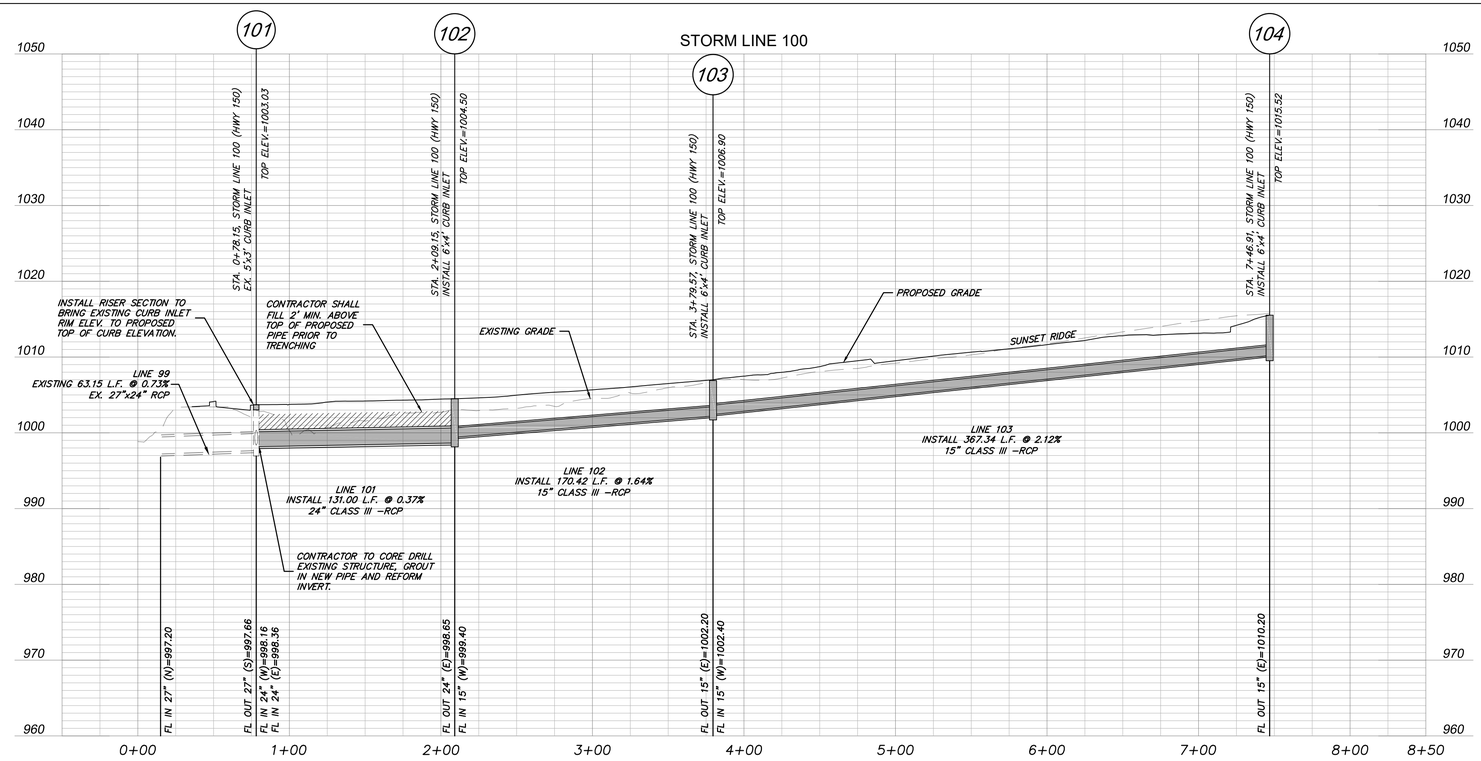
DRAINAGE MAP

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
9
9 OF 66





ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

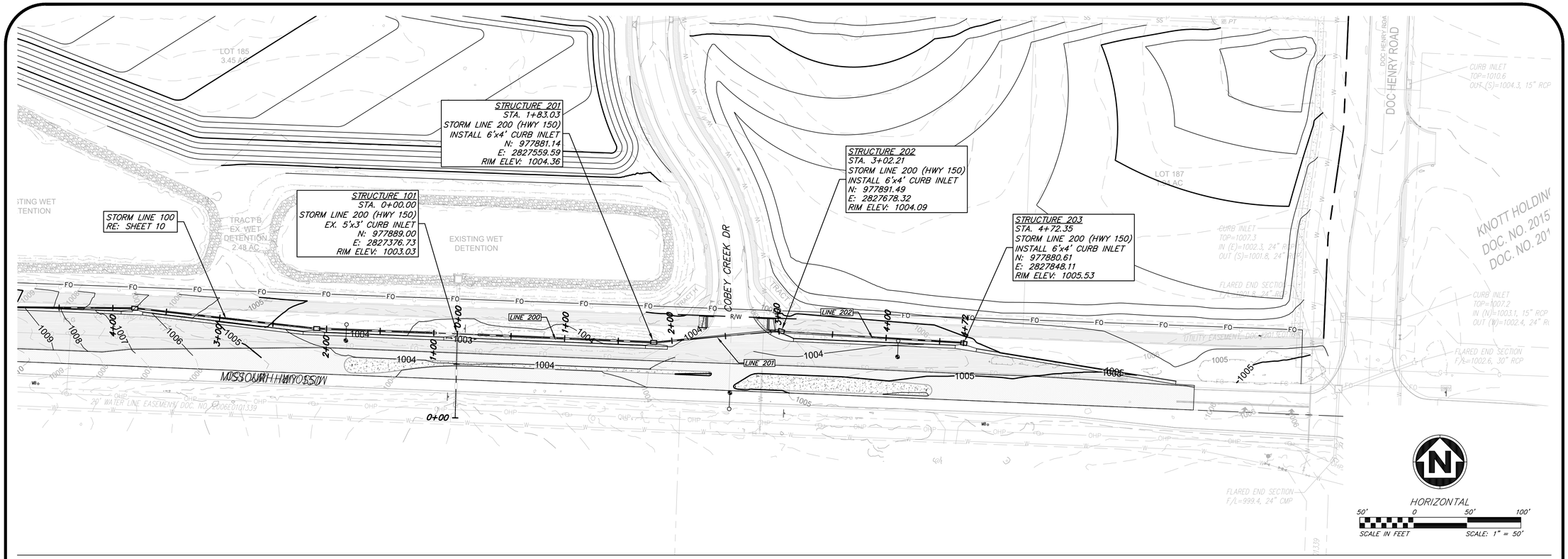
SUMMIT HOMES
CORBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

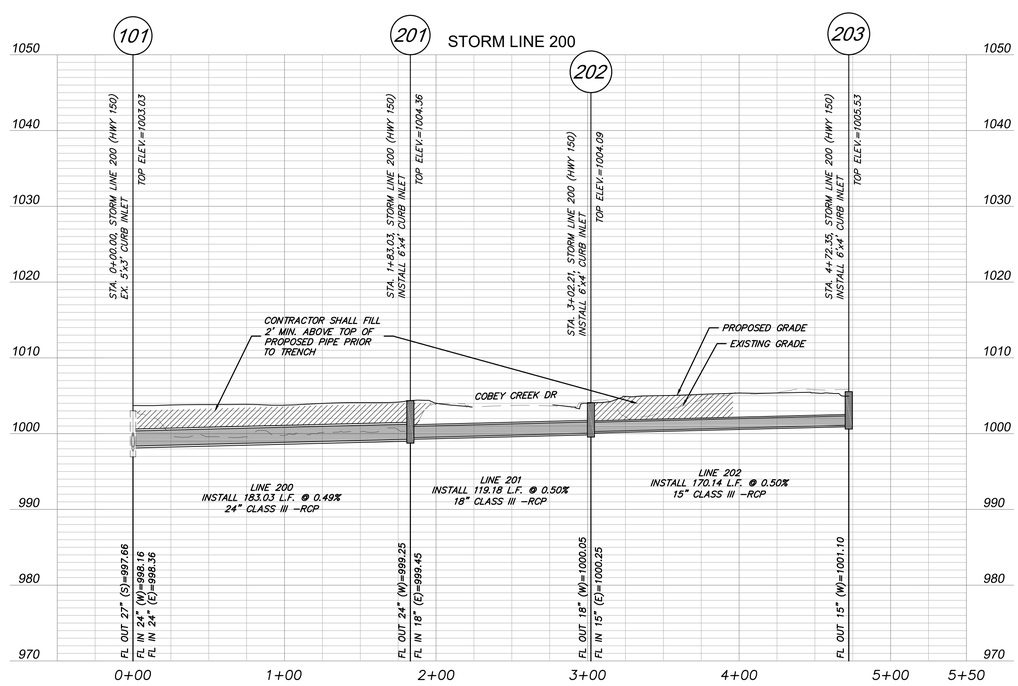
STORM P&P-1

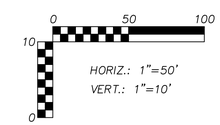
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOHNSON
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
10
10 OF 66







ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/15/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

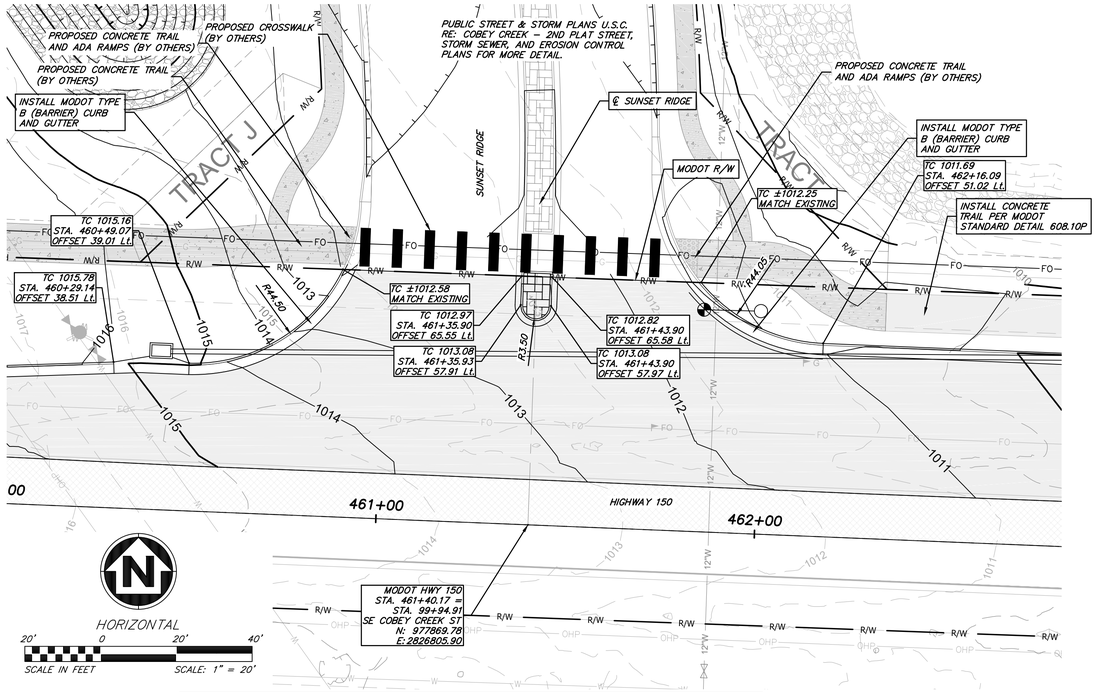
STORM P&P-2

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

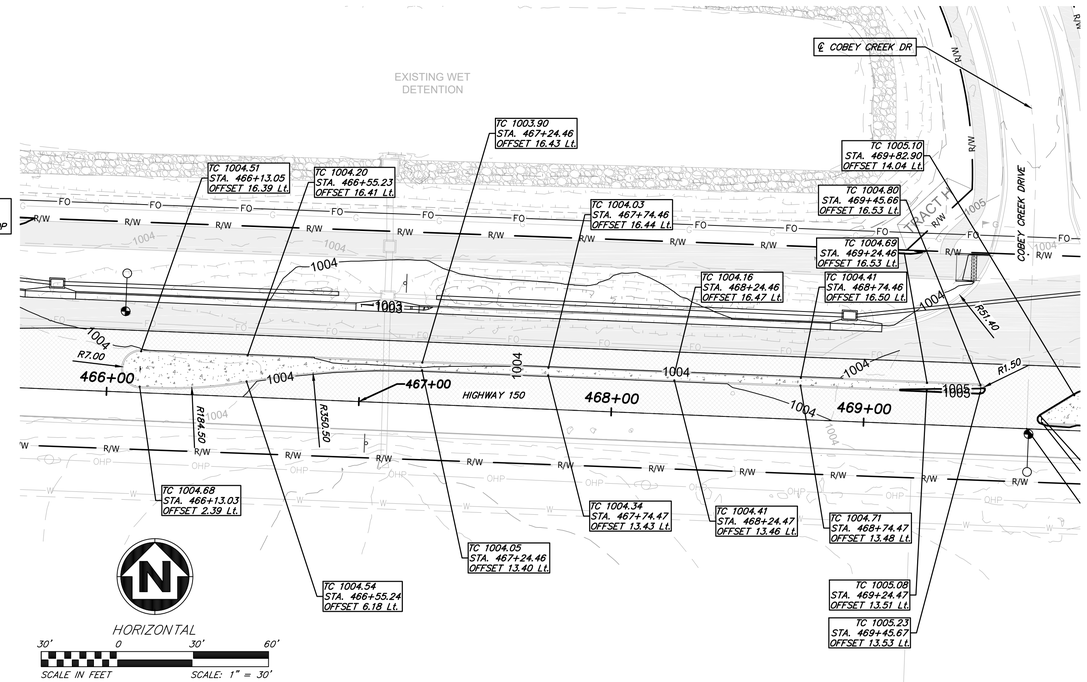
STATE OF MISSOURI
PATRICK J. JOHNSON
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
11
11 OF 66

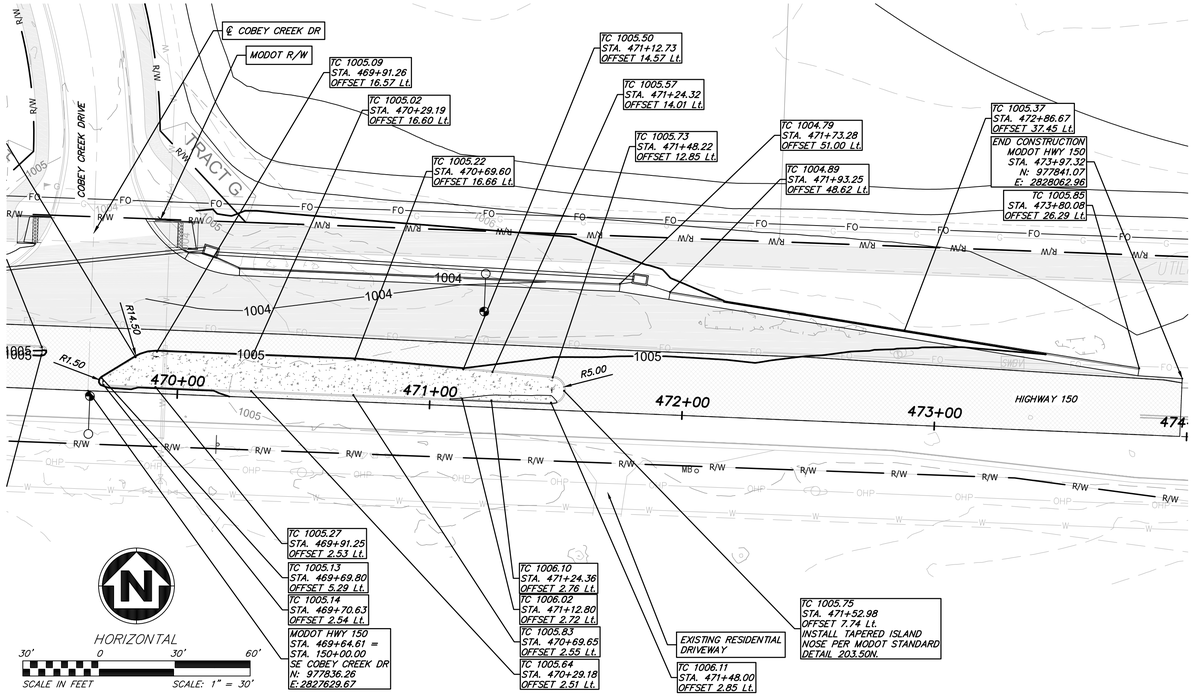
Apr 07, 2023 - 1:52pm Plotted By: jgold G:\Shared drives\KC10 - Land Development\Projects\2021\21KC10060 Cobey Creek Residential\01 CIVIL\03-DWG\Sheet\MoDOT 150 HWY WIDENING\21KC10060-CIV-STM-P&P.dwg Layout: STORM PLAN & PROFILE - 2



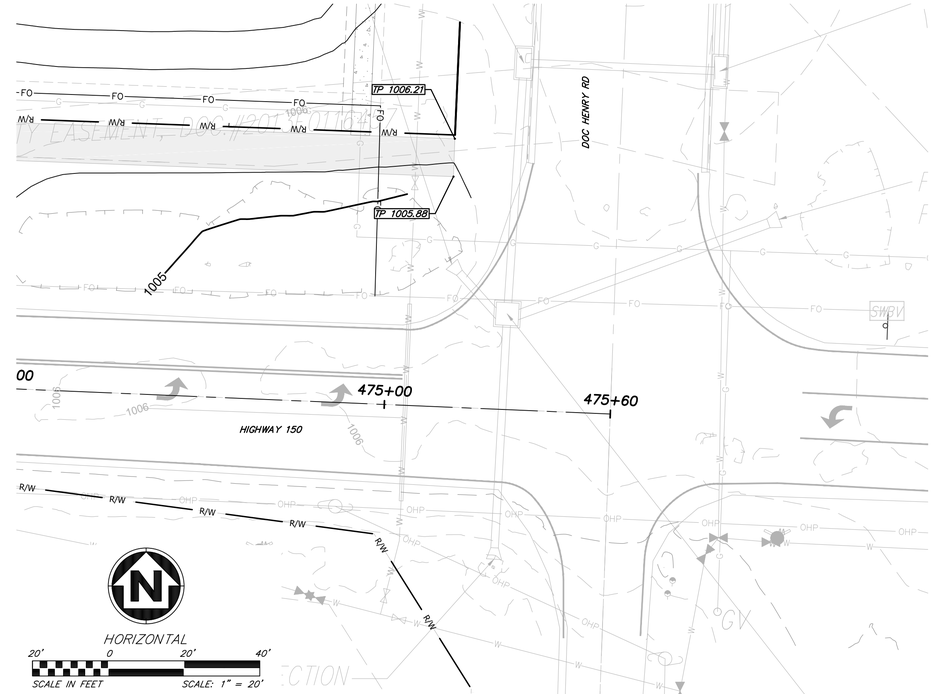
INTERSECTION DETAILS (MODOT HWY 150 & SUNSET RIDGE)



MEDIAN DETAILS (STA. 466+05.53 THRU STA. 469.47.60)



MEDIAN DETAILS (STA. 469+63.78 THRU 473+63.31)



INTERSECTION DETAILS (MODOT HWY 150 & DOC HENRY ROAD)

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/11/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

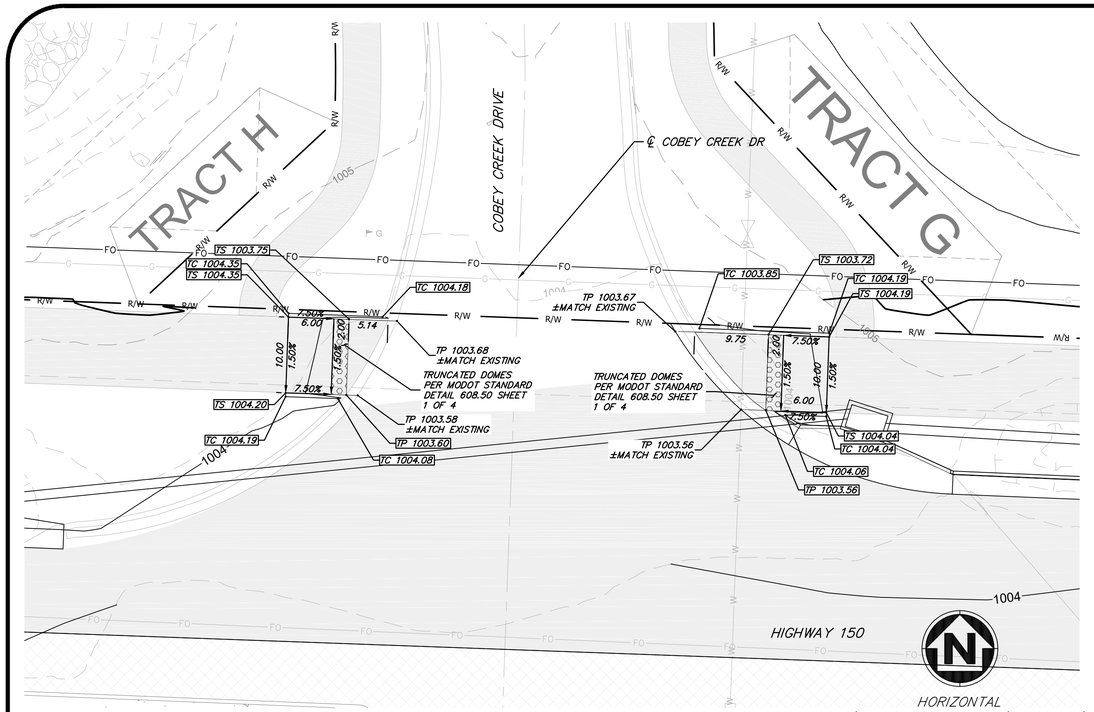
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

INTERSECTION DETAILS

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
12
12 OF 66



ADA RAMP DETAIL (MODOT HWY 150 & COBEY CREEK DRIVE)

LEGEND

TP XXX.XX	TOP OF PAVEMENT SPOT ELEVATION
TS XXX.XX	TOP OF SIDEWALK SPOT ELEVATION
TC XXX.XX	TOP OF CURB SPOT ELEVATION

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/11/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

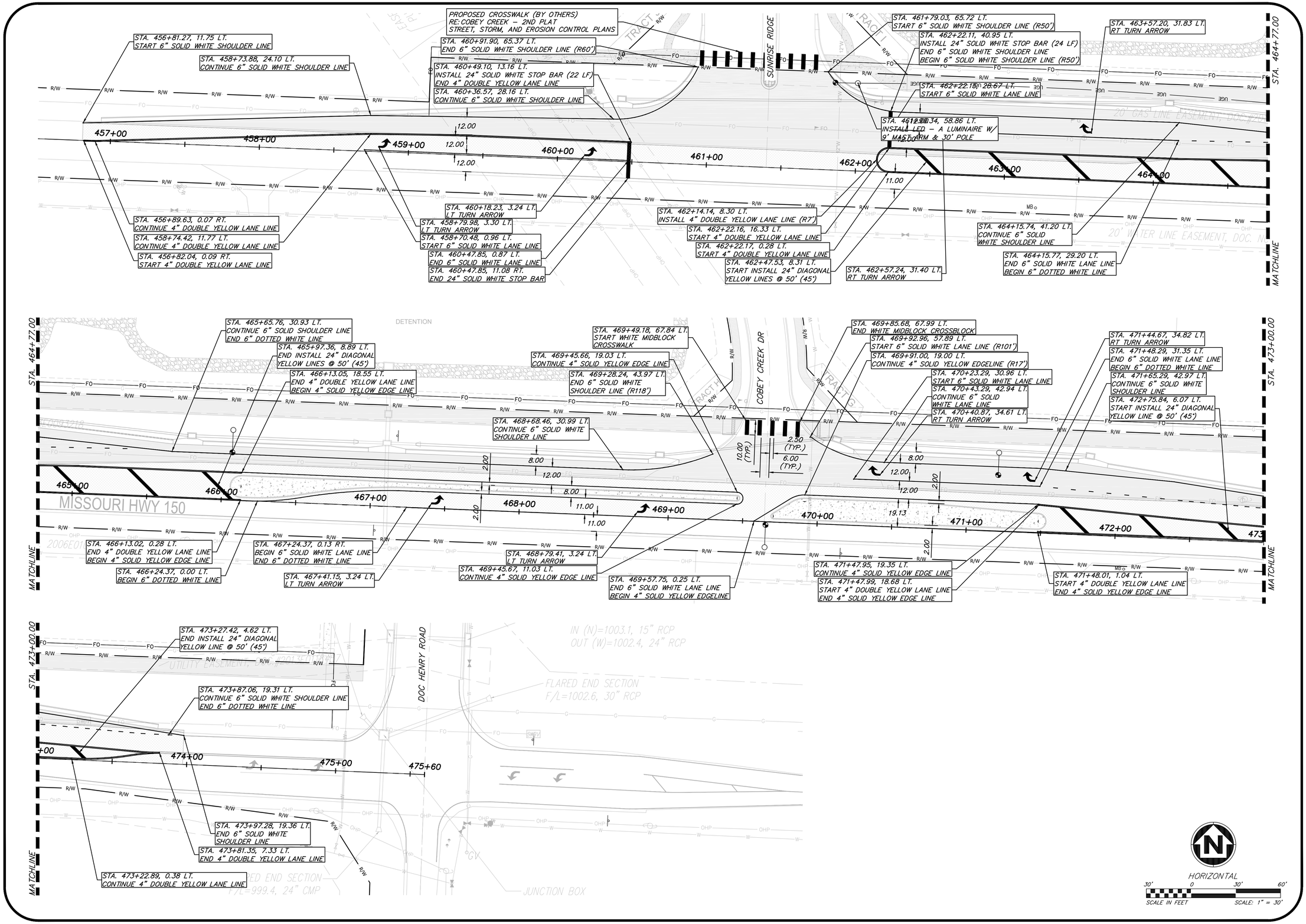
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

INTERSECTION DETAILS

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
13
13 OF 66



Apr 07, 2023 – 1:56pm Plotted By: jsdd G:\Shared drives\KC10 – Land Development\Projects\2021\21KC10060 Cobey Creek Residential\01 CIVIL\05-DWG\Sheet\MoDOT 150 HWY WIDENING\21KC10060-CIV-STRP.dwg Layout: STRIPING PLAN

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

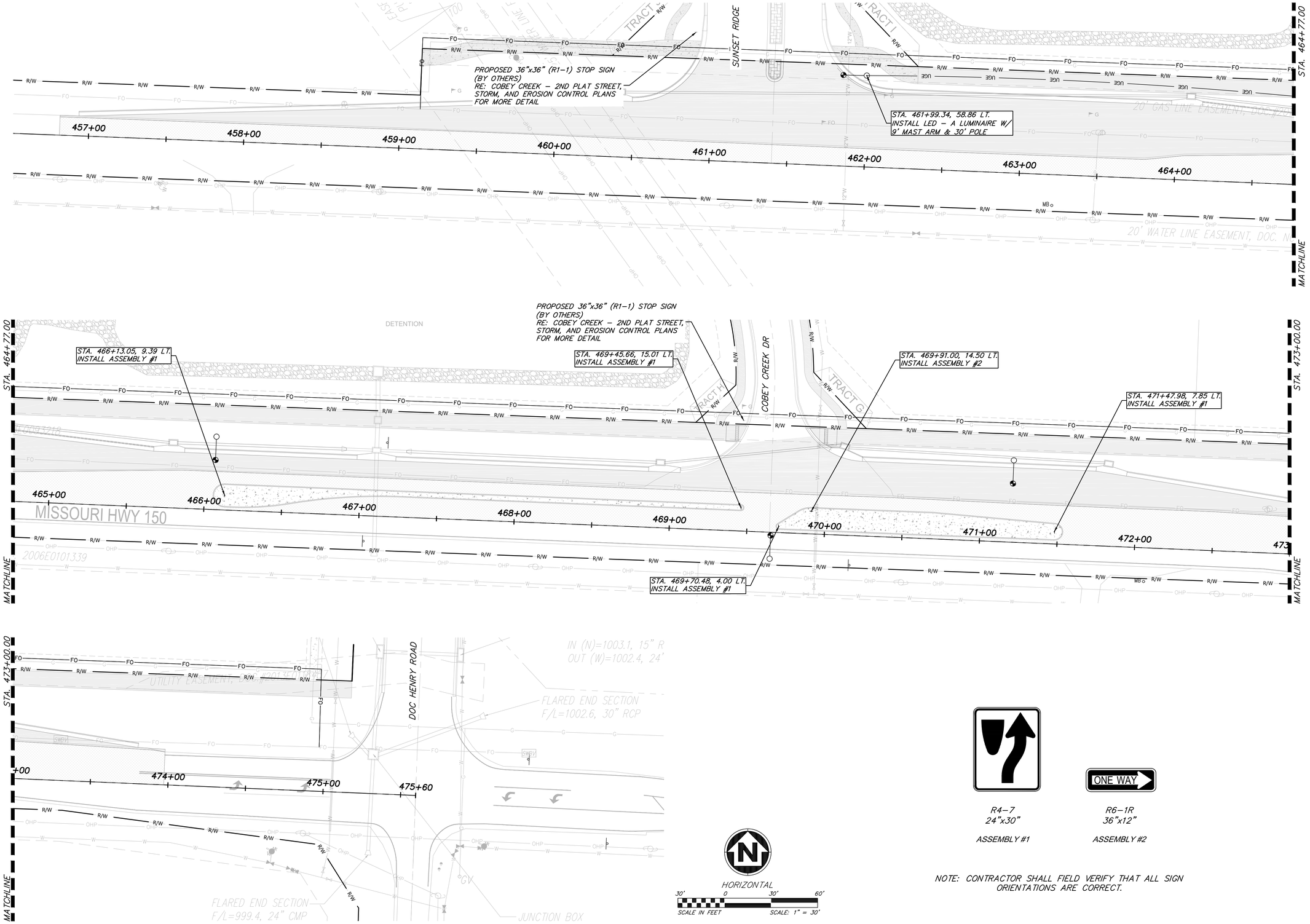
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

STRIPING PLAN

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
14
14 OF 66



NOTE: CONTRACTOR SHALL FIELD VERIFY THAT ALL SIGN ORIENTATIONS ARE CORRECT.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.	
DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

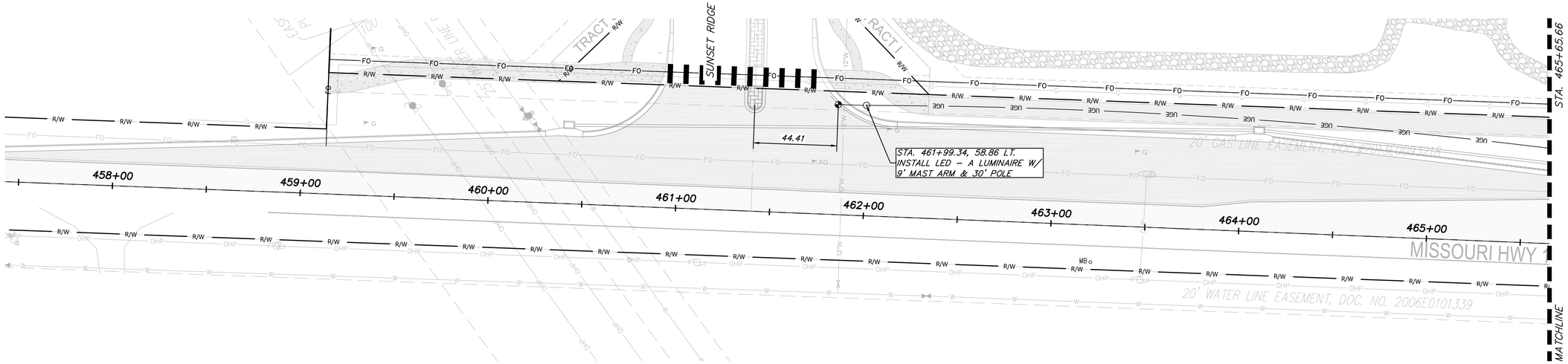
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

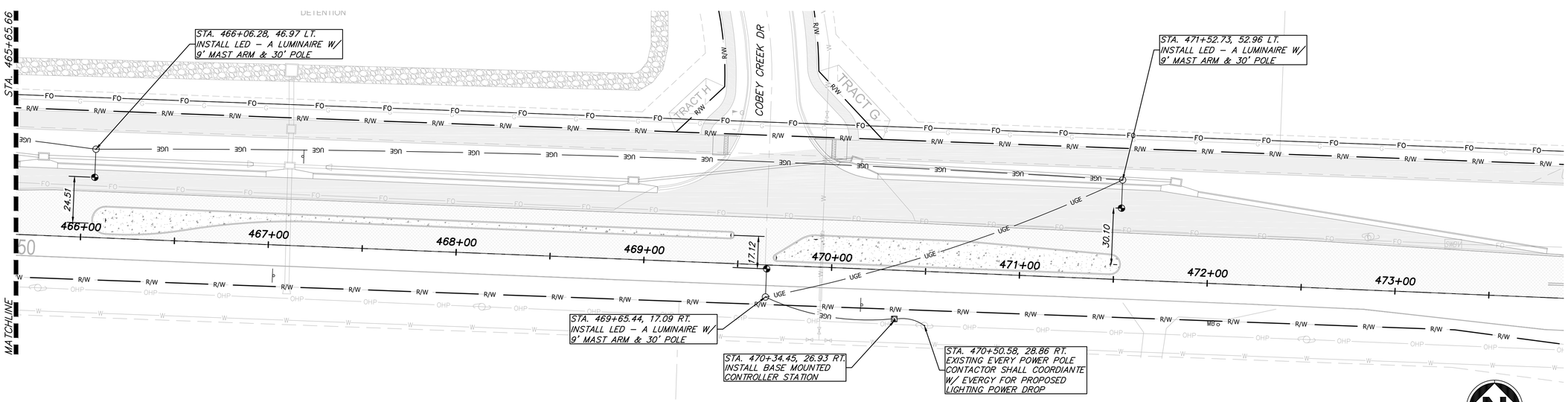
SIGNAGE PLAN

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
15
15 OF 66





NOTES:
1) CONTRACTOR TO PROVIDE LIGHTING CIRCUIT DESIGN & COORDINATE WITH EVERGY FOR METER AND METER PEDESTAL LOCATION.
2) PROPOSED UNDERGROUND ELECTRIC IS SCHEMATIC AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATION WITH MODOT AND EVERGY TO CONNECT THE PROPOSED LIGHTING CIRCUIT AS DESIGNED.
3) ALL PROPOSED ROADWAY UTILITY CROSSINGS SHALL BE BORED. OPEN CUTTING OF HIGHWAY 150 IS NOT ALLOWED.
4) DESIGNERS, FABRICATORS, AND CONTRACTORS SHALL PROVIDE BREAKAWAY CERTIFICATIONS WHERE APPROPRIATE, OR CERTIFICATIONS SHALL BE PROVIDED AT THE REQUEST OF THE MISSOURI DEPARTMENT OF TRANSPIRATION. (MODOT)

HORIZONTAL
30' 0 30' 60'
SCALE IN FEET SCALE: 1" = 30'

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/13/22
2	PER MODOT COMMENT	JGD	11/15/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

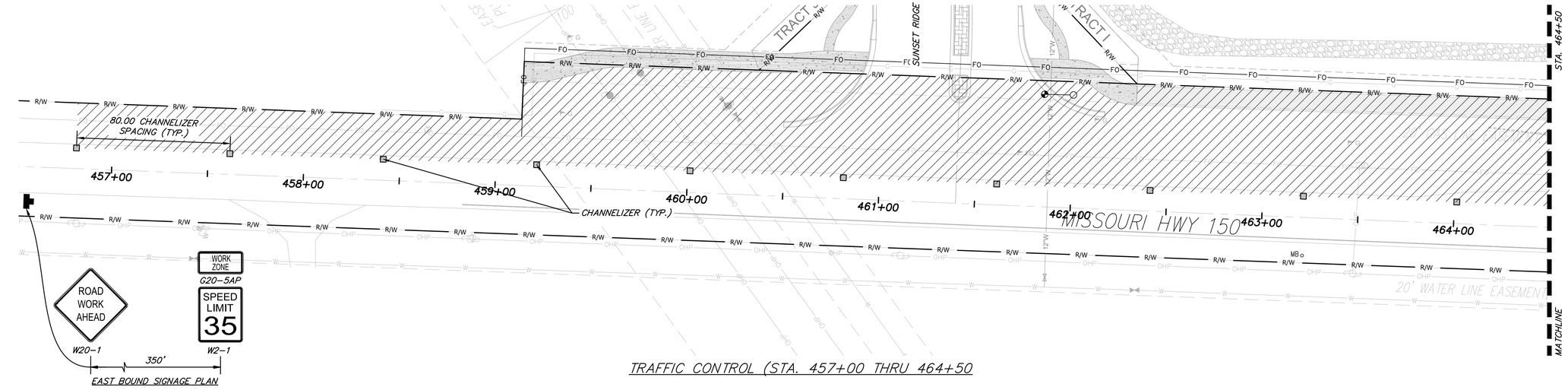
LIGHTING PLAN

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

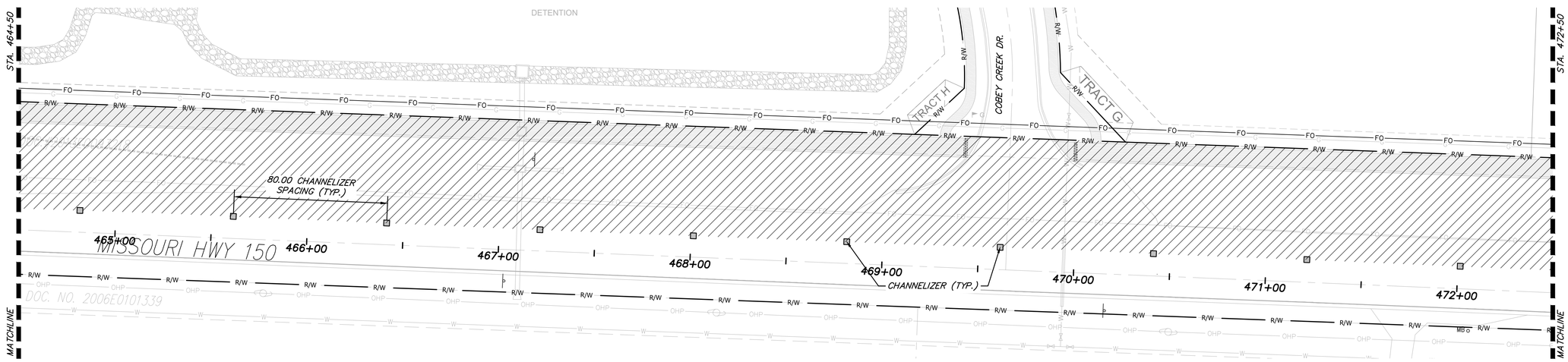
STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/10/2023

SHEET NUMBER
16
16 OF 66

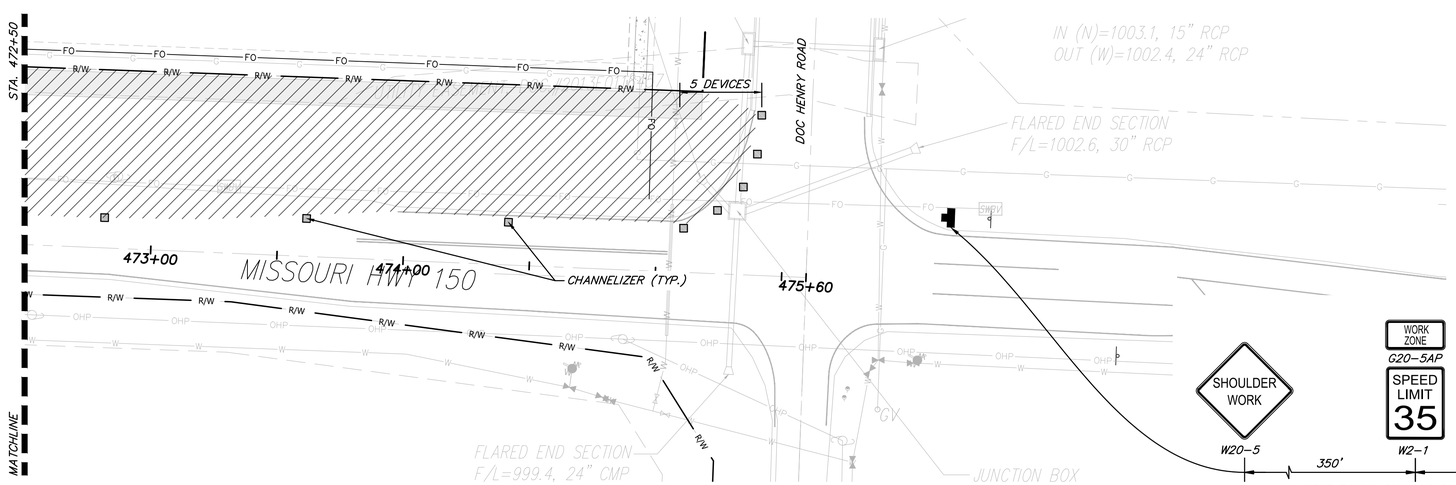
Apr 10, 2023 – 1:06pm Plotted By: jgold G:\Shared drives\KC10 – Land Development\Projects\2021\21KC10060 Cobey Creek Residential\01 CIVIL\03-DWG\Sheet\MoDOT 150 HWY WIDENING\21KC10060-C11-STRP.dwg Layout: LIGHTING PLAN



TRAFFIC CONTROL (STA. 457+00 THRU 464+50



TRAFFIC CONTROL (STA.464+50 THRU 472+50



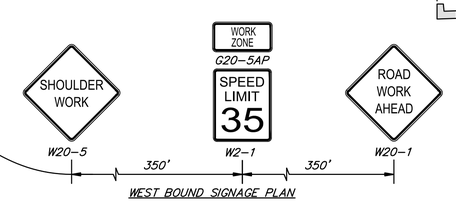
TRAFFIC CONTROL (STA. 472+50 THRU 475+60

LEGEND:

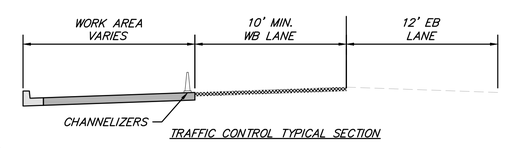
- R/W — EX./PRO. RIGHT-OF-WAY
- SIGN
- CHANNELIZER
- WORK AREA

GENERAL NOTES:

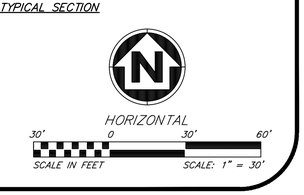
1. REFER TO MDOT STANDARD DETAILS SECTION 616.10AX SHEETS 1–9 FOR TRAFFIC CONTROL DETAILS.
2. ALL TRAFFIC CONTROL DEVICES SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE M.U.T.C.D. AND MODOT STANDARDS AND SPECIFICATIONS.
3. TRAFFIC CONTROL SIGNS SHOWN HERE ARE A PROJECT MINIMUM, ACTUAL SIGNING WILL BE DICTATED BY CONTRACTOR PROJECT PHASING, SEE DETAILS PROVIDED FOR PROPER USE OF CONSTRUCTION SIGNAGE AND DEVICES.
4. THE CONTRACTOR SHALL MOVE CHANNELIZING DEVICES DURING NON-WORKING HOURS EXCLUDING CHANNELIZING DEVICES REQUIRED FOR PROTECTION OF DROPOFF CONDITIONS.



WEST BOUND SIGNAGE PLAN



TRAFFIC CONTROL TYPICAL SECTION



ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

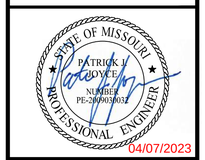
REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

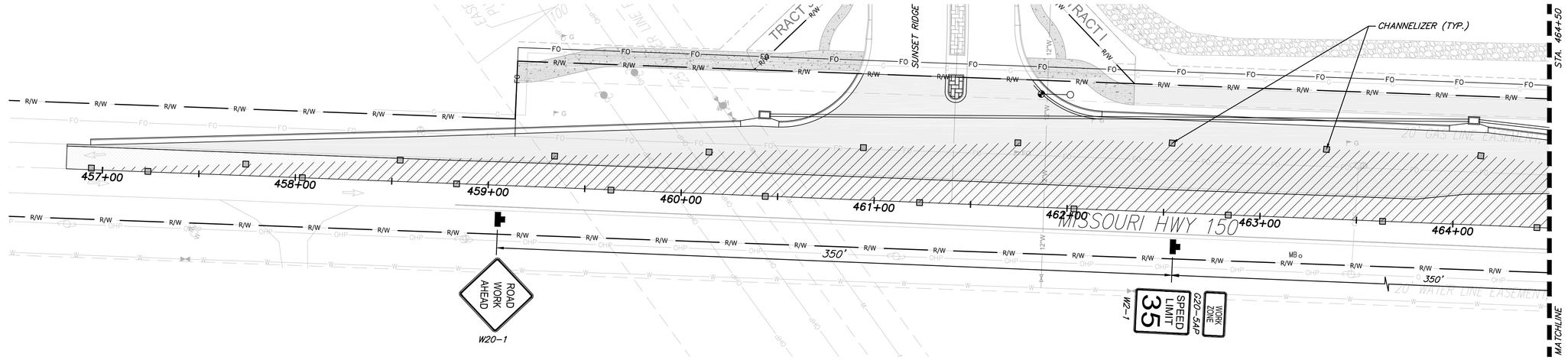
TRAFFIC CONTROL-1

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

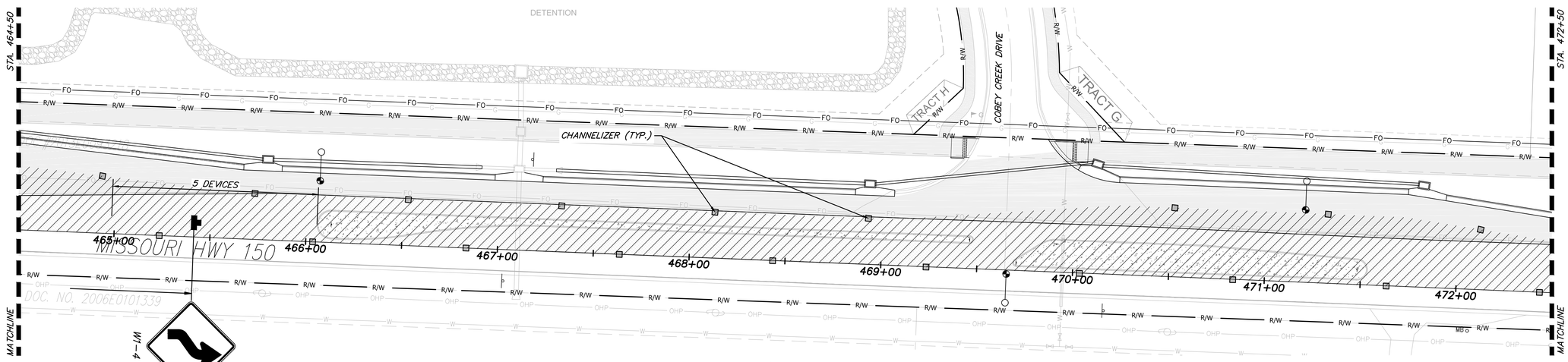


04/07/2023

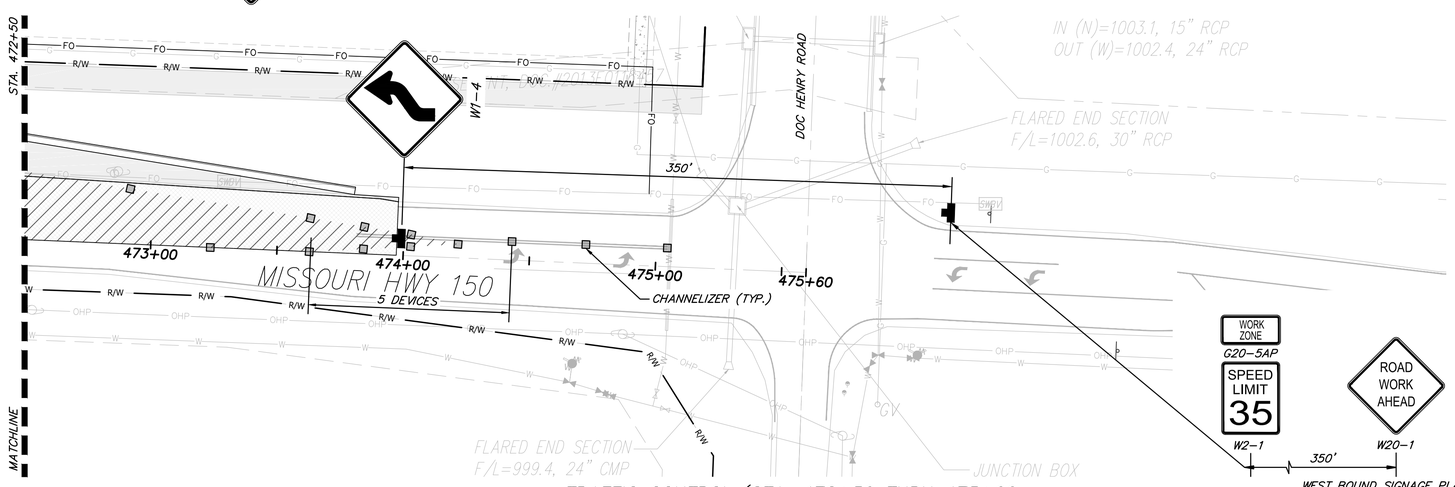
SHEET NUMBER
17
17 OF 66



TRAFFIC CONTROL (STA. 459+00 THRU 464+00)



TRAFFIC CONTROL (STA. 464+50 THRU 472+50)



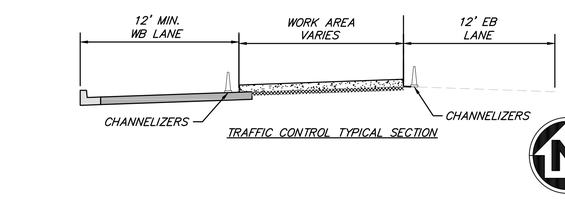
TRAFFIC CONTROL (STA. 472+50 THRU 475+60)

LEGEND:

- R/W — EX./PRO. RIGHT-OF-WAY
- SIGN
- CHANNELIZER
- WORK AREA

GENERAL NOTES:

1. REFER TO MDOT STANDARD DETAILS SECTION 616.10AX SHEETS 1-9 FOR TRAFFIC CONTROL DETAILS.
2. ALL TRAFFIC CONTROL DEVICES SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE M.U.T.C.D. AND MODOT STANDARDS AND SPECIFICATIONS.
3. TRAFFIC CONTROL SIGNS SHOWN HERE ARE A PROJECT MINIMUM, ACTUAL SIGNING WILL BE DICTATED BY CONTRACTOR PROJECT PHASING, SEE DETAILS PROVIDED FOR PROPER USE OF CONSTRUCTION SIGNAGE AND DEVICES.
4. THE CONTRACTOR SHALL MOVE CHANNELIZING DEVICES DURING NON-WORKING HOURS EXCLUDING CHANNELIZING DEVICES REQUIRED FOR PROTECTION OF DROPOFF CONDITIONS.



WEST BOUND SIGNAGE PLAN

TRAFFIC CONTROL TYPICAL SECTION

HORIZONTAL
30' 0 30' 60'
SCALE IN FEET SCALE: 1" = 30'

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.	
DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

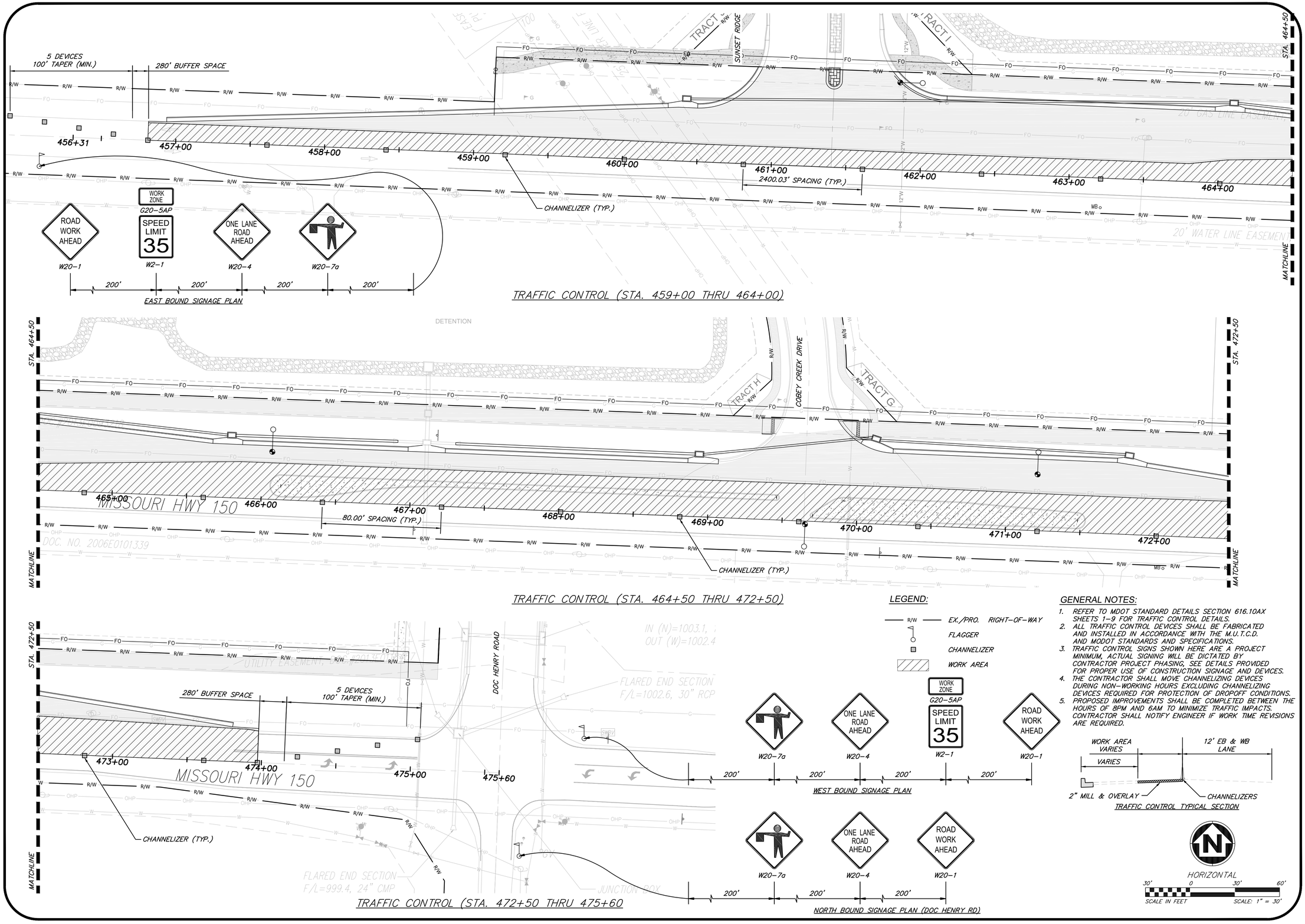
TRAFFIC CONTROL-2

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
18
18 OF 66

Apr 07, 2023 - 1:59pm Plotted By: jgold Q:\Shared drives\KC10 - Land Development\Projects\2021\21KC10060 Cobey Creek Residential\01 CIVIL\03-DWG\Sheet\MoDOT 150 HWY WIDENING\21KC10060-CI1-TFCT.dwg Layout: TRAFFIC CONTROL-2



ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.	
DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/13/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

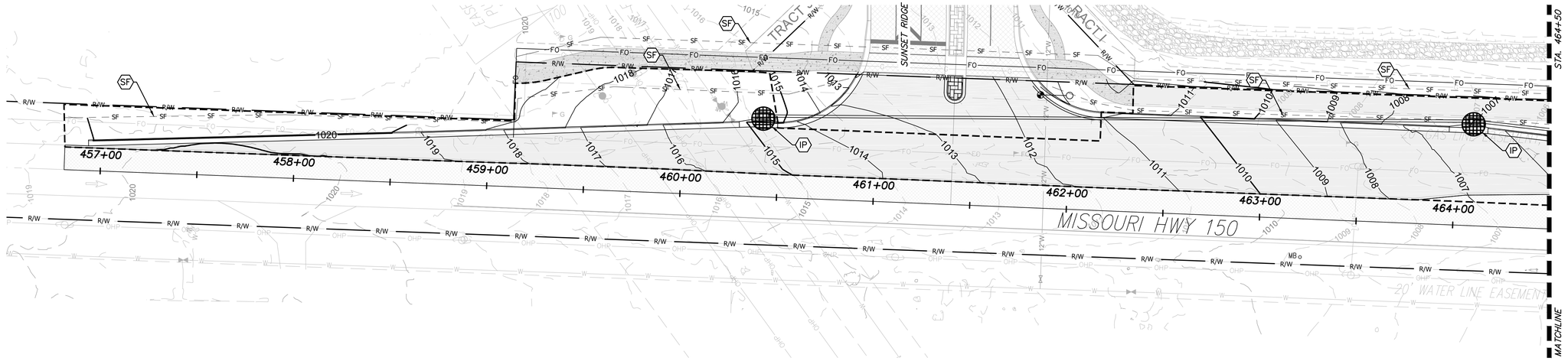
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

TRAFFIC CONTROL-3

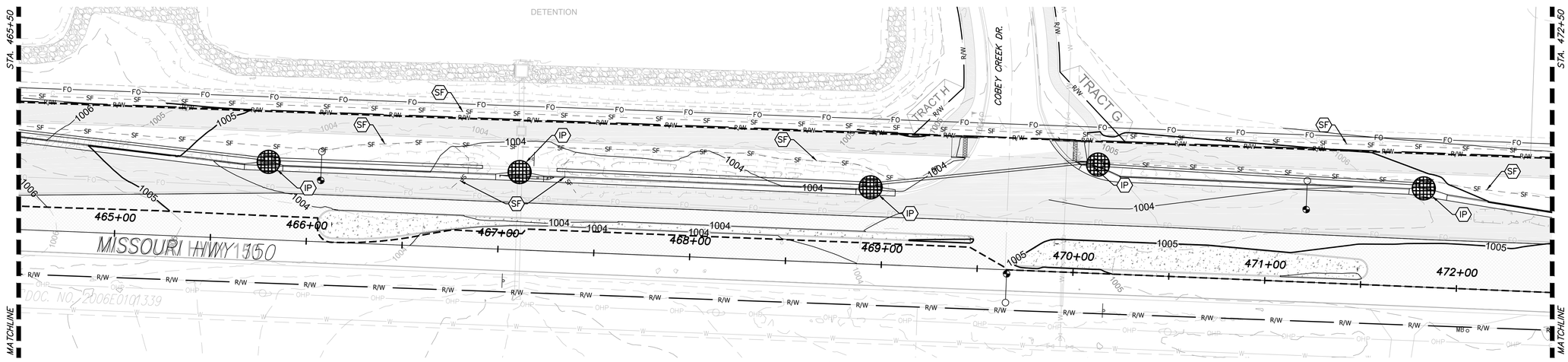
S 29 T47N R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

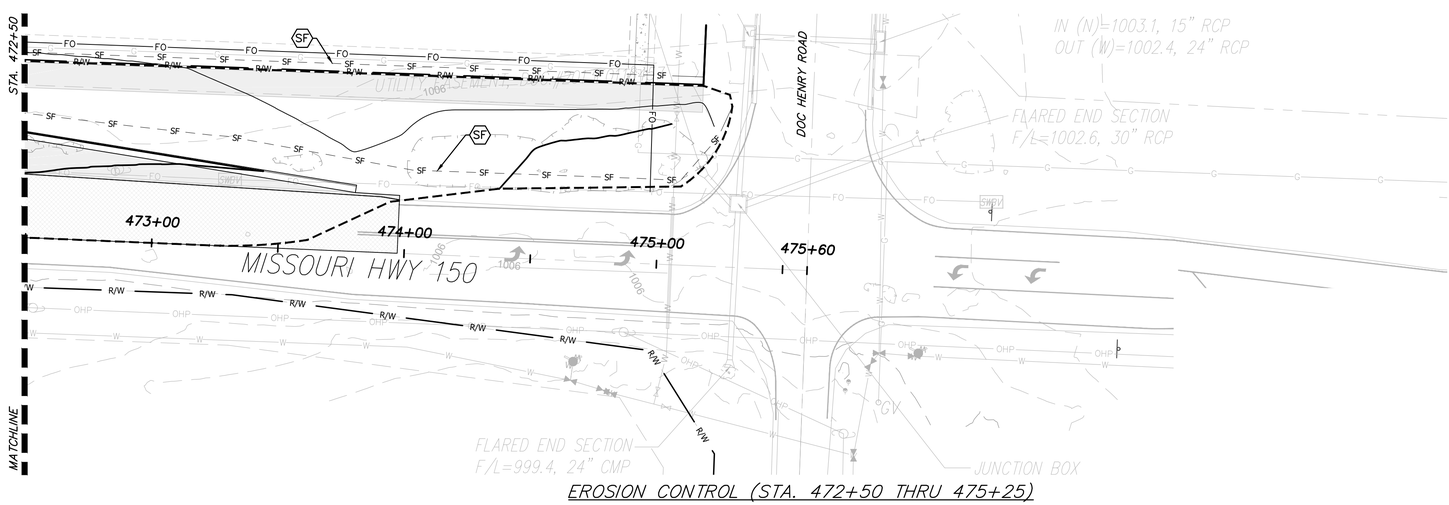
SHEET NUMBER
19
19 OF 66



EROSION CONTROL (STA. 456+70 THRU 464+50)



EROSION CONTROL (STA. 464+50 THRU 472+50



EROSION CONTROL (STA. 472+50 THRU 475+25)

LEGEND:

980	PROPOSED GRADE 5' CONTOUR
980	PROPOSED GRADE 1' CONTOUR
980	EXISTING GRADE 5' CONTOUR
980	EXISTING GRADE 1' CONTOUR
	LIMITS OF DISTURBANCE (2.30 ACRES)
SF	SILT FENCE
IP	INLET PROTECTION

** EROSION DETAILS LISTED ABOVE CAN BE LOCATED BY ABBREVIATION ON SHEETS 49, 50 AND 51.

HORIZONTAL

20' 0 20' 40'

SCALE IN FEET SCALE: 1" = 20'

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

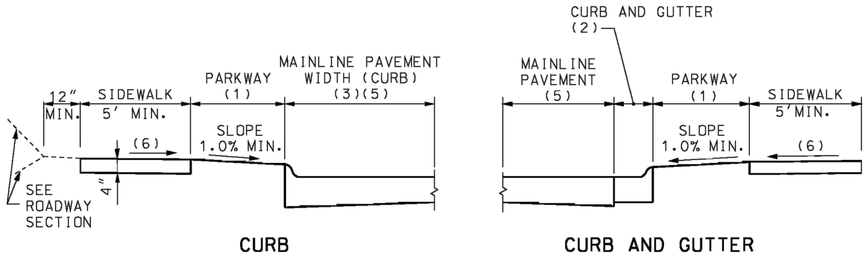
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

EROSION CONTROL

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

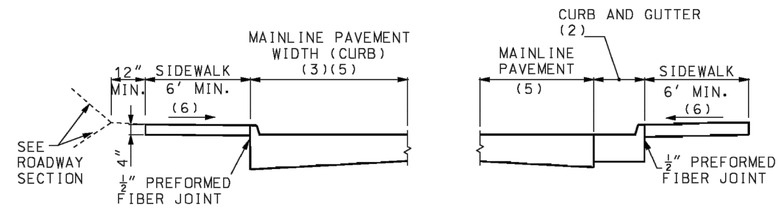
STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
20
20 OF 66



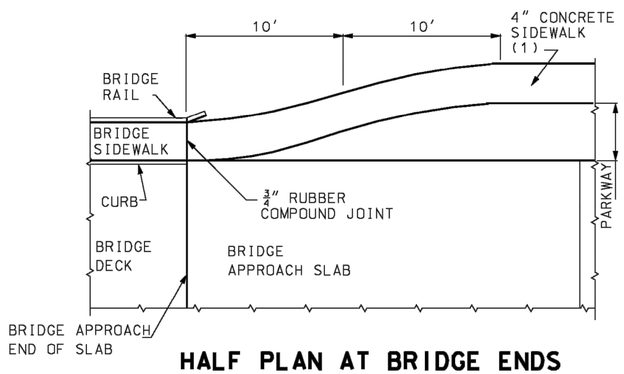
CURB CURB AND GUTTER

TYPICAL SIDEWALK WITH PARKWAY 2' OR MORE

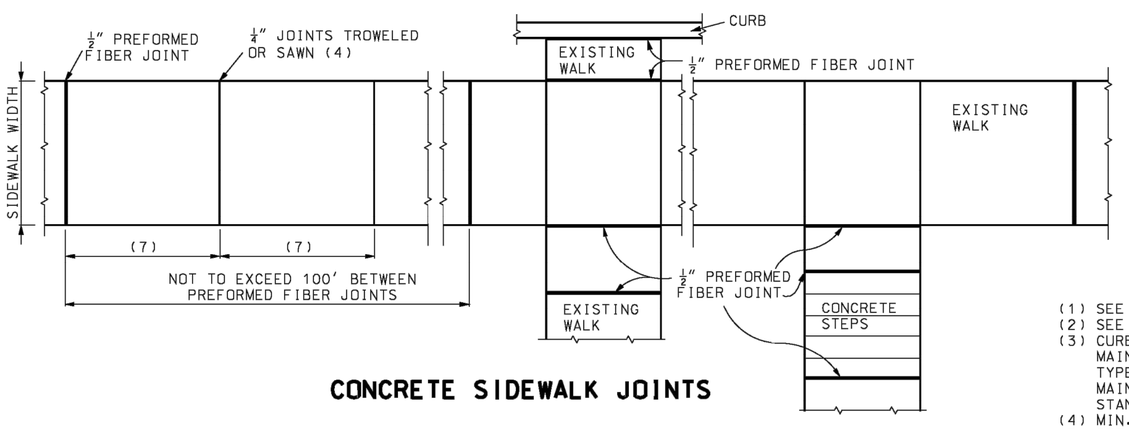


CURB CURB AND GUTTER

TYPICAL SIDEWALK WITH NO PARKWAY



HALF PLAN AT BRIDGE ENDS



CONCRETE SIDEWALK JOINTS

(1) SEE PLANS FOR WIDTH
(2) SEE STANDARD 608.00
(3) CURB TO BE MONOLITHIC WITH PCC MAINLINE PAVEMENT. CURB TO BE TYPE S WITH ASPHALT CONCRETE MAINLINE PAVEMENT. SEE STANDARD PLAN 609.00.
(4) MIN. 1/2" DEPTH JOINT.
(5) SEE TYPICAL PAVEMENT SECTION
(6) SLOPE 1.0% (2.0% MAX.)
(7) SPACING EQUAL TO WIDTH OF WALK

GENERAL NOTES:

ALL AREAS OF THE PEDESTRIAN ACCESS ROUTE MUST BE COMPLIANT WITH THE AMERICANS WITH DISABLILITES ACT - GUIDELINES FOR ACCESSIBLE PUBLIC RIGHTS OF WAY. EXCEPTIONS MUST BE APPROVED BY THE ENGINEER. ALL OTHER AREAS OF NON-COMPLIANCE SHALL BE REMOVED AND CORRECTED AT THE CONTRACTOR'S EXPENSE.

THE SURFACES OF PEDESTRIAN ACCESS ROUTES AND ELEMENTS, AND SPACES REQUIRED TO CONNECT TO PEDESTRIAN ACCESS ROUTES, SHALL BE FIRM, STABLE, SLIP RESISTANT, AND SHALL NOT POND WATER.

WHERE SIDEWALKS ARE LESS THAN 5 FT., 5 FT. X 5 FT. PASSING SPACES EVERY 200 FT. SHALL BE PROVIDED AND ARE PERMITTED TO OVERLAP PEDESTRIAN ACCESS ROUTES.

THE CROSS SLOPE OF THE CONTINUOUS PEDESTRIAN ACCESS ROUTE THROUGH ENTRANCES, ALLEYS, AND SIDEROAD CONNECTIONS WITH STOP OR YIELD CONTROL SHALL BE 1.00% TO FACILITATE DRAINAGE (2.00% MAX.).

WHERE PEDESTRIAN ACCESS ROUTES ARE CONTAINED WITHIN PEDESTRIAN STREET CROSSINGS WITHOUT YIELD OR STOP CONTROL, THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL BE 5.00% MAXIMUM.

WHERE PEDESTRIAN ACCESS ROUTES ARE CONTAINED WITHIN MIDBLOCK PEDESTRIAN STREET CROSSINGS, THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL BE PERMITTED TO EQUAL THE STREET OR HIGHWAY GRADE.

STORMWATER INLETS, SIGNS, POSTS, MANHOLE COVERS, PULL BOXES AND OTHER ACCESS LIDS SHOULD BE AVOIDED WITHIN THE SIDEWALK. IF SUCH A LOCATION IS NECESSARY, THE FEATURE MUST MEET ADA STANDARDS.

THE RUNNING GRADE OF A SIDEWALK SHALL NOT EXCEED 5.0% UNLESS IT IS MATCHING THE GRADE OF THE ADJACENT ROADWAY.

PEDESTRIAN ACCESS ROUTE SHALL CONTINUE ACROSS RESIDENTIAL AND COMMERCIAL ENTRANCES, ALLEYS, AND SIDEROAD CONNECTIONS.

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

STATE OF MISSOURI ERIC E. SCHROETER NUMBER PE-28411 PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONCRETE SIDEWALK

DATE EFFECTIVE: 04/01/2015
DATE PREPARED: 2/20/2015

608.10P

SHEET NO. 1 OF 1

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/13/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

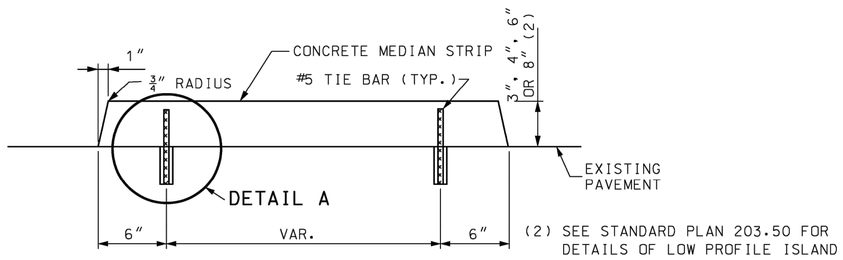
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

STANDARD DETAILS-1

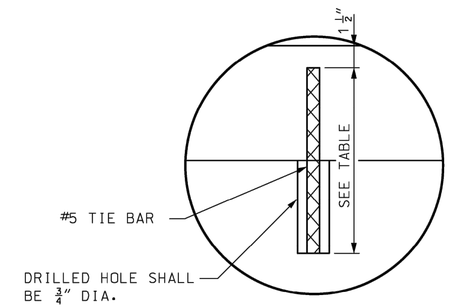
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI PATRICK J. COYLE NUMBER PE-2009030032 PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
21
21 OF 66

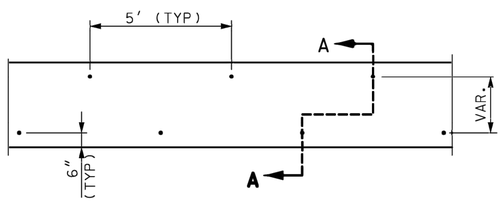


SECTION A–A
CONCRETE MEDIAN STRIP

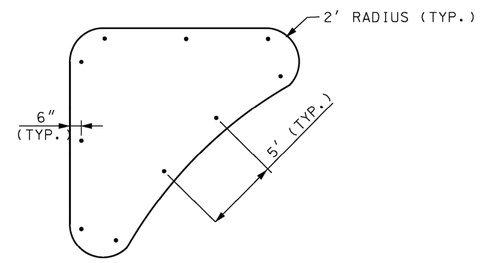


DETAIL A

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



TIE BAR LOCATIONS FOR
CONCRETE MEDIAN STRIP



TIE BAR LOCATIONS FOR
CONCRETE MEDIAN STRIP (ISLAND)

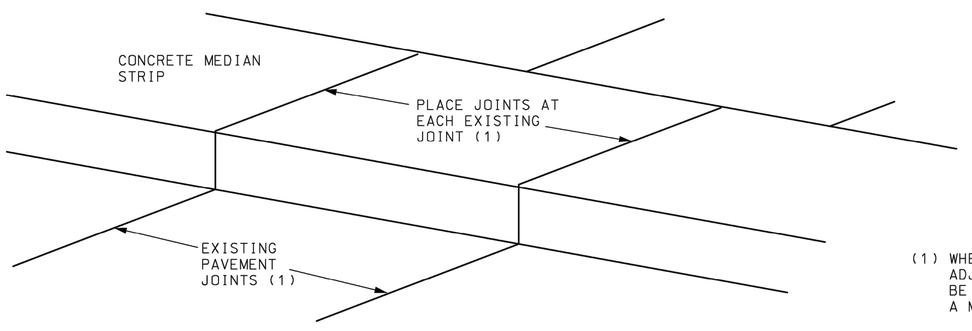
GENERAL NOTES:

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

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

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

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



CONCRETE MEDIAN STRIP JOINT LOCATION

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

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

608.30A

SHEET NO. 1 OF 1

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/15/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

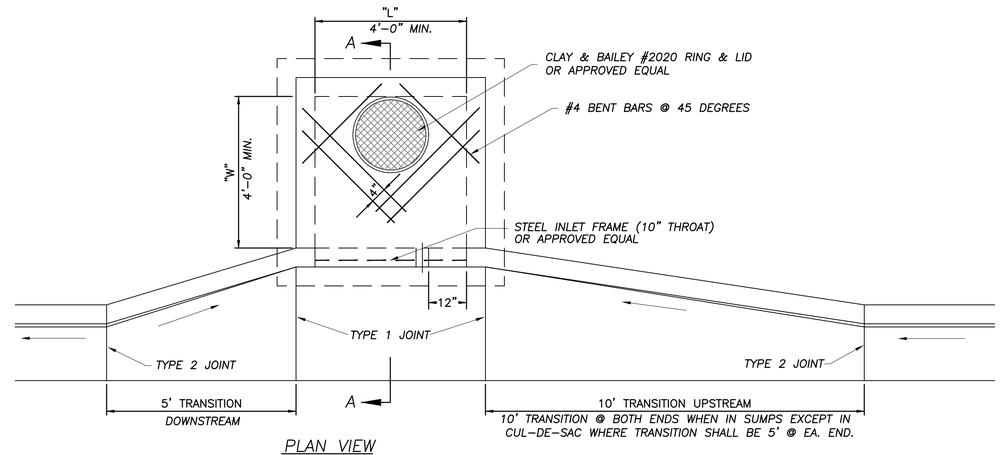
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

STANDARD DETAILS-2

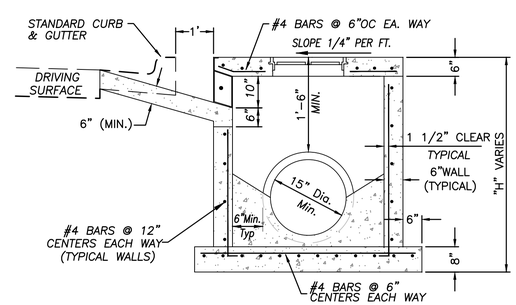
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. BOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
22
22 OF 66



PLAN VIEW



SECTION A-A

NOTES:

1. ALL CONCRETE SHALL BE 4000 psi.
2. INLET CONSTRUCTION NOTES SHALL LIST THE "L" DIMENSION FIRST, THE "W" DIMENSION SECOND, AND THE "H" DIMENSION THIRD.
3. FLOOR OF INLET SHALL HAVE A SHAPED CONCRETE INVERT TO PROVIDE FOR SMOOTH FLOW.
4. THE MINIMUM DIMENSION BETWEEN TOP OF PIPE AND TOP OF BOX SHALL BE 1'-6" (TYPICAL ALL WALLS)
5. ALL INGRADE INLETS SHALL CONFORM TO STREET GRADE. ALL INLETS IN SUMP SHALL BE LEVEL. BEVEL ALL EXPOSED EDGES WITH 3/4" TRIANGULAR MOLDING.
6. THE THROAT AND TRANSITION ARE SUBSIDIARY TO THE STRUCTURE.

Curb Inlet

NOT TO SCALE

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/11/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

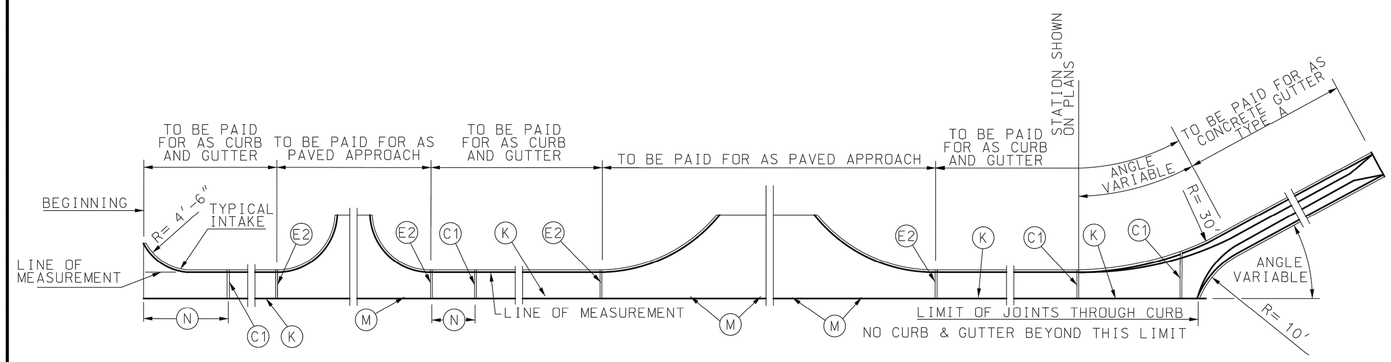
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

STORM SEWER DETAILS

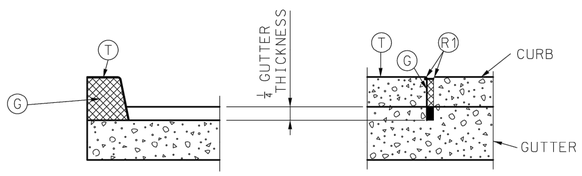
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

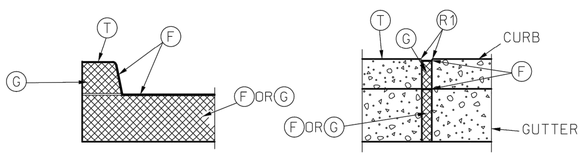
SHEET NUMBER
23
23 OF 66



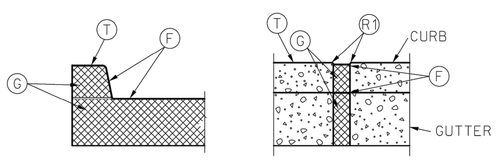
PLAN OF MEASUREMENT OF CURB & GUTTER AND JOINT PLAN



C1 JOINT



E2 JOINT



E1 JOINT

LEGEND

- C1 $\frac{1}{8}$" MAXIMUM WIDTH TRANSVERSE CONTRACTION JOINT (PREFORMED OR SAWED).
- E1 2" TRANSVERSE EXPANSION JOINT. (PREFORMED OR SAWED)
- E2 $\frac{1}{2}$" TRANSVERSE EXPANSION JOINT. (PREFORMED OR SAWED)
- F FILLER FOR JOINTS - HOT POURED.
- G PREFORMED JOINT FILLER MATERIAL.
- K TONGUE & GROOVE JOINT WITH TIE BAR - SEE DETAIL.
- M TONGUE & GROOVE JOINT WITHOUT TIE BARS - SEE DETAIL.
- N NOT LESS THAN 10' OR MORE THAN 30'.
- T TOP OF CURB.
- R1 ROUND TO $\frac{1}{4}$" RADIUS. (EXCEPT FOR SAWED JOINTS)

GENERAL NOTES:

A MINIMUM 4" TYPE 1 OR 5 AGGREGATE BASE SHALL BE PLACED BENEATH ALL CURB AND GUTTER SECTIONS AND INCLUDED WITHIN THE MAINLINE BASE PAY LIMITS.

WHEN CURBS ARE CONSTRUCTED DIRECTLY BENEATH GUARDRAIL, CURB HEIGHT SHALL BE 4 INCH BARRIER CURB, AS SHOWN ON STANDARD PLAN 606.00.

CURB, GUTTER AND CURB AND CUTTER CONSTRUCTED ALONG AND ATTACHED TO CONCRETE PAVEMENT OR BASE SHALL HAVE:

1. JOINT C1 ONE-QUARTER DEPTH OF CURB AND GUTTER THICKNESS AS A CONTINUATION OF EACH CONTRACTION JOINT IN THE BASE OR PAVEMENT.
2. JOINT E1 AS CONTINUATION OF 2" EXPANSION JOINT E IN THE CONCRETE BASE OR PAVEMENT SHALL EXTEND AND CONTINUE THROUGH THE CURB, CUTTER AND CURB AND GUTTER.
3. JOINT E2 THROUGH CURB AND CURB AND CUTTER AT THE BEGINNING AND END OF EACH PAVED APPROACH.

CURB, CURB AND GUTTER AND GUTTER CONSTRUCTED APART OR SEPARATED FROM CONCRETE BASE OR PAVEMENT OR AS A FORM FOR ASPHALTIC CONCRETE PAVEMENT SHALL HAVE A JOINT E2 ENTIRELY THROUGH THE CURB, CURB AND GUTTER AND GUTTER, AT THE BEGINNING AND END OF EACH "PAVED APPROACH" AND A JOINT C1 TO $\frac{1}{4}$ DEPTH OF CURB AND GUTTER THICKNESS AT INTERVALS OF 30 FEET BETWEEN APPROACHES.

JOINTS E1 AND E2 THROUGH CURB SHALL BE FILLED WITH PREFORMED FILLER MATERIAL AND SEALED WITH HOT POURED FILLER FOR JOINTS.

JOINT E1 IN GUTTER SHALL BE FILLED WITH PREFORMED FILLER AND SEALED WITH HOT FILLER MATERIAL.

JOINT E2 IN GUTTER SHALL BE FILLED WITH PREFORMED FILLER AND SEALED WITH FILLER OR FILLED WITH HOT POURED FILLER.

PREFORMED FILLER MATERIAL SHALL BE PLACED TO PROVIDE 1" HOT POURED FILLER FOR JOINTS.

THE BARRIER CLASS CURBS MAY BE CONSTRUCTED WITHOUT BATTER WHEN CONSTRUCTED ON A RADIUS OF 6 FEET OR LESS. THE R2 WILL BE REQUIRED.

WHERE A SIDEWALK INTERSECTS A CURB. THE SIDEWALK SHALL BE RAMPED NO STEEPER THAN 12:1 SLOPE TO PROVIDED ACCESS FOR WHEELCHAIR ACROSS APPROACHES.

PRECAST TYPE A AND B GUTTER ARE ONLY ALLOWED WHEN CONSTRUCTABILITY ISSUES MAKE CAST IN PLACE NOT PRACTICAL. PRECAST IS ONLY ALLOWED WITH THE APPROVAL OF THE ENGINEER. WHEN ALLOWED BY THE ENGINEER, TYPES A AND B GUTTER MAY BE PRECAST TO CONFORM TO THE DIMENSIONS SHOWN. THE PRECASTER SHALL SUBMIT SHOP DRAWINGS INDICATING THE SECTION LENGTH, SECTION CONNECTION, AND PROPOSED JOINT SEALING SYSTEM. WHEN PRECAST SECTIONS CANNOT CONFORM TO ANY VERTICAL OR HORIZONTAL CURVE THEN CAST IN PLACE IS THE ONLY OPTION. A COMBINATION OF CAST IN PLACE AND PRECAST GUTTER MAY BE PERMITTED.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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 CURB, CURB AND GUTTER AND GUTTER

DATE EFFECTIVE: 04/01/2021
DATE PREPARED: 1/27/2021

609.00P

SHEET NO. 1 OF 2

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/18/23
4	PER MODOT COMMENT	JGD	04/07/23

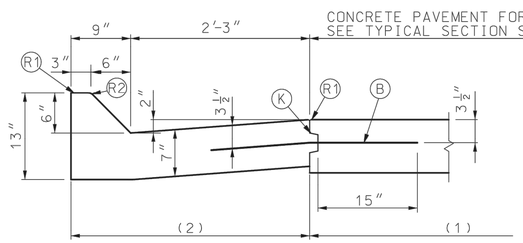
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

CURB DETAILS

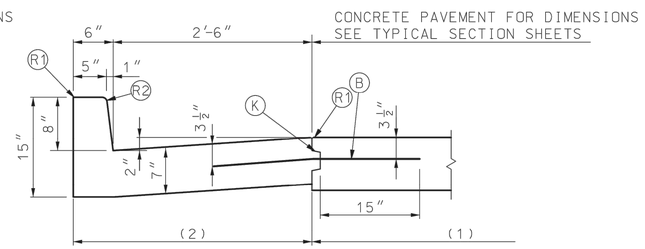
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. BOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
24
24 OF 66

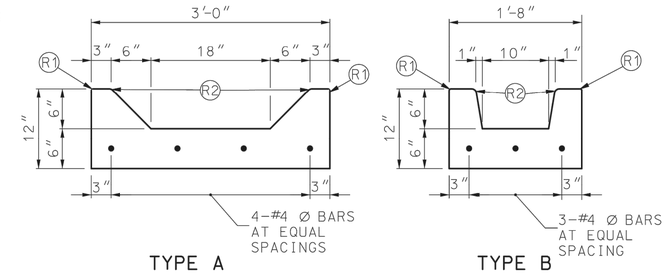


TYPE A
(MOUNTABLE)



TYPE B
(BARRIER)

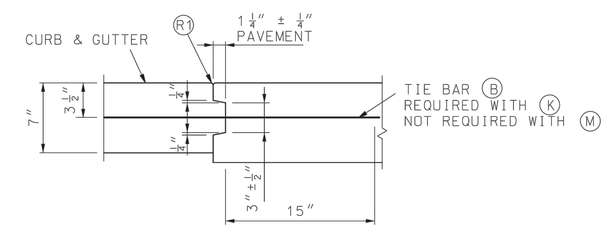
CURB & GUTTER



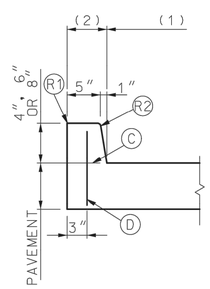
TYPE A

TYPE B

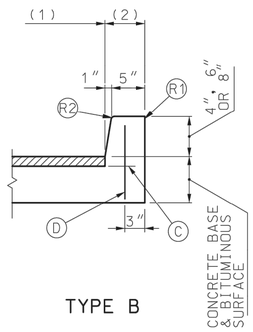
GUTTERS



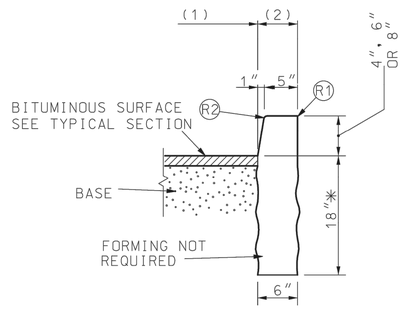
THRU TONGUE & GROOVE JOINT



TYPE A
(INTEGRAL)



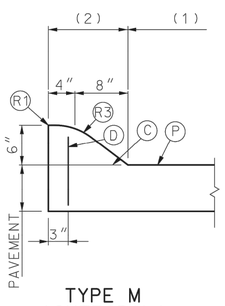
TYPE B



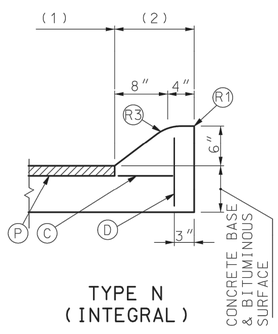
TYPE S
(SEPARATED)

✱ DEPTH MAY BE REDUCED IF KEYED 6″ IN ROCK

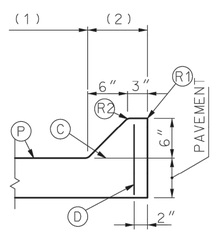
BARRIER CURBS



TYPE M
(INTEGRAL)

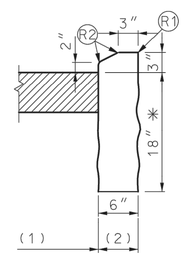


TYPE N
(INTEGRAL)

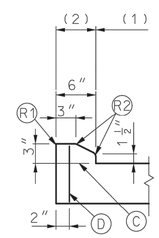


TYPE O
(INTEGRAL)

MOUNTABLE CURBS



TYPE F
(SEPARATED)



TYPE E
(INTEGRAL)

BEGINNING AND ENDINGS OF INTROCUCED LOW PROFILE CURBS SHALL UTILIZE CURB HEIGHT RUNOUT FORM 0 INCH TO 3 INCHES IN 5 FEET PAYMENT. LENGTH SHALL INCLUDE TAPERS.

✱ DEPTH MAY BE REDUCED IF KEYED 6″ IN ROCK.

LOW PROFILE CURB

LEGEND

(B) TIE BARS - 30″ X #5 Ø AT 30″ CTRS.

(C) PERMISSIBLE CONSTRUCTION JOINT. IF CONSTRUCTED IN THIS MANNER TIE BARS MUST BE USED.

(D) #4 Ø TIE BAR AT 24″ CENTERS LENGTH OF THE TIE BARS EQUALS THICKNESS OF PAVEMENT PLUS HEIGHT OF CURB, LESS 3 INCHES.

(K) TONGUE & GROOVE JOINT WITH TIE BAR - SEE DETAIL.

(P) TOP OF PAVEMENT OR CONCRETE BASE.

(R1) ROUND TO 1/4″ RADIUS. (EXCEPT FOR SAWED JOINTS)

(R2) ROUND TO 3/4″ RADIUS.

(R3) CONSTRUCT TO 9″ RADIUS

(1)PAY LIMIT FOR PAVEMENT

(2)PAY LIMIT FOR CURB, OR CURB & GUTTER.

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

STATE OF MISSOURI
ERIC E SCHROETER
NUMBER PE-28411
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONCRETE CURB, CURB AND GUTTER AND GUTTER

DATE EFFECTIVE: 07/01/2018
DATE PREPARED: 5/3/2018

609.00P

SHEET NO. 2 OF 2

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/15/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

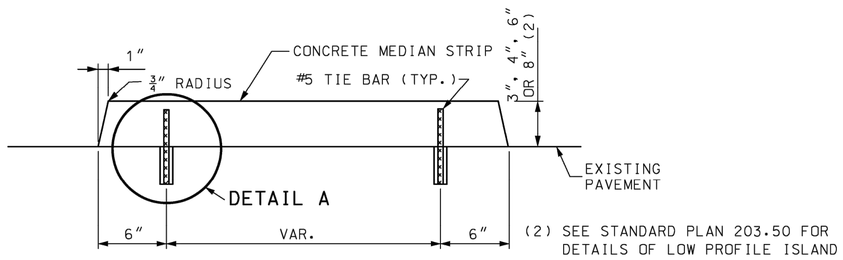
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

CURB DETAILS-2

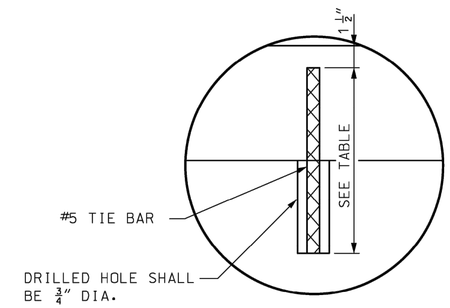
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
25
25 OF 66

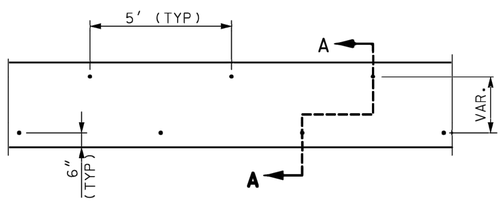


SECTION A–A
CONCRETE MEDIAN STRIP

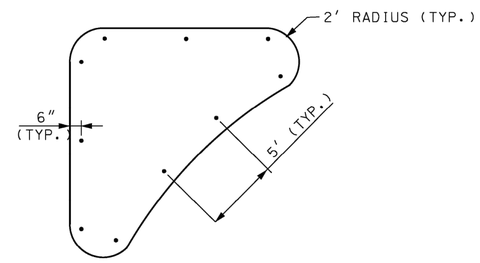


DETAIL A

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



TIE BAR LOCATIONS FOR
CONCRETE MEDIAN STRIP



TIE BAR LOCATIONS FOR
CONCRETE MEDIAN STRIP (ISLAND)

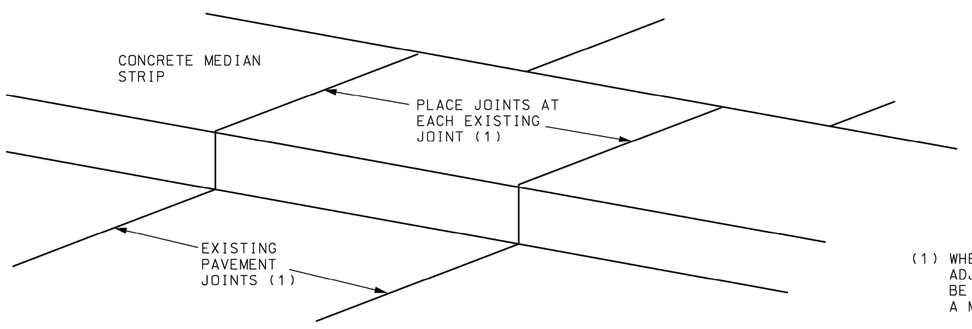
GENERAL NOTES:

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

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

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

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



CONCRETE MEDIAN STRIP JOINT LOCATION

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

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

608.30A

SHEET NO. 1 OF 1

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/15/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

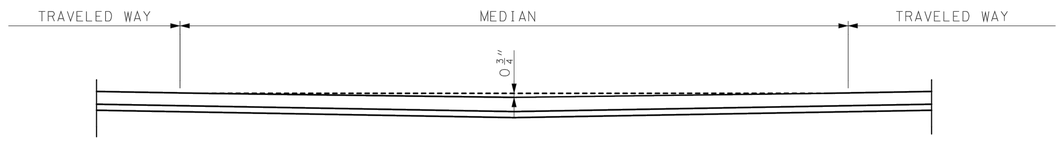
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

MEDIAN DETAILS

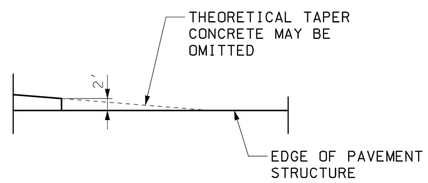
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. BOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

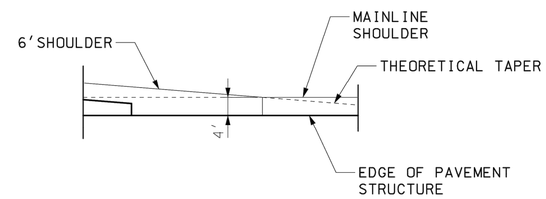
SHEET NUMBER
26
26 OF 66



SECTION ALONG MEDIAN OPENING ℄

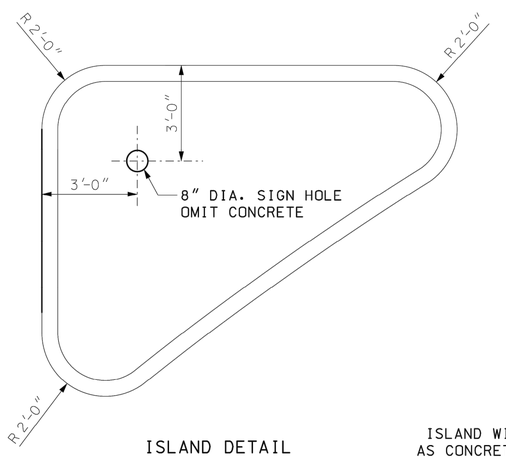


TAPER TREATMENT



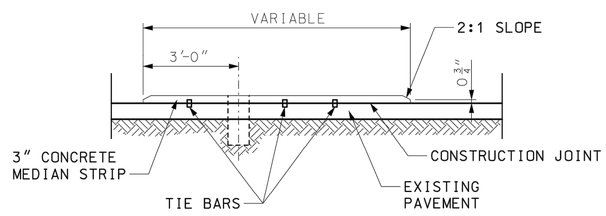
SHOULDER TAPER
TREATMENT

DETAIL A



ISLAND DETAIL

ISLAND WILL BE PAID FOR
AS CONCRETE MEDIAN STRIP.



LOW PROFILE ISLAND DETAIL

DETAIL B

GENERAL NOTES:
FOR DETAILS ON CONCRETE MEDIAN STRIP CONSTRUCTION, SEE STANDARD PLAN 608.30.

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

STATE OF MISSOURI
ERIC E. SCHROETER
NUMBER PE-28411
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

TYPICAL MEDIAN OPENING

DIVIDED HIGHWAYS

DATE EFFECTIVE:	04/01/2016	203.50N	SHEET NO.
DATE PREPARED:	2/11/2016		2 OF 2

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

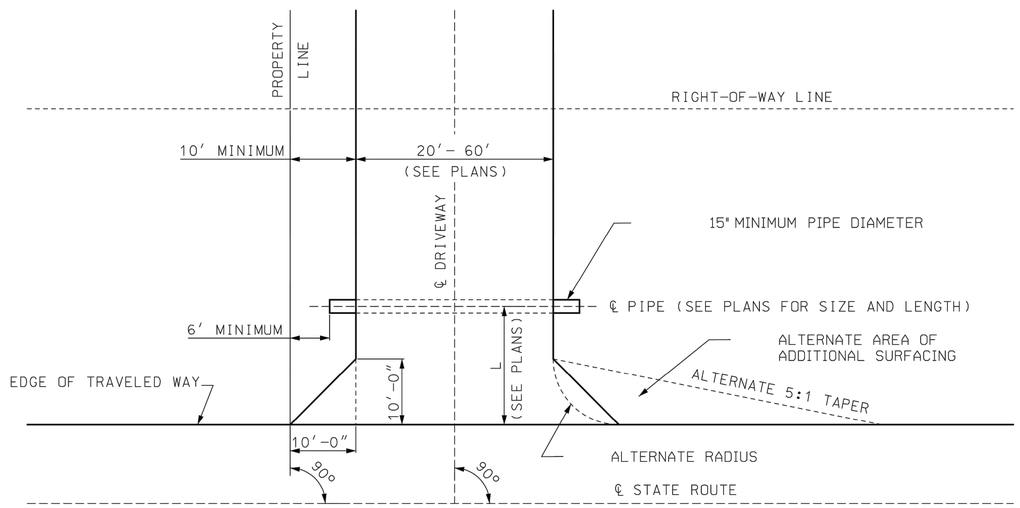
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

MEDIAN DETAILS-2

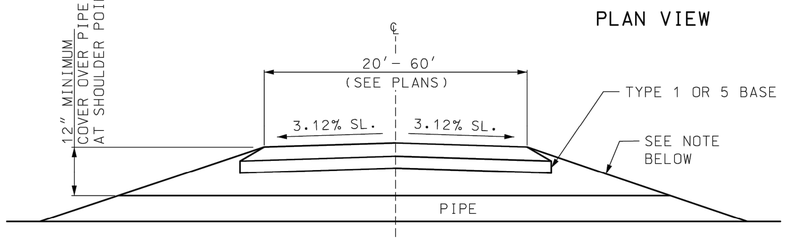
S 29 T47N R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

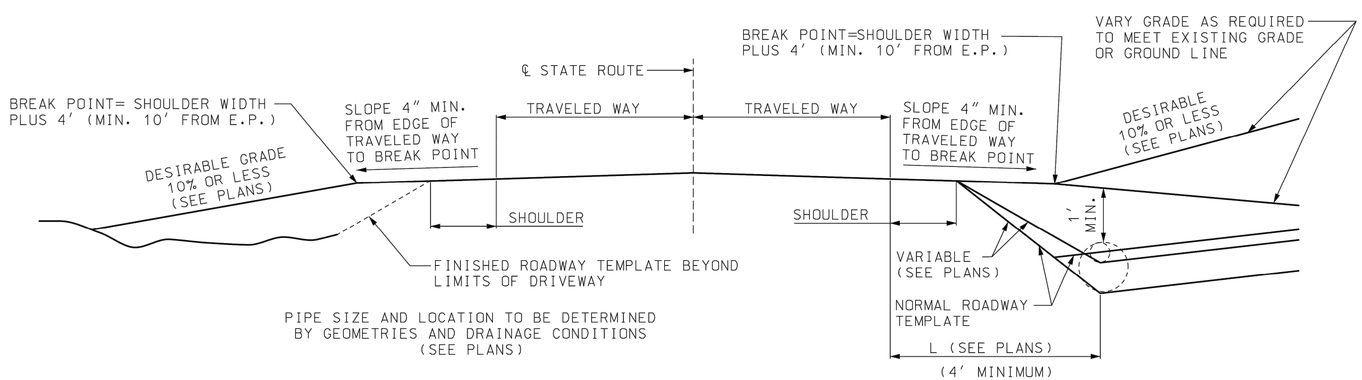
SHEET NUMBER
27
27 OF 66



PLAN VIEW



DRIVEWAY TYPICAL SECTION



IN FILLS

IN CUTS

PROFILE VIEW

DRIVEWAY SIDE SLOPES: ✳

1 TO 1700 VEHICLES PER DAY ON STATE ROUTE USE 3:1 SLOPE (OR 6:1 SLOPE WHERE PRACTICABLE).

OVER 1700 VEHICLES PER DAY ON STATE ROUTE USE 6:1 SLOPE (OR FLATTER WHERE PRACTICABLE).

NOTE: RECOMMENDED WIDTH OF DRIVEWAY - 20'

✳ IN ORDER TO MINIMIZE THE USE OF 6:1 SLOPED END PIPE SECTIONS ON NEW CONSTRUCTION AND WHERE POSSIBLE ON EXISTING ROUTES. THE LOCATION OF DRAINAGE PIPE SHOULD BE BEYOND THE CLEAR ZONE DISTANCE AS SHOWN IN TABLE 3.1 OF THE 1988 EDITION OF "ROADSIDE DESIGN GUIDE".

GENERAL NOTES:

NO PART OF THE DRIVEWAY EXCLUDING TAPERS SHALL BE CONSTRUCTED BEYOND THE PROPERTY FRONTAGE.

SURFACING SHALL BE AS SHOWN ON THE PLANS OR PERMIT.

4 INCHES OF TYPE 1 OR 5 BASE SHALL BE PLACED AND COMPACTED BENEATH THE AREAL SURFACE OF CONCRETE AND ASPHALT DRIVEWAYS.

LENGTH OF PIPE SHALL BE DETERMINED BY DEPTH AND LOCATION OF DITCH. (MINIMUM 32' LENGTH OF MINIMUM 15" DIAMETER PIPE), SEE PLANS.

THIS DRAWING ILLUSTRATES DRIVEWAY DETAILS FOR MINIMUM SITUATIONS. TRAFFIC VOLUMES, SAFETY CONSIDERATIONS, LOCAL REQUIREMENTS, ETC., MAY DICTATE MORE EXTENSIVE IMPROVEMENTS THAN ILLUSTRATED.

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.

DRIVEWAY
TYPE I

DATE EFFECTIVE: 07/01/2020
DATE PREPARED: 4/29/2020

203.61B

SHEET NO. 1 OF 1

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/18/23
4	PER MODOT COMMENT	JGD	04/07/23

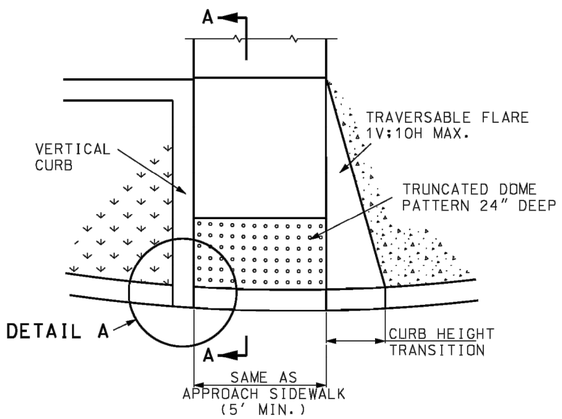
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

MEDIAN DETAILS-3

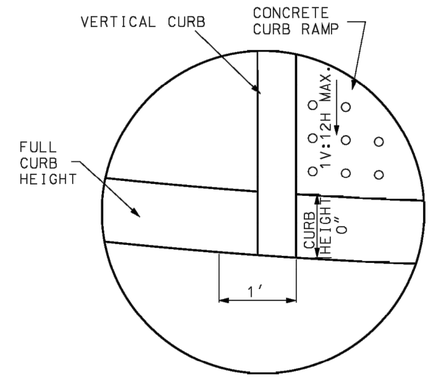
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI — PATRICK J. JOYCE — NUMBER PE-2009030032 — PROFESSIONAL ENGINEER
04/07/2023

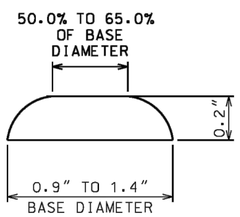
SHEET NUMBER
28
28 OF 66



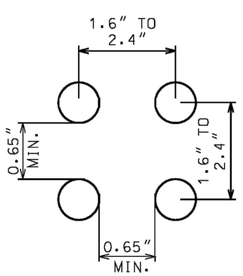
CURB RAMP DETAIL



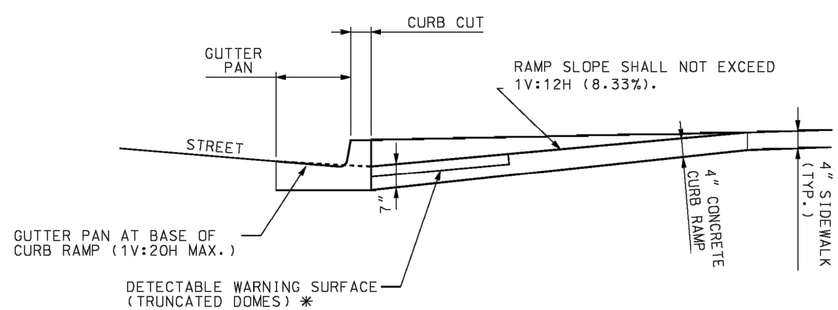
DETAIL A



TRUNCATED DOMES CROSS SECTION



TRUNCATED DOMES SPACING



SECTION A-A

✳ SOME DETECTABLE WARNING PRODUCTS REQUIRE A CONCRETE BORDER FOR PROPER INSTALLATION. THE CONCRETE BORDER SHALL NOT EXCEED 2 INCH PER SIDE.

GENERAL NOTES:

ALL AREAS OF THE PEDESTRIAN ACCESS ROUTE MUST BE COMPLIANT WITH THE AMERICANS WITH DISABLILITES ACT – GUIDELINES FOR ACCESSIBLE PUBLIC RIGHTS OF WAY". EXCEPTIONS MUST BE APPROVED BY THE ENGINEER. ALL OTHER AREAS OF NON-COMPLIANCE SHALL BE REMOVED AND CORRECTED AT THE CONTRACTOR'S EXPENSE.

THE SURFACES OF PEDESTRIAN ACCESS ROUTES AND ELEMENTS, AND SPACES REQUIRED TO CONNECT TO PEDESTRIAN ACCESS ROUTES, SHALL BE FIRM, STABLE, SLIP RESISTANT, AND SHALL NOT POND WATER.

SIDEWALK, RAMP AND LANDING CROSS SLOPES SHALL BE 1.00% TO FACILITATE DRAINAGE (2.00% MAX.).

THE CROSS SLOPE OF THE CONTINUOUS PEDESTRIAN ACCESS ROUTE THROUGH ENTRANCES, ALLEYS, AND SIDEROAD CONNECTIONS WITH STOP OR YIELD CONTROL SHALL BE 1.00% TO FACILITATE DRAINAGE (2.00% MAX.).

WHERE PEDESTRIAN ACCESS ROUTES ARE CONTAINED WITHIN PEDESTRIAN STREET CROSSINGS WITHOUT YIELD OR STOP CONTROL, THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL BE 5.00% MAXIMUM.

WHERE PEDESTRIAN ACCESS ROUTES ARE CONTAINED WITHIN MIDBLOCK PEDESTRIAN STREET CROSSINGS, THE CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE SHALL BE PERMITTED TO EQUAL THE STREET OR HIGHWAY GRADE.

30"x 48" CLEAR SPACE SHALL BE PROVIDED CENTERED ON THE PEDESTRIAN PUSH BUTTON.

BEYOND THE BOTTOM GRADE BREAK OF A CURB RAMP, A CLEAR SPACE 4'MINIMUM BY 4'MINIMUM SHALL BE PROVIDED WITHIN THE WIDTH OF THE PEDESTRIAN STREET CROSSING AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE.

SIDE FLARES OF CURB RAMPS, IN THE PATH OF PEDESTRIAN TRAVEL (TRAVERSABLE), SHALL NOT EXCEED A SLOPE OF 1V:10H. SIDE FLARES OUTSIDE THE PEDESTRIAN PATH (NONTRAVERSABLE) MAY BE VERTICAL.

TRANSITION FROM SIDEWALK OR CURB RAMP TO GUTTER TO ROADWAY SHALL BE FLUSH.

DETECTABLE WARNING SURFACES (TRUNCATED DOMES) SHALL BE PREFORMED AND INSTALLED AS PER MANUFACTURER'S RECOMENDATIONS. STAMPED CONCRETE WILL NOT BE ACCEPTED.

THE DETECTABLE WARNING SURFACE SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. TRUNCATED DOMES SHALL SPAN THE FULL WIDTH OF THE RAMP OR LANDING 24" DEEP.

DETECTABLE WARNING SURFACES SHALL BE ALIGNED PERPENDICULAR OR RADIAL TO THE BREAK BETWEEN THE RAMP, LANDING OR BLENDED TRANSITION, AND THE STREET.

WHERE THE BOTTOM GRADE BREAK OF A CURB RAMP IS LESS THAN 5' FROM THE BACK OF CURB, DETECTABLE WARNINGS SHALL BE LOCATED ON THE RAMP SURFACE AT THE BACK OF THE CURB. WHERE THE GRADE BREAK IS GREATER THAN 5' FROM THE BACK OF CURB, THE DETECTABLE WARNING SHALL BE LOCATED ON THE LOWER LANDING.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

STATE OF MISSOURI
ERIC E. SCHROETER
NUMBER PE-28411
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CURB RAMPS

DATE EFFECTIVE: 04/01/2015
DATE PREPARED: 5/29/2015

608.50

SHEET NO. 1 of 4

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

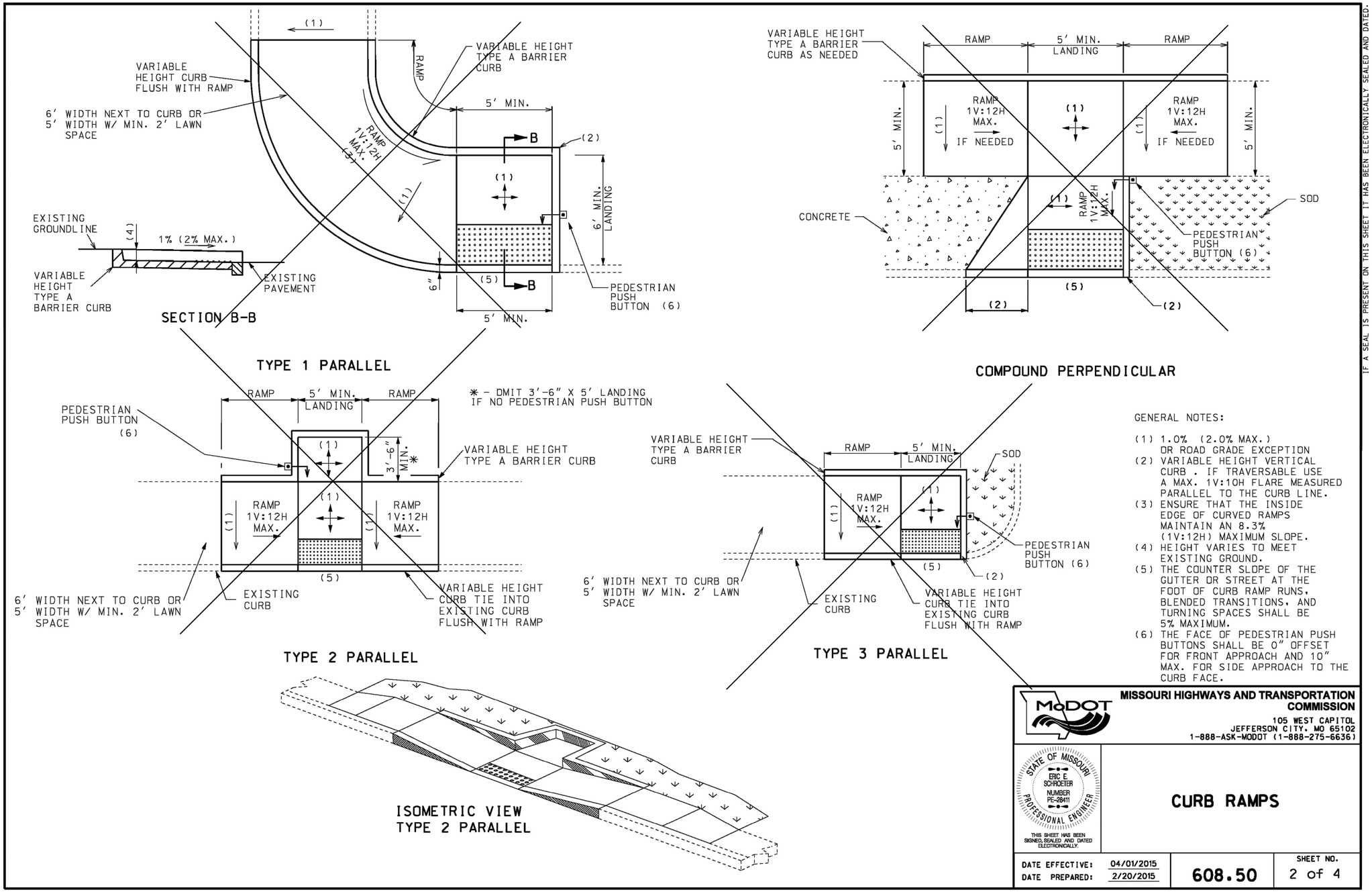
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

CURB RAMP DETAILS-1

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
29
29 OF 66



GENERAL NOTES:

(1) 1.0% (2.0% MAX.) OR ROAD GRADE EXCEPTION
(2) VARIABLE HEIGHT VERTICAL CURB . IF TRAVERSABLE USE A MAX. 1V:10H FLARE MEASURED PARALLEL TO THE CURB LINE.
(3) ENSURE THAT THE INSIDE EDGE OF CURVED RAMPS MAINTAIN AN 8.3% (1V:12H) MAXIMUM SLOPE.
(4) HEIGHT VARIES TO MEET EXISTING GROUND.
(5) THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF CURB RAMP RUNS, BLENDED TRANSITIONS, AND TURNING SPACES SHALL BE 5% MAXIMUM.
(6) THE FACE OF PEDESTRIAN PUSH BUTTONS SHALL BE 0" OFFSET FOR FRONT APPROACH AND 10" MAX. FOR SIDE APPROACH TO THE CURB FACE.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

STATE OF MISSOURI — ERIC E. SCHROETER — NUMBER PE-28411 — PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CURB RAMPS

DATE EFFECTIVE: 04/01/2015
DATE PREPARED: 2/20/2015

608.50

SHEET NO. 2 of 4

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

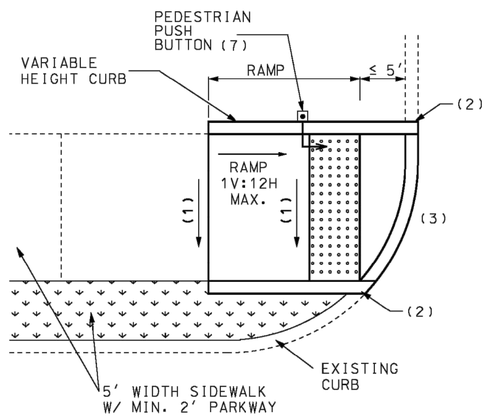
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

CURB RAMP DETAILS-2

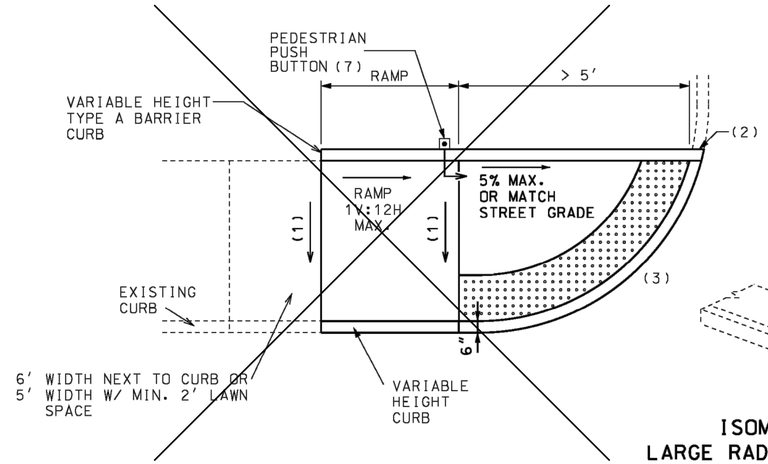
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI — PATRICK J. JOYCE — NUMBER PE-2009030032 — PROFESSIONAL ENGINEER
04/07/2023

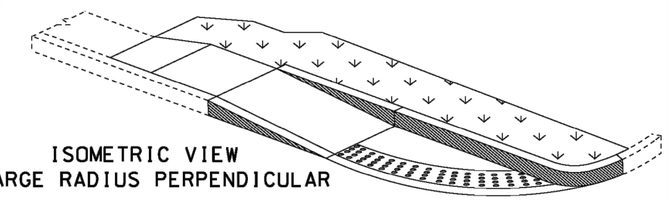
SHEET NUMBER
30
30 OF 66



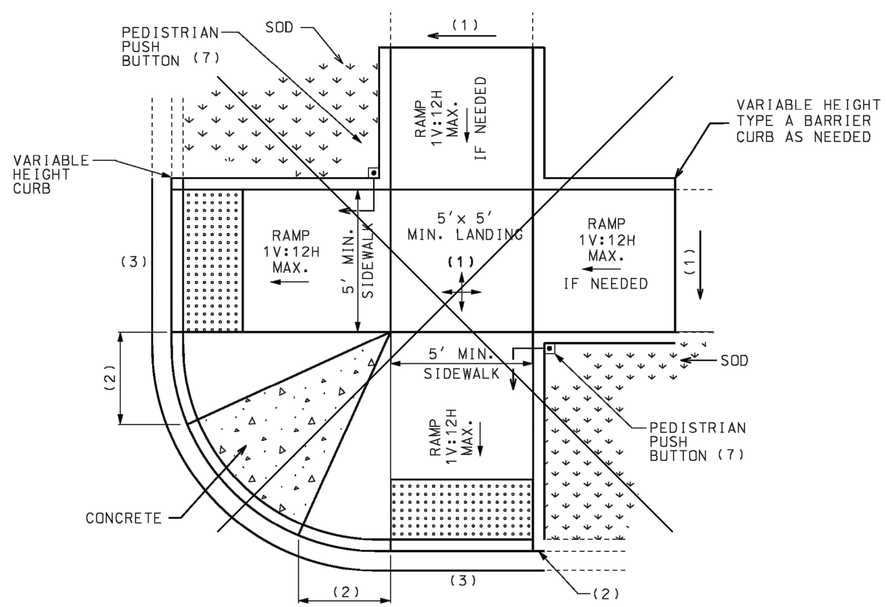
SMALL RADIUS PERPENDICULAR



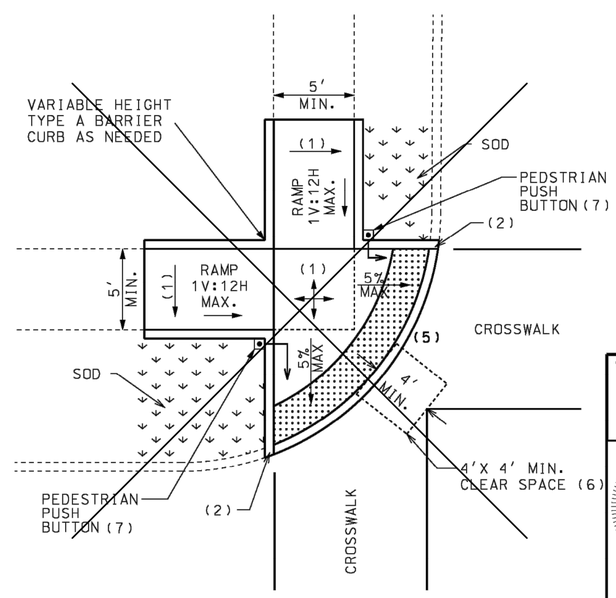
LARGE RADIUS PERPENDICULAR



ISOMETRIC VIEW
LARGE RADIUS PERPENDICULAR



DUAL PERPENDICULAR



BLENDED TRANSITION

GENERAL NOTES:

(1) 1.0% MINIMUM, 2.0% MAXIMUM.
(2) VERTICAL OR 1' FLARE. IF TRAVERSABLE USE A MAX. 1V:10H FLARE MEASURED PARALLEL TO THE CURB LINE.
(3) ENSURE THAT THE INSIDE EDGE OF CURVED RAMPS MAINTAIN AN 8.3% (1V:12H) MAXIMUM SLOPE.
(4) HEIGHT VARIES TO MEET EXISTING GROUND.
(5) THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF CURB RAMP RUNS.BLENDED TRANSITIONS. AND TURNING SPACES SHALL BE 5% MAXIMUM.
(6) BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE 4'X 4' MINIMUM SHALL BE PROVIDED WITHIN THE WIDTH OF THE PEDESTRIAN STREET CROSSING AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE.
(7) THE FACE OF PEDESTRIAN PUSH BUTTONS SHALL BE 0" OFFSET FOR FRONT APPROACH AND 10" MAX. FOR SIDE APPROACH TO THE CURB FACE.

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

STATE OF MISSOURI
ERIC E. SCHROETER
NUMBER PE-28411
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CURB RAMPS

DATE EFFECTIVE: 04/01/2015
DATE PREPARED: 2/20/2015

608.50

SHEET NO. 3 of 4

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/15/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

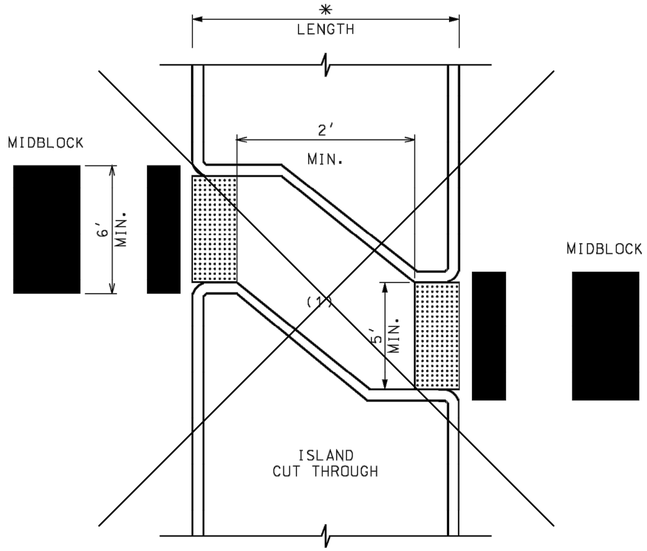
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

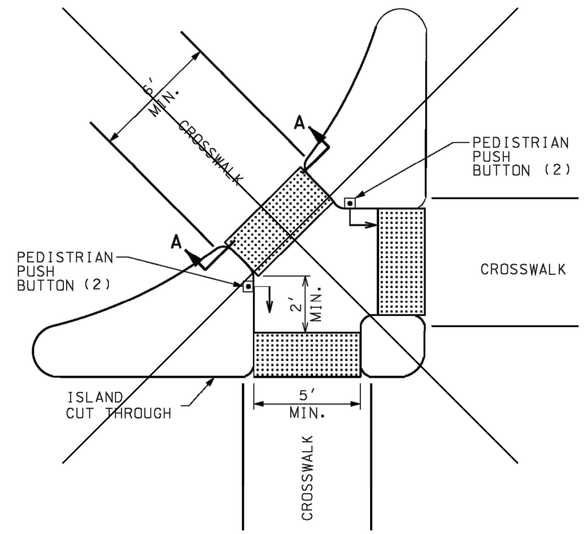
CURB RAMP DETAILS-3

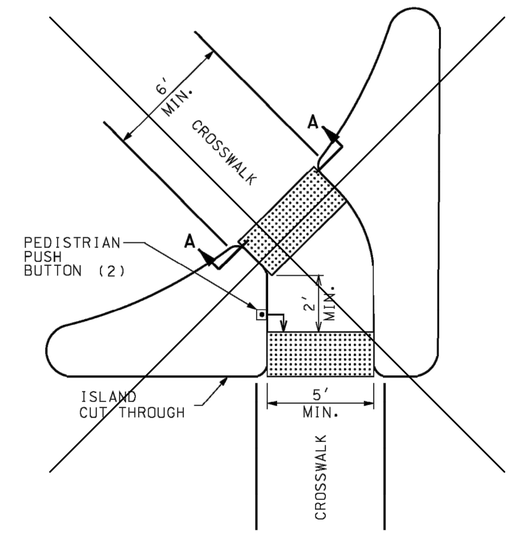
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
31
31 OF 66

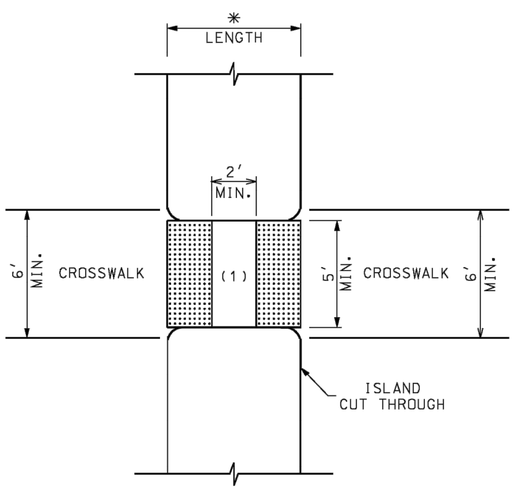


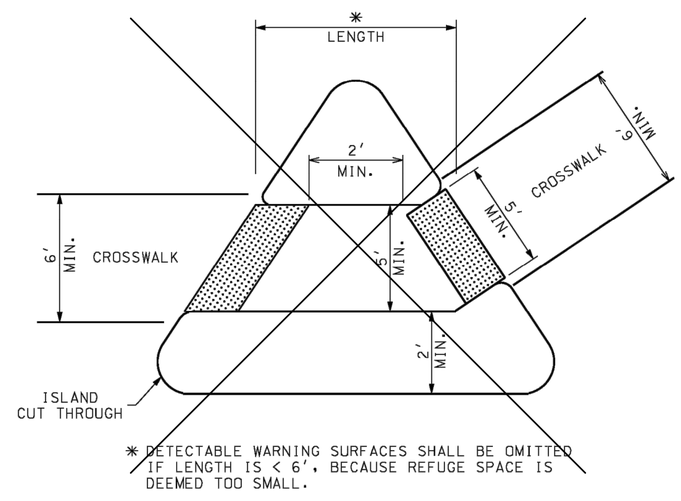




IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

(2) PEDESTRIAN PUSH BUTTONS SHALL BE 0" OFFSET FOR FRONT APPROACH AND 10" MAX. FOR SIDE APPROACH TO THE CURB FACE.

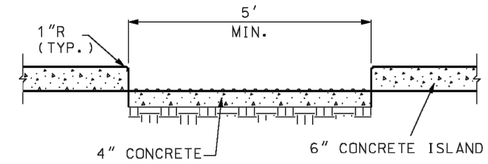




* DETECTABLE WARNING SURFACES SHALL BE OMITTED IF LENGTH IS < 6′, BECAUSE REFUGE SPACE IS DEEMED TOO SMALL.

ISLAND CUT THROUGHS

(1) DETECTABLE WARNING SURFACES SHALL BE PLACED AT THE EDGES OF THE PEDESTRIAN ISLAND AND SHALL BE SEPARATED BY 2′ MIN. LENGTH OF SURFACE WITHOUT DETECTABLE WARNINGS.



SECTION A-A
ISLAND CUT THROUGH TYPICAL

RAMP OR CUT-THROUGH DEPENDING ON ISLAND WIDTH. IF RAMPED, PROVIDE 4′ MINIMUM LANDING AND SLOPE RAMPS AT 1V:12H MAX.

RAMP MUST BE CONSTRUCTED TO DRAIN TO THE OUTSIDE.

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

STATE OF MISSOURI
ERIC E SCHROETER
NUMBER PE-28411
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CURB RAMPS

DATE EFFECTIVE: 04/01/2015
DATE PREPARED: 2/20/2015

608.50

SHEET NO. 4 of 4

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

CURB RAMP DETAILS-4

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOHNSON
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

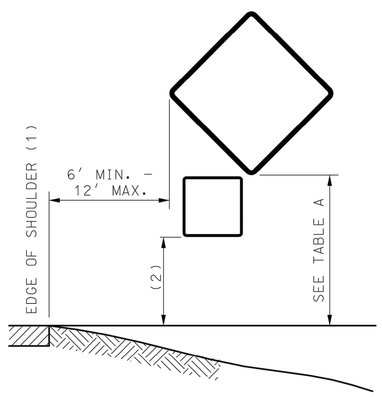
SHEET NUMBER
32
32 OF 66

TABLE A
WORK ZONE SIGN MOUNTING REQUIREMENTS

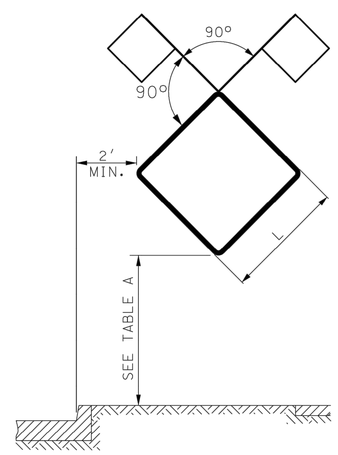
TYPE	SIGN SUPPORT	SIGN SUBSTRATE	MINIMUM MOUNTING HEIGHT(3)	USAGE LIMITATIONS	COMMENTS
POST	PERFORATED SQUARE STEEL TUBE U-CHANNEL WOOD	RIGID	5′ RURAL UNDIVIDED HIGHWAYS 7′ RURAL DIVIDED HIGHWAYS 7′ URBAN HIGHWAYS	NONE	POSTS SHALL BE FREE OF ANY BRACING AND EXTEND NO FURTHER ABOVE THE SIGN EXCEPT AS NEEDED FOR WARNING LIGHT ATTACHMENT. FOR DETAILS OF POST INSTALLATION DETAILS SEE SHEET NO. 2 OF 9. GALVANIZATION OF POSTS WILL NOT BE REQUIRED.
TYPE 1 PORTABLE	SKID FOLD-UP STAND	RIGID	5′ RURAL UNDIVIDED HIGHWAYS 7′ RURAL DIVIDED HIGHWAYS 7′ URBAN HIGHWAYS	PERMITTED ONLY WHERE POST MOUNTING IS NOT FEASIBLE.	SYSTEMS SHALL COMPLY WITH CRASH TEST REQUIREMENTS OF NCHRP 350 TEST LEVEL 3 AND MAY BE PLACED ADJACENT TO OR WITHIN THE ROADWAY PROVIDED A MINIMUM LATERAL CLEARANCE OF 3 FEET, MEASURED HORIZONTALLY FROM THE EDGE OF THE SIGN TO THE EDGE OF DESIGNATED TRAVELED WAY, IS MAINTAINED.
TYPE 2 PORTABLE	EASEL FOLD-UP STAND SELF-DRIVING POST TYPE III MOVABLE BARRICADE SKID	FLEXIBLE RIGID	12″(4)	PERMITTED ONLY FOR INSTALLATION UP TO 3 DAYS(5). WHERE SIGNS ARE OBSCURED BY OTHER OBJECTS (I.E., TRAFFIC CONTROL DEVICES, PARKED VEHICLES, BARRIER, VEGETATION, ETC.) OR INSTALLED ON MULTI-LANE UNDIVIDED FACILITIES OR MULTI-LANE DIVIDED FACILITIES WITH 3 OR MORE LANES IN ONE DIRECTION, MOUNTING HEIGHTS SHALL BE AS SPECIFIED FOR POST-MOUNTED SIGNS.	SYSTEMS SHALL COMPLY WITH CRASH TEST REQUIREMENTS OF NCHRP 350 TEST LEVEL 3 AND MAY BE PLACE ADJACENT TO OR WITHIN ROADWAY PROVIDED A MINIMUM LATERAL CLEARANCE OF 3 FEET, MEASURED HORIZONTALLY FROM THE EDGE OF THE SIGN TO THE EDGE OF THE DESIGNATED TRAVELED WAY, IS MAINTAINED.
BARRIER	CONCRETE TRAFFIC BARRIER GUARDRAIL	FLEXIBLE RIGID	5′ RURAL UNDIVIDED HIGHWAYS 7′ RURAL DIVIDED HIGHWAYS 7′ URBAN HIGHWAYS	PERMITTED ONLY WHERE LONGITUDINAL BARRIER IS PRESENT.	SYSTEMS SHALL PROVIDE POSITIVE CONNECTION TO THE BARRIER AND MINIMIZE POTENTIAL FOR VEHICLE SNAGGING.
VEHICLE	PAVEMENT MARKING EQUIPMENT PILOT CAR PROTECTIVE VEHICLE	FLEXIBLE RIGID	48″ (6)	PERMITTED ONLY IN PILOT CAR OR MOVING OPERATIONS.	

(3) MEASURED FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF THE PAVEMENT.
(4) MOUNTING HEIGHTS FOR REGULATORY AND GUIDE SIGNS SHALL BE AS SPECIFIED FOR POST-MOUNTED SIGNS.
(5) SIGNS MOUNTED ON TYPE III BARRICADES, GORE EXIT SIGN, AND SIGNS FOR CROSWALK/SIDEWALKCLOSURES MAY BE LEFT IN PLACE FOR MORE THAN 3 DAYS.
(6) DEVIATIONS AS APPROVED BY THE ENGINEER.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



(1) EDGE OF TRAVELED WAY WHERE THERE IS NO PAVED OR STABILIZED SHOULDER.
(2) ONE-FOOT LESS THAN MOUNTING HEIGHT NOTED IN TABLE A.



HEIGHT AND LATERAL LOCATIONS FOR POST AND PORTABLE SIGN MOUNTING

GENERAL NOTES:

LONGITUDINAL SPACING OF SIGNS SHOWN IN THE PLANS ARE PREFERRED MINIMUMS, BUT MAY BE ADJUSTED TO MEET EXISTING FIELD CONDITIONS WITH APPROVAL FROM THE ENGINEER.

SIGNS SHALL NOT BE MOUNTED IN OR ON CHANNELIZERS.

ALL POSTS AND SIGNS SHALL BE INSTALLED AND MAINTAINED IN A PLUMB POSITION.

CONSTRUCTION SIGNS SHALL NOT BE LOCATED ON SIDEWALKS, BICYCLE LANES, OR AREAS DESIGNATED FOR PEDESTRIAN OR BICYCLE TRAFFIC.

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.

TEMPORARY
TRAFFIC CONTROL DEVICES
SIGN MOUNTING REQUIREMENTS

DATE EFFECTIVE: 10/01/2021
DATE PREPARED: 7/13/2021

616.10AY

SHEET NO. 1 OF 9

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/18/23
4	PER MODOT COMMENT	JGD	04/07/23

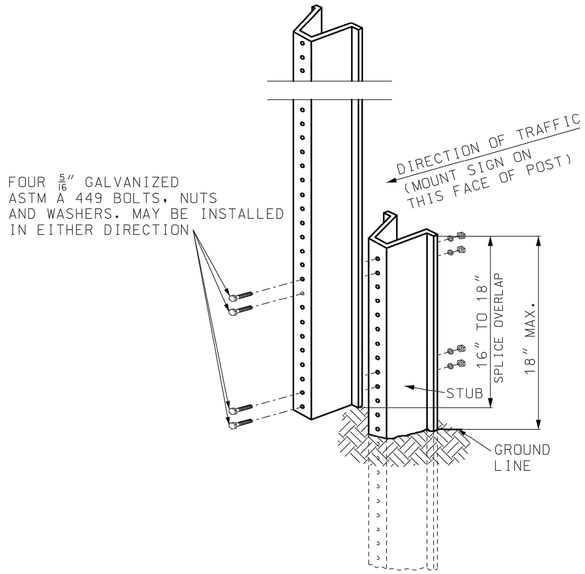
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

TRAFFIC CONTROL DETAILS-1

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
33
33 OF 66



U-CHANNEL POST DETAIL

USE OF SPLICE IS OPTIONAL.

SPLICE OVERLAP SHALL BE POSITION ENTIRELY BETWEEN GROUND LINE AND 18" ABOVE GROUND LINE.

✳ IF A PLAQUE IS USED, NEITHER THE SIGN NOR PLAQUE SHALL BE POSITIONED WITHIN THE SPLICE OVERLAP AREA.

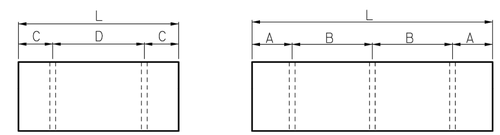
ONLY ONE SPLICE WILL BE ALLOWED PER POST.

POST TYPE

SIGN AREA (SQ.FT.)	U-CHANNEL	WOOD	PERFORATED SQUARE STEEL TUBING
≤ 10	1 - 3.0 LB./FT.✳	1 - 4" X 4"✳	1 - 2" 12 GA.✳
> 10 ≤ 16	2 - 3.0 LB./FT.	2 - 4" X 4" 1 - 4" X 6"✳	2 - 2" 12 GA. 1 - 2½" 12 GA.
> 16 ≤ 24	2 - 3.0 LB./FT.	2 - 4" X 6"	3 - 2" 12 GA.✳✳
> 24 ≤ 32	3 - 3.0 LB./FT.	2 - 4" X 6"	N/A
> 30 ≤ 50	N/A	2 - 6" X 6"	N/A

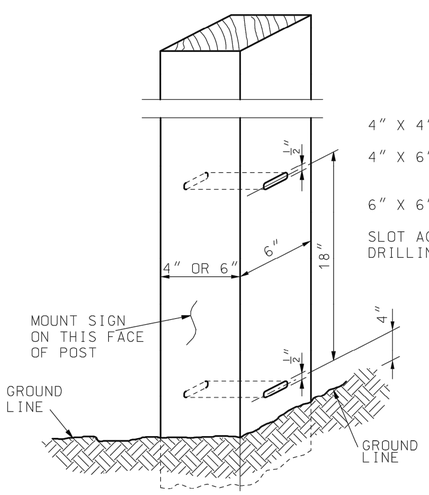
✳ SIGNS GREATER THAN 4 FEET IN WIDTH, EXCEPT DIAMOND SHAPE SIGNS, REQUIRE TWO POSTS.

✳✳ REQUIRES SLIP BASE PER MANUFACTURER'S RECOMMENDATION.



A = 1/6(L) C = 1/5(L)
B = 1/3(L) D = 3/5(L)

POST SPACING



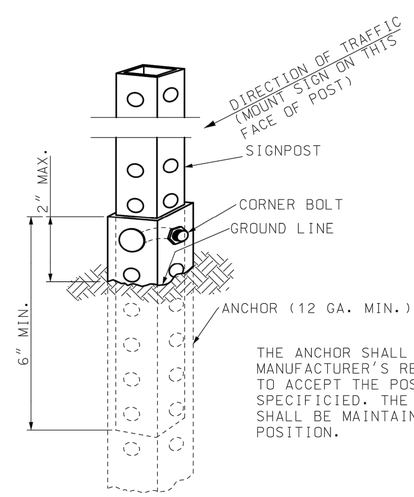
4" X 4" WOOD POST - NO SLOTS OR HOLES REQUIRED

4" X 6" WOOD POST - 1½" X ½" SLOT ON 6" SIDE OR 1½" DIA. HOLE ON 6" SIDE

6" X 6" WOOD POST - 2" X ½" SLOT OR 2" DIA. HOLE

SLOT ACROSS NEUTRAL AXIS FORMED BY SUCCESSIVE DRILLING WITH ½" BIT.

WOOD POST DETAIL



THE SIGN POST MAY BE ATTACHED TO THE ANCHOR WITH A CORNER BOLT OR STRAIGHT BOLT PER MANUFACTURER'S SPECIFICATION.

THE ANCHOR SHALL BE SIZED AS PER MANUFACTURER'S RECOMMENDATIONS TO ACCEPT THE POST SIZE SPECIFICIED. THE SIGN ASSEMBLY SHALL BE MAINTAINED IN A PLUMB POSITION.

PERFORATED SQUARE STEEL TUBE POST DETAIL

GENERAL NOTES:

ALL POSTS SHALL BE EMBEDDED A MINIMUM OF 3 FEET.

SIGN INSTALLATION DETAILS SHOWN SHALL APPLY TO ALL POSTS IN A MULTI-POST INSTALLATION.

AT THE ENGINEERS DISCRETION A FLUORESCENT PAINT SHALL BE APPLIED HEAVILY TO BOTH SIDES OF U-CHANNEL POST STUB FOR A LENGTH OF AT LEAST 6 INCHES BELOW THE TOP OF THE STUB.

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.

TEMPORARY
TRAFFIC CONTROL DEVICES
POST INSTALLATION DETAILS

DATE EFFECTIVE: 10/01/2021
DATE PREPARED: 7/13/2021

616.10AY

SHEET NO. 2 OF 9

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/15/22
3	PER MODOT COMMENT	JGD	01/18/23
4	PER MODOT COMMENT	JGD	04/07/23

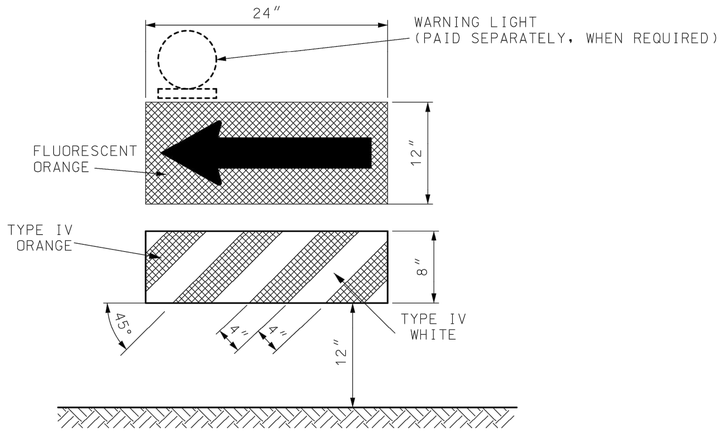
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

TRAFFIC CONTROL DETAILS-2

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
34
34 OF 66

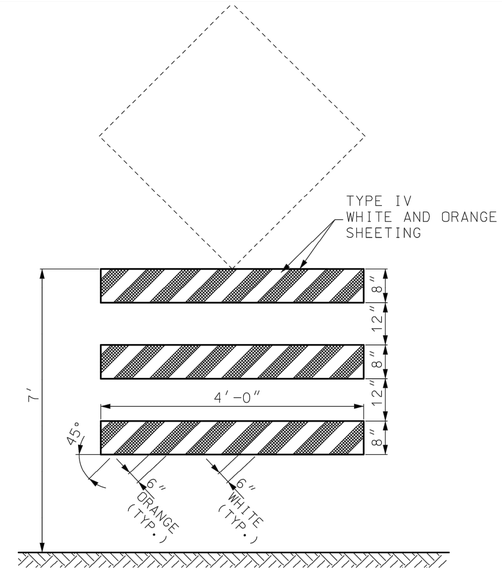


DIRECTION INDICATOR BARRICADE

VERTICAL DIMENSIONS DO NOT INCLUDE PROJECTIONS DESIGNED FOR EASE OF HANDLING.

DIRECTION INDICATOR BARRICADES SHALL NOT BE USED IN SHIFTING TAPERS UNLESS SHOWN ON THE PLANS.

THE PANELS SHALL BE SECURELY ATTACHED TO A SUPPORT THAT IS PORTABLE, CAPABLE OF REMAINING UPRIGHT AND ENTIRELY FREE STANDING.



ADVANCE WARNING RAIL SYSTEM

MAXIMUM WEIGHT OF SIGN SHALL NOT EXCEED 25 LBS.

THE SIGN AND RAIL SYSTEM MAY BE MOUNTED AS TWO SEPARATE CRASHWORTHY DEVICES. THE RAIL SYSTEM SHALL BE LOCATED DIRECTLY IN FRONT OF THE SIGN WITH 7 TO 10 FEET SEPARATING THE TWO DEVICES.

WHERE MARKING IS NOT PROVIDED ON THE BACKSIDE, STRIPS OF 3″ WIDE MODOT TYPE 7 ORANGE SHEETING MAY BE APPLIED TO THE ENDS OF EACH RAIL TO HELP DELINEATE THE DEVICE.

WHITE AND ORANGE REFLECTIVE SHEETING SHALL BE IN ACCORDANCE WITH SEC 1042.2.7.4.

GENERAL NOTES:

WHITE, ORANGE, AND FLUORESCENT ORANGE REFLECTIVE SHEETING SHALL BE IN ACCORDANCE WITH SEC 1042.2.7.

BALLAST FOR TRAFFIC CONTROL DEVICES SHALL CONFORM TO MANUFACTURERS' RECOMMENDATION FOR FIELD CONDITIONS WHEN APPLICABLE.

IF USED, THE WARNING LIGHT UNIT AND BATTERY COMPARTMENT SHALL BE FURNISHED BY THE DEVICE MANUFACTURER OR OTHERWISE MEET THE MANUFACTURER'S RECOMMENDATIONS FOR DESIGN AND WILL BE REQUIRED ON ALL DEVICES IN THE SERIES.

WARNING LIGHTS SHALL BE IN ACCORDANCE WITH SEC 1063.5.

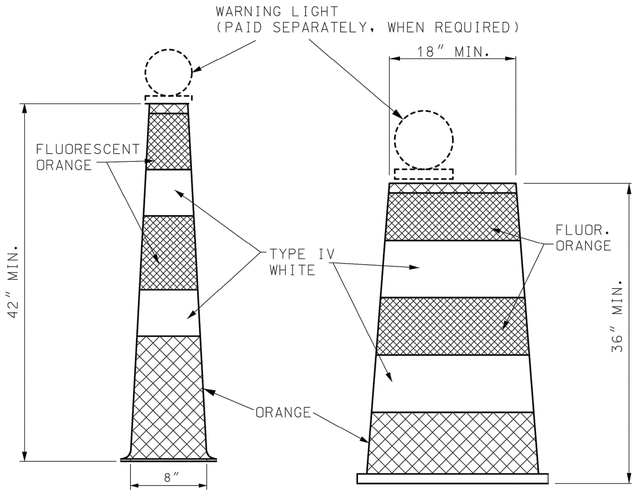
UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY, AT NO ADDITIONAL COST, USE DRUM-LIKE CHANNELIZERS IN LIEU OF TRIM-LINE CHANNELIZERS TO PROVIDE LONGITUDINAL CHANNELIZATION WITHIN THE ACTIVITY AREA WHERE NO RAMPS, INTERSECTIONS OR LIMITED LATERAL CLEARANCE EXISTS.

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY, AT NO ADDITIONAL COST, USE DIRECTION INDICATOR BARRICADES IN LIEU OF TRIM-LINE CHANNELIZERS IN MERGING TAPERS.

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY, AT NO ADDITIONAL COST, USE VERTICAL PANELS IN LIEU OF TRIM-LINE CHANNELIZERS TO PROVIDE LONGITUDINAL CHANNELIZATION WITHIN THE ACTIVITY AREA.

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY, AT NO ADDITIONAL COST, USE CONES IN LIEU OF TRIM-LINE CHANNELIZERS DURING DAYTIME OPERATIONS ON MINOR ROUTES.

PANEL AND RAIL MARKINGS FOR TRAFFIC DELINEATION SHALL SLOPE DOWNWARD TOWARD THE INTENDED DIRECTION OF TRAVEL. ILLUSTRATIONS SHOWN ARE FOR INSTANCES WHERE TRAFFIC MOVES TO THE LEFT, REVERSE CONFIGURATIONS SHALL BE USED FOR TRAFFIC MOVEMENTS TO THE RIGHT. MARKINGS SHALL ONLY BE APPLIED TO THE FRONT OF EACH RAIL OR PANEL, OR MAY BE APPLIED TO BOTH THE FRONT AND BACK PROVIDING THE MARKING ON THE BACK DOES NOT CONFLICT WITH INTENDED OPPOSING TRAFFIC MOVEMENT.

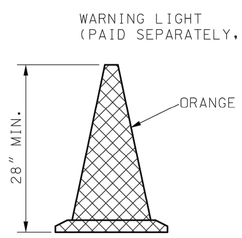


TRIM-LINE DRUM-LIKE

CHANNELIZERS

WHITE, ORANGE, AND FLUORESCENT ORANGE REFLECTIVE SHEETING SHALL BE IN ACCORDANCE WITH SEC 1042.2.7.3.

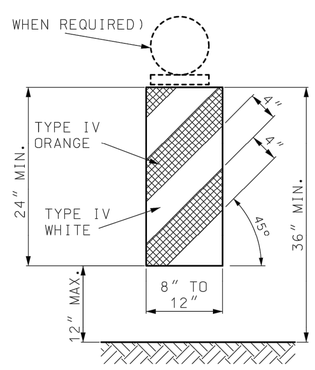
STRIPES ON TRIM-LINE CHANNELIZERS SHALL BE 6″ TO 8″.
STRIPES ON DRUM-LIKE CHANNELIZERS SHALL BE 4″ TO 6″.



CONE

CONES SHALL MAINTAIN THEIR SHAPE UPON EXPOSURE TO NORMAL WORK CONDITIONS.

CONES SHALL BE USED DURING DAYLIGHT HOURS ONLY.



VERTICAL PANEL

VERTICAL PANELS SHALL BE SECURELY ATTACHED TO A SUPPORT THAT IS PORTABLE, CAPABLE OF REMAINING UPRIGHT AND ENTIRELY FREE STANDING.

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.

TEMPORARY
TRAFFIC CONTROL DEVICES
CHANNELIZERS AND DIRECTION INDICATOR BARRICADE

DATE EFFECTIVE: 10/01/2021
DATE PREPARED: 7/13/2021

616.10AY

SHEET NO. 3 OF 9

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

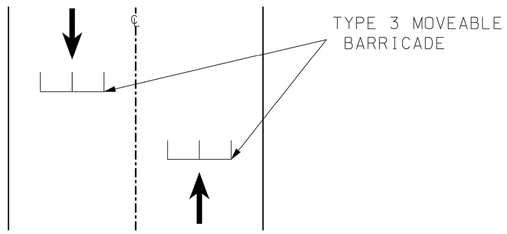
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

TRAFFIC CONTROL DETAILS-3

S 29 T47N R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

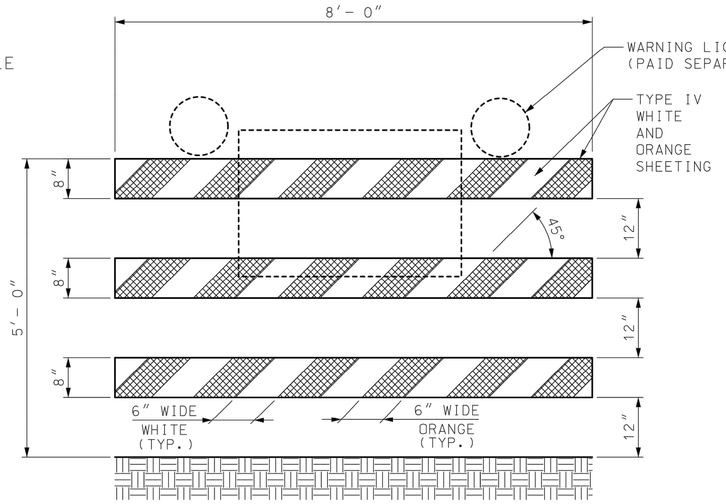
STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
35
35 OF 66

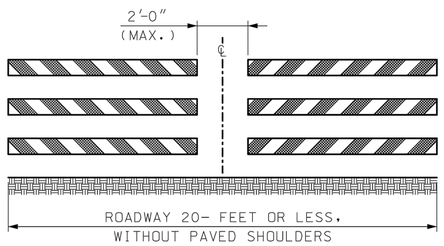


RETROREFLECTIVE MARKING ON TYPE 3 BARRICADES SHALL BE ON BOTH SIDES OF EACH RAIL AND DIRECT TRAFFIC MOVEMENT APPROPRIATELY TO ALLOW VEHICLES TO PASS THROUGH

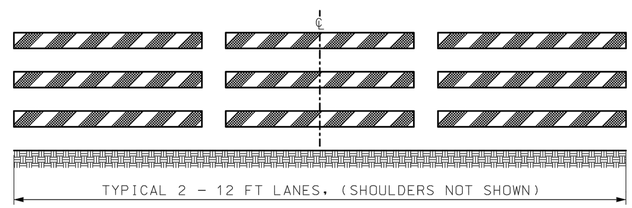
SOFT CLOSURE
PLAN VIEW



EXAMPLE 1

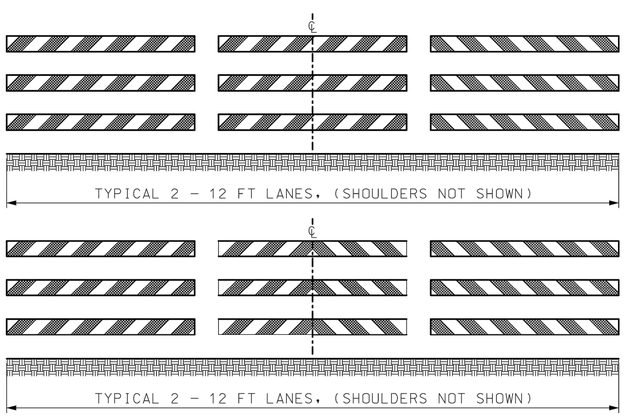


EXAMPLE 2

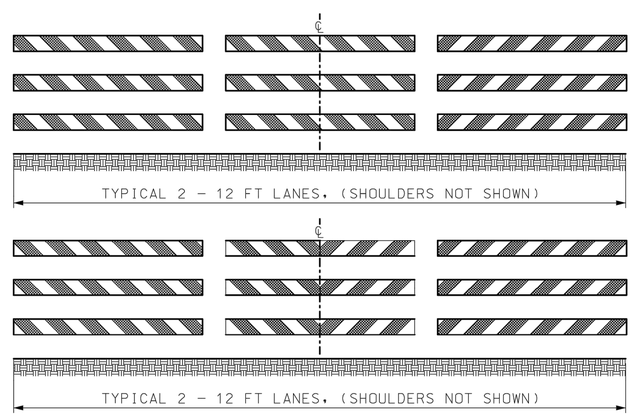


EXAMPLE SHOWS STRIPES SLOPING TO DIRECT
VEHICULAR MOVEMENT TOWARD THE LEFT

EXAMPLE 3



EXAMPLE 4



EXAMPLE 5

EXAMPLE 1 - ONE TYPE 3 MOVABLE BARRICADE WILL BE REQUIRED TO COMPLETELY CLOSE EACH 8′ OF PAVEMENT. PAVED SHOULDERS SHALL BE INCLUDED IN THE AREA TO BE CLOSED.

SIGNS SHALL BE LIGHT WEIGHT (ROLL-UP OR PLASTIC) AND SHOULD NOT OBSCURE MORE THAN 50 PERCENT OF THE TOP 2 RAILS OR 33 PERCENT OF ALL THREE RAILS.

WARNING LIGHTS SHALL BE LIGHT WEIGHT (3.3 LBS. OR LESS) OR HAVE BATTERY PACK MOUNTED NO HIGHER THAN 18-INCH AND SHALL NOT COVER ANY PORTION OF THE BARRICADE FACE.

IF WARNING LIGHTS ARE USED,THE LIGHTS SHOULD BE INSTALLED ON THE BARRICADES IN THE DIRECTION OF TRAFFIC.

IF SIGNS OR LIGHTS CANNOT MEET THE ABOVE REQUIREMENTS, THEY SHALL BE MOUNTED ON SEPARATE CRASHWORTHY DEVICES AT HEIGHTS SPECIFIED FOR POST MOUNTED SIGNS, LOCATED IN TABLE A ON SHEET 1. THE BARRICADE SHALL BE LOCATED IN FRONT OF THE SIGNS OR LIGHTS WITH 7 TO 10 FEET SEPARATING THE DEVICES.

TYPE 3 MOVABLE BARRICADES SHALL BE ENTIRELY FREE STANDING AND PORTABLE. MARKING SHALL ONLY BE APPLIED TO THE FRONT OF EACH RAIL OR MAY BE APPLIED TO BOTH THE FRONT AND THE BACK OF EACH RAIL PROVIDED THE MARKING ON THE BACK DOES NOT CONFLICT WITH INTENDED OPPOSING TRAFFIC MOVEMENT.

WHITE AND ORANGE REFLECTIVE SHEETING SHALL BE IN ACCORDANCE WITH SEC 104.2.7.4.

EXAMPLE 2 - FOR PAVED ROADWAYS WITH A WIDTH OF 20-FEET OR LESS AND WITHOUT PAVED SHOULDERS, TWO BARRICADES ARE ACCEPTABLE.

EXAMPLE 3 - WHERE BARRICADES EXTEND ENTIRELY ACROSS A ROADWAY, STRIPES SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH ROAD USERS MUST TURN.

EXAMPLE 4 - WHERE BOTH RIGHT AND LEFT TURNS ARE PROVIDED, STRIPES SLOPE DOWNWARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE OR BARRICADES.

EXAMPLE 5 - WHERE NO TURNS ARE INTENDED, STRIPES POSITIONED TO SLOPE DOWNARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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.

TEMPORARY
TRAFFIC CONTROL DEVICES

TYPE 3 MOVABLE BARRICADE

DATE EFFECTIVE: 10/01/2021
DATE PREPARED: 7/13/2021

616.10AY

SHEET NO.
4 OF 9

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/13/22
2	PER MODOT COMMENT	JGD	01/13/23
3	PER MODOT COMMENT	JGD	01/18/23
4	PER MODOT COMMENT	JGD	04/07/23

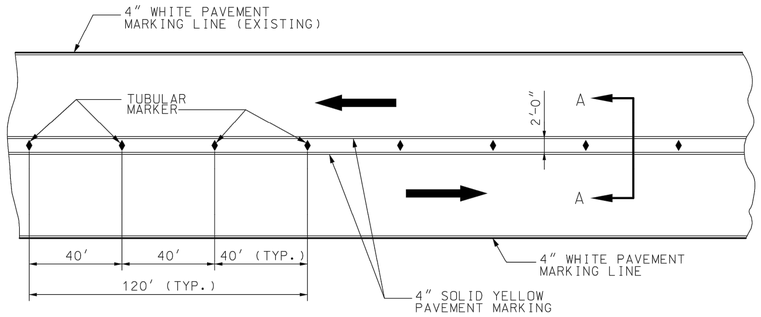
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

TRAFFIC CONTROL
DETAILS-4

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

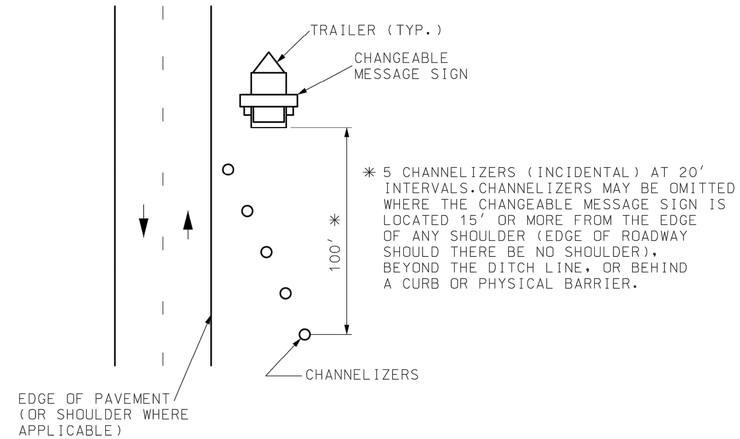
STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

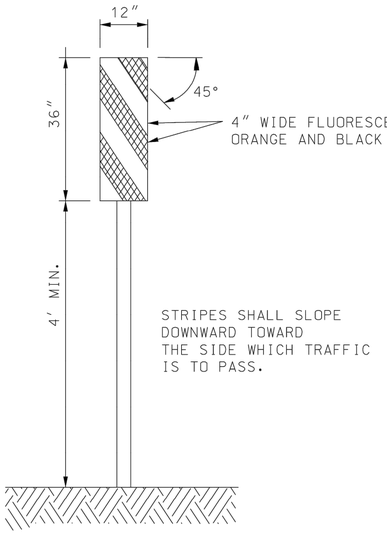
SHEET NUMBER
36
36 OF 66



TWO LANE / TWO WAY TRAFFIC DELINEATION PLAN FOR DIVIDED HIGHWAY

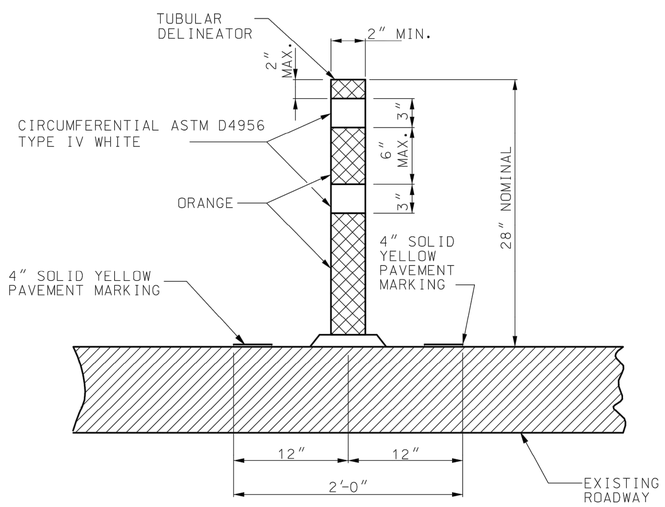
IF RAISED PAVEMENT MARKERS ARE PRESENT, THE LENSES SHALL BE REMOVED OR COVERED TO THE SATISFACTION OF THE ENGINEER.





TYPE 3 OBJECT MARKERS

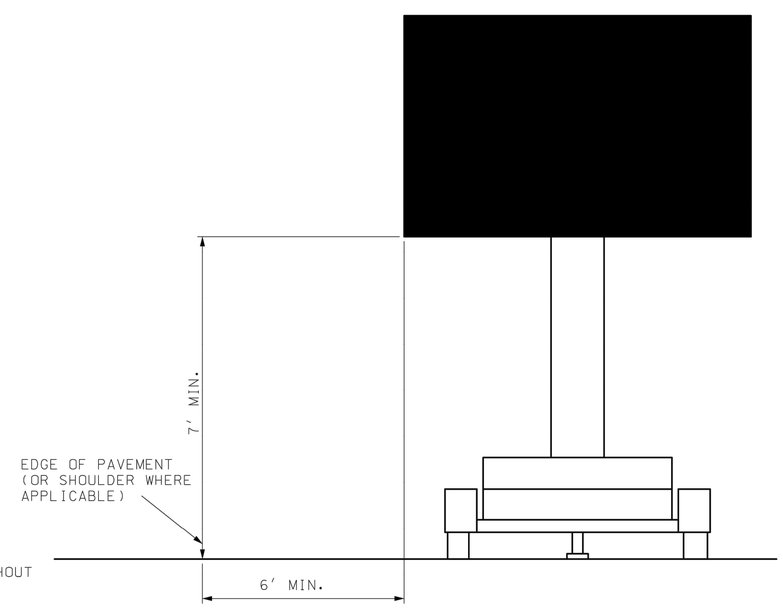
FLUORESCENT ORANGE REFLECTIVE SHEETING SHALL BE IN ACCORDANCE WITH SEC 1042.2.7.



SECTION A-A
TUBULAR DELINEATOR DETAIL

AN ADHESIVE, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, SHALL BE USED TO APPLY THE TUBULAR DELINEATOR TO THE ROADWAY SURFACE. THE ADHESIVE SHALL PERMIT EASY REMOVAL OF THE TUBULAR DELINEATOR WITHOUT DAMAGE TO THE ROADWAY SURFACE.

REFLECTIVE SHEETING APPLIED TO TUBULAR DELINEATORS SHALL BE IN ACCORDANCE WITH SEC 1042.2.7.5.



CHANGEABLE MESSAGE SIGN

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.

TEMPORARY TRAFFIC CONTROL DEVICES

DATE EFFECTIVE: 10/01/2021
DATE PREPARED: 7/13/2021

616.10AY

SHEET NO. 5 OF 9

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/18/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

TRAFFIC CONTROL DETAILS-5

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI — PATRICK J. JOYCE — NUMBER PE-2009030032 — PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
37
37 OF 66

WARNING SIGNS

SIGN	SIZE (IN.)	AREA (SQ. FT.)	SHEETING	COLOR SYM. LEG. BRD.	COLOR BACK GROUND	DESIGNATION	DESCRIPTION	
W01-1L	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	TURN (SYMBOL LEFT ARROW)	
W01-1R	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	TURN (SYMBOL RIGHT ARROW)	
W01-2L	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	CURVE (SYMBOL LEFT ARROW)	
W01-2R	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	CURVE (SYMBOL RIGHT ARROW)	
W01-3L	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	REVERSE TURN (SYMBOL LEFT ARROW)	
W01-3R	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	REVERSE TURN (SYMBOL RIGHT ARROW)	
W01-4L	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	REVERSE CURVE (SYMBOL LEFT ARROW)	
W01-4R	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	REVERSE CURVE (SYMBOL RIGHT ARROW)	
W01-4bL	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)	(2)
W01-4bR	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)	(2)
W01-4cL	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)	(2)
W01-4cR	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)	(2)
W01-6	60X30	12.50	ASTM 9 OR 11	BK	FL. OR	SHF	HORIZONTAL ARROW (SYMBOL)	
W01-6a	72X36	18.00	ASTM 9 OR 11	BK	FL. OR	SHF	HORIZONTAL ARROW (SYMBOL ON PERMANENT BARRICADE)	(1)
W01-7	60X30	12.50	ASTM 9 OR 11	BK	FL. OR	SHF	DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)	
W01-7a	72X36	18.00	ASTM 9 OR 11	BK	FL. OR	SHF	DOUBLE HEAD HORIZONTAL ARROW (SYMBOL ON PERMANENT BARRICADE)	(1)
W01-8	18X24	3.00	ASTM 9 OR 11	BK	FL. OR	SHF	CHEVRON (SYMBOL)	
W01-8a	30X36	7.50	ASTM 9 OR 11	BK	FL. OR	SHF	CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)	
W03-1	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	STOP AHEAD (SYMBOL)	
W03-2	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	YIELD AHEAD (SYMBOL)	
W03-3	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	SIGNAL AHEAD (SYMBOL)	
W03-4	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	BE PREPARED TO STOP	
W03-5	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	SPEED LIMIT AHEAD	
W04-1L	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	MERGE (SYMBOL FROM LEFT)	
W04-1R	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	MERGE (SYMBOL FROM RIGHT)	
W04-1a(L)	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	MERGE (ARROW SYMBOL)	(3)
W04-1a(R)	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	MERGE (ARROW SYMBOL)	(3)
W05-1	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	ROAD/BRIDGE/RAMP NARROWS	(4)
W05-3	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	ONE LANE BRIDGE	
W05-5	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	NARROW LANES	(3)
W06-1	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	DIVIDED HIGHWAY (SYMBOL)	
W06-2	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	DIVIDED HIGHWAY END (SYMBOL)	
W06-3	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	TWO WAY TRAFFIC (SYMBOL)	
W07-3a	30X24	5.00	ASTM 9 OR 11	BK	FL. OR	SHF	NEXT XX MILES (PLAQUE)	
W08-1	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	BUMP	
W08-2	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	DIP	
W08-3	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	PAVEMENT ENDS	
W08-4	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	SOFT SHOULDER	
W08-5	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	SLIPPERY WHEN WET (SYMBOL)	
W08-6	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	TRUCK CROSSING WITH FLAGS	
W08-6c	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	TRUCK ENTRANCE	(3)
W08-7a	36X36	9.00	ASTM 9 OR 11	BK	FL. OR	SHF	FRESH OIL/LOOSE GRAVEL	(3)
W08-9	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	LOW SHOULDER	
W08-11	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	UNEVEN LANES	
W08-12	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	NO CENTER LINE	
W08-15	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	GROOVED PAVEMENT	
W08-15p	30X24	5.00	ASTM 9 OR 11	BK	FL. OR	SHF	MOTORCYCLE (PLAQUE)	
W08-17(L)	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	SHOULDER DROP-OFF (SYMBOL LEFT)	
W08-17(R)	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	SHOULDER DROP OFF (SYMBOL RIGHT)	(4)
W08-17p	30X24	5.00	ASTM 9 OR 11	BK	FL. OR	SHF	SHOULDER DROP-OFF (PLAQUE)	
W10-1	42 RND.	9.62	ASTM 9 OR 11	BK	FL. YL	SHF	RAILROAD CROSSING	
W012-1	24X24	4.00	ASTM 9 OR 11	BK	FL. OR	SHF	DOUBLE DOWN ARROW (SYMBOL)	
W012-2	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	LOW CLEARANCE (SYMBOL)	
W012-2x	24X18	3.00	ASTM 9 OR 11	BK	FL. OR	SHF	LOW CLEARANCE (PLAQUE)	(3)
W012-2a	84X24	14.00	ASTM 9 OR 11	BK	FL. OR	SHF	OVERHEAD LOW CLEARANCE (FEET AND INCHES)	(3)
W012-4	120X60	50.00	ASTM 9 OR 11	BK	FL. OR	SHF	LOW CLEARANCE XX FT XX IN XX MILES AHEAD	(3)
W012-5	120X60	50.00	ASTM 9 OR 11	BK	FL. OR	SHF	WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD	(3)
W013-1	30X30	6.25	ASTM 9 OR 11	BK	FL. OR	SHF	ADVISORY SPEED (PLAQUE)	
W016-2	30X24	5.00	ASTM 9 OR 11	BK	FL. OR	SHF	XXX FEET (PLAQUE)	
W016-3	30X24	5.00	ASTM 9 OR 11	BK	FL. OR	SHF	X MILE (PLAQUE)	
W020-1	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	ROAD/BRIDGE/RAMP WORK AHEAD	(4)
W020-2	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	DETOUR AHEAD	
W020-3	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	ROAD CLOSED AHEAD	
W020-4	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	ONE LANE ROAD AHEAD	
W020-5	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	RIGHT/CENTER/LEFT LANE CLOSED AHEAD	(4)

(1) SIGN DEPICTION, ARROW, BORDERS AND SPACING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

(2) REFER TO THE LATEST EDITION OF MUTCD PART VI BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA FOR SIGN DEPICTION. ARROW, BORDERS AND SPACING SHALL CONFORM TO THE GUIDELINES SET FORTH IN THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

(3) ARROW, BORDERS AND SPACING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

(4) USE OF A SUPPLEMENTAL PLATE FOR LINE 1 IS ACCEPTABLE.

(5) PLAQUE AND APPLICABLE REGULATORY SIGN MAY BE MANUFACTURED AS ONE SIGN.

(6) SHF REFER TO STD. 903.02 SHEET 1 OF 8

GENERAL NOTES:

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA, UNLESS SPECIFIED OTHERWISE.

SIGN DIMENSIONS SHOWN ARE MINIMUM. NO ADDITIONAL PAYMENT WILL BE MADE IF CONTRACTORS USE LARGER SIGNS.

NO ADDITIONAL PAYMENT WILL BE MADE FOR PLATES.

ALL PLAQUES SHALL HAVE A BORDER. PLATES SHALL NOT HAVE A BORDER.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MoDOT

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.

TEMPORARY
TRAFFIC CONTROL DEVICES
WARNING SIGNS

DATE EFFECTIVE: 10/01/2021
DATE PREPARED: 7/13/2021

616.10AY

SHEET NO. 6 OF 9

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/13/22
2	PER MODOT COMMENT	JGD	11/15/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

TRAFFIC CONTROL DETAILS-6

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
38
38 OF 66

SIGN	SIZE (IN.)	AREA (SQ. FT.)	SHEETING	COLOR SYM. LEG. BRD.	COLOR BACK GROUND	DESIGNATION	DESCRIPTION
WARNING SIGNS							
W020-5a	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD (4)
W020-6a	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	RIGHT/CENTER/LEFT LANE CLOSED (3)(4)
W020-7	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	FLAGGER (SYMBOL) WITH FLAGS
W021-5	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	SHOULDER WORK/SHOULDER WORK AHEAD (3)
W021-5a	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	RIGHT SHOULDER CLOSED
W021-5b	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	RIGHT SHOULDER CLOSED AHEAD
W022-1	48X48	16.00	ASTM 9 OR 11	BK	FL. OR	SHF	BLASTING ZONE AHEAD
W022-2	42X36	10.50	ASTM 9 OR 11	BK	FL. OR	SHF	TURN OFF 2-WAY RADIO AND PHONE
W022-3	42X36	10.50	ASTM 9 OR 11	BK	FL. OR	SHF	END BLASTING ZONE
G022-1	15X21	2.19	ASTM 9 OR 11	BK	FL. OR	SHF	WET PAINT (ARROW PIVOTS) (3)
GUIDE SIGNS							
E05-1	36X48	12.00	ASTM 9 OR 11	BK	FL. OR	SHF	GORE EXIT (3)
E05-2	48X36	12.00	ASTM 9 OR 11	BK	FL. OR	SHF	EXIT OPEN (3)
E05-2a	48X36	12.00	ASTM 9 OR 11	BK	FL. OR	SHF	EXIT CLOSED
G020-1	60X24	10.00	ASTM 9 OR 11	BK	FL. OR	SHF	ROAD WORK NEXT XX MILES
G020-2	48X24	8.00	ASTM 9 OR 11	BK	FL. OR	SHF	END ROAD WORK
G020-4	36X18	4.50	ASTM 9 OR 11	BK	FL. OR	SHF	PILOT CAR FOLLOW ME - REAR VEHICLE MOUNT SIGN
G020-4a	42X30	8.75	ASTM 9 OR 11	BK	FL. OR	SHF	PILOT CAR IN USE WAIT & FOLLOW - STATE ROUTE SIGN
G020-4a	18X12	1.50	ASTM 9 OR 11	BK	FL. OR	SHF	PILOT CAR IN USE WAIT & FOLLOW - NON-STATE ROUTE SIGN
G020-5aP	36X24	6.00	ASTM 9 OR 11	BK	FL. OR	SHF	WORK ZONE (PLAQUE) (3) (5)
M04-8a	24X18	3.00	ASTM 9 OR 11	BK	FL. OR	SHF	END DETOUR
M04-9L	48X36	12.00	ASTM 9 OR 11	BK	FL. OR	SHF	DETOUR (LEFT ARROW)
M04-9R	48X36	12.00	ASTM 9 OR 11	BK	FL. OR	SHF	DETOUR (RIGHT ARROW)
M04-9P	48X12	4.00	ASTM 9 OR 11	BK	FL. OR	SHF	STREET NAME (PLAQUE)
M04-10L	48X18	6.00	ASTM 9 OR 11	BK	FL. OR	SHF	DETOUR (ARROW LEFT)
M04-10R	48X18	6.00	ASTM 9 OR 11	BK	FL. OR	SHF	DETOUR (ARROW RIGHT)
REGULATORY SIGNS							
R1-1	48X48	13.25	ASTM 4	WH	RD	SH	STOP
R1-2	48 TRI.	6.93	ASTM 4	RD	WH	SH	YIELD
R1-2a	36X36	9.00	ASTM 4	BK	WH	SH	TO ONCOMING TRAFFIC (PLAQUE)
R1-3p	30X12	2.50	ASTM 4	WH	RD	SH	ALL WAY (PLAQUE)
R2-1	36X48	12.00	ASTM 4	BK	WH	SH	SPEED LIMIT XX
R3-1	48X48	16.00	ASTM 4	BK/RD	WH	SH	NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00	ASTM 4	BK/RD	WH	SH	NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00	ASTM 4	BK	WH	SH	NO TURNS
R3-4	48X48	16.00	ASTM 4	BK/RD	WH	SH	NO U-TURN (SYMBOL)
R3-7L	30X30	6.25	ASTM 4	BK	WH	SH	LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25	ASTM 4	BK	WH	SH	RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00	ASTM 4	BK	WH	SH	DO NOT PASS
R4-2	36X48	12.00	ASTM 4	BK	WH	SH	PASS WITH CARE
R4-7a	36X48	12.00	ASTM 4	BK	WH	SH	KEEP RIGHT (HORIZONTAL ARROW)
R4-8a	36X48	12.00	ASTM 4	BK	WH	SH	KEEP LEFT (HORIZONTAL ARROW)
R5-1	30X30	6.25	ASTM 4	RD	WH	SH	DO NOT ENTER
R5-1a	36X24	6.00	ASTM 4	WH	RD	SH	WRONG WAY
R6-1L	54X18	6.75	ASTM 4	BK	WH	SH	ONE WAY ARROW (LEFT)
R6-1R	54X18	6.75	ASTM 4	BK	WH	SH	ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00	ASTM 4	BK	WH	SH	ONE WAY (LEFT)
R6-2R	24X30	5.00	ASTM 4	BK	WH	SH	ONE WAY (RIGHT)
R9-9	24X12	2.00	ASTM 4	BK	WH	SH	SIDEWALK CLOSED
R9-11L	24X18	3.00	ASTM 4	BK	WH	SH	SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE
R9-11R	24X18	3.00	ASTM 4	BK	WH	SH	SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE
R10-6	24X36	6.00	ASTM 4	BK	WH	SH	STOP HERE ON RED (45° ARROW)
R11-2	48X30	10.00	ASTM 4	BK	WH	SH	ROAD CLOSED
R11-3a	60X30	12.50	ASTM 4	BK	WH	SH	ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50	ASTM 4	BK	WH	SH	ROAD CLOSED TO THRU TRAFFIC
CONST-3A	60X48	20.00	ASTM 4	BK	WH/ FL. OR	SH	FINE SIGN (3)
CONST-3X	56X12	4.67	ASTM 4	BK	WH	SH	SPEEDING/PASSING (PLATE) (3)
MISCELLANEOUS SIGNS							
CONST-5	48X36	12.00	ASTM 4	WH	BL	SH	POINT OF PRESENCE
CONST-5	96X48	32.00	ASTM 4	WH	BL	SH	POINT OF PRESENCE
CONST-7	72X36	18.00	ASTM 4	WH/BK	BL/FL.OR	SH	RATE OUR WORK ZONE
CONST-7	48X24	8.00	ASTM 4	WH/BK	BL/FL.OR	SH	RATE OUR WORK ZONE
CONST-8	48X36	12.00	ASTM 9 OR 11	BK	FL.OR	SHF	WORK ZONE NO PHONE ZONE

(1) SIGN DEPICTION, ARROW, BORDERS AND SPACING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

(2) REFER TO THE LATEST EDITION OF MUTCD PART VI BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA FOR SIGN DEPICTION. ARROW, BORDERS AND SPACING SHALL CONFORM TO THE GUIDELINES SET FORTH IN THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

(3) ARROW, BORDERS AND SPACING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

(4) USE OF A SUPPLEMENTAL PLATE FOR LINE 1 IS ACCEPTABLE.

(5) PLAQUE AND APPLICABLE REGULATORY SIGN MAY BE MANUFACTURED AS ONE SIGN.

(6) SH REFER TO STD. 903.02 SHEET 1 OF 8

(7) SHF REFER TO STD. 903.02 SHEET 1 OF 8

GENERAL NOTES:

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA, UNLESS SPECIFIED OTHERWISE.

SIGN DIMENSIONS SHOWN ARE MINIMUM. NO ADDITIONAL PAYMENT WILL BE MADE IF CONTRACTORS USE LARGER SIGNS.

NO ADDITIONAL PAYMENT WILL BE MADE FOR PLATES.

ALL PLAQUES SHALL HAVE A BORDER. PLATES SHALL NOT HAVE A BORDER.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MoDOT

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-90042
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

TEMPORARY TRAFFIC CONTROL DEVICES
WARNING, GUIDE AND REGULATORY SIGNS

DATE EFFECTIVE: 01/01/2022
DATE PREPARED: 10/21/2021

616.10AY

SHEET NO. 7 OF 9

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/18/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

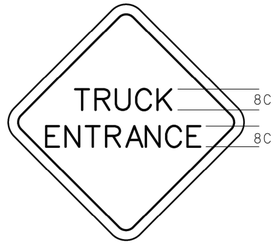
TRAFFIC CONTROL DETAILS-7

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

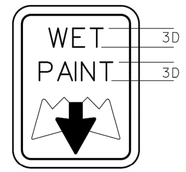
SHEET NUMBER
39
39 OF 66

W05-5 (3)



W08-6c (3)

W08-7a (3)



G022-1 (3)

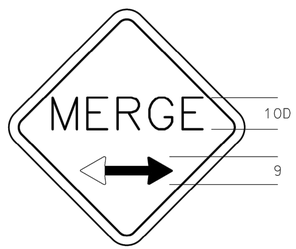
(1) SIGN DEPICTION, ARROW, BORDERS AND SPACING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

(2) REFER TO THE LATEST EDITION OF MUTCD PART VI BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA FOR SIGN DEPICTION, ARROW, BORDERS AND SPACING SHALL CONFORM TO THE GUIDELINES SET FORTH IN THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

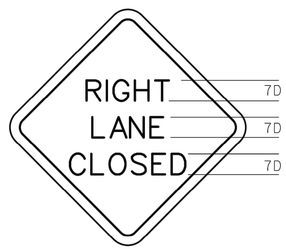
(3) ARROW, BORDERS AND SPACING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA.

(4) USE OF A SUPPLEMENTAL PLATE FOR LINE 1 IS ACCEPTABLE.

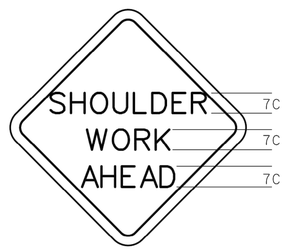
(5) PLAQUE AND APPLICABLE REGULATORY SIGN MAY BE MANUFACTURED AS ONE SIGN.



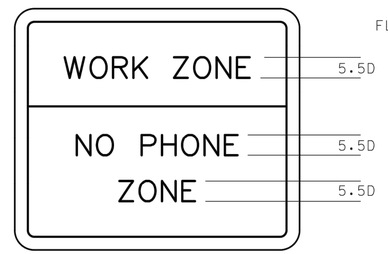
W04-1a



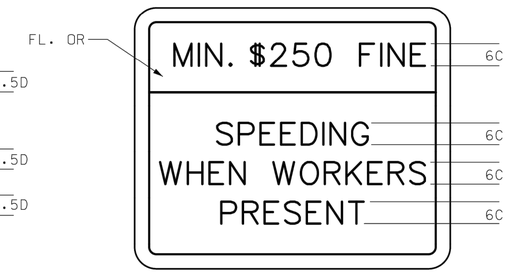
W020-6a (3)(4)



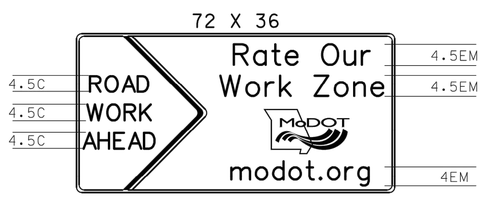
W021-5 (3)

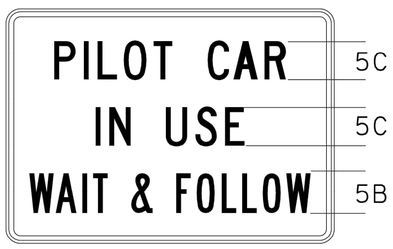


CONST-8 (3)

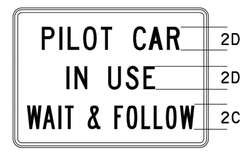


CONST-3A (3)

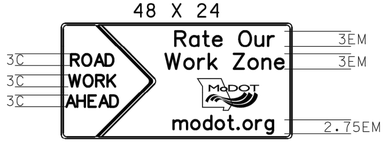




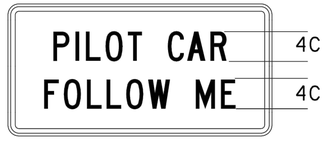
G020-4a (3)
42X30



G020-4a (3)(4)
18X12



CONST-7



G020-4 (3)
36X18

CONST-3X (3)

W012-5 (3)

W012-4 (3)

GENERAL NOTES:

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" BY THE U.S. DEPARTMENT OF TRANSPORTATION - FHWA UNLESS SPECIFIED OTHERWISE.

SIGN DIMENSIONS SHOWN ARE MINIMUM. NO ADDITIONAL PAYMENT WILL BE MADE IF CONTRACTORS USE LARGER SIGNS.

NO ADDITIONAL PAYMENT WILL BE MADE FOR PLATES.

ALL PLAQUES SHALL HAVE A BORDER. PLATES SHALL NOT HAVE A BORDER.

LETTER DIMENSIONS SHALL BE AS SHOWN.

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.

TEMPORARY
TRAFFIC CONTROL DEVICES

DATE EFFECTIVE: 10/01/2021 DATE PREPARED: 7/13/2021	616.10AY	SHEET NO. 8 OF 9

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

TRAFFIC CONTROL DETAILS-8

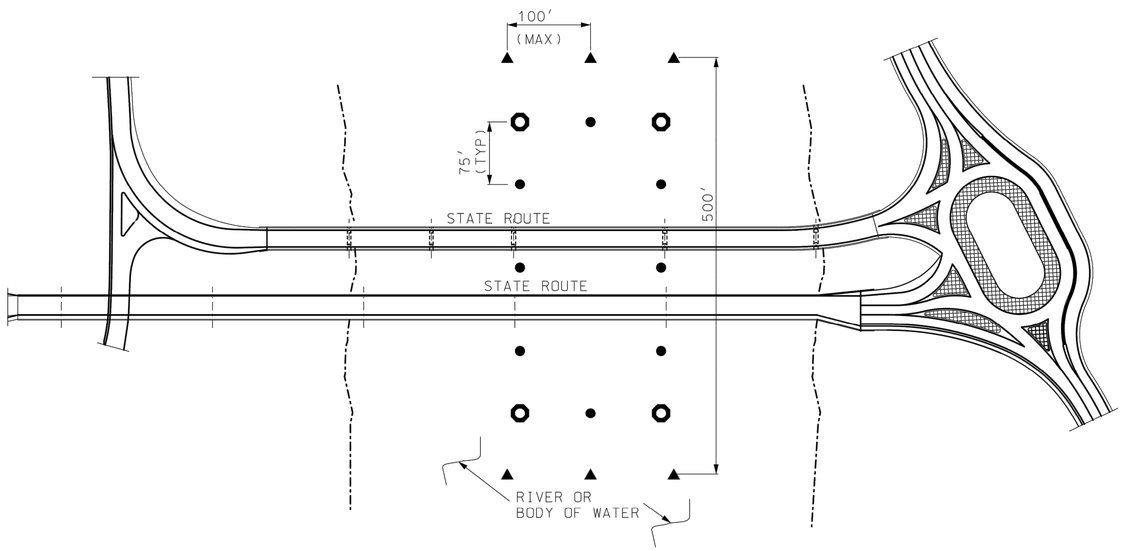
S 29 T47N R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
40
40 OF 66

LEGEND

- BOATS KEEP OUT (SIGN)
- BOATS KEEP OUT (BUOY)
- NO WAKE (BUOY)



GENERAL NOTES:

INFORMATION SHOWN IS SCHEMATIC ONLY. FINAL LOCATION AND NUMBER OF SIGNS AND BUOYS IS SUBJECT TO APPROVAL OF MISSOURI STATE WATER PATROL

THE DETAILS SHOWN ARE FOR BIDDING PURPOSES ONLY. ALL MATERIALS AND LABOR NECESSARY TO INSTALL AND REMOVE

SIGNS SHALL BE INCIDENTAL TO OTHER ITEMS

THE CONTRACTOR IS RESPONSIBLE FOR BUOY MAINTENANCE THROUGHOUT CONSTRUCTION AND FOR DETERMINING ANTICIPATED WATER LEVELS DURING CONSTRUCTION. EACH SIGN AND BUOY SHALL BE ANCHORED TO BOTTOM OF LAKE.

SIGNS SHALL BE DOUBLE FACED

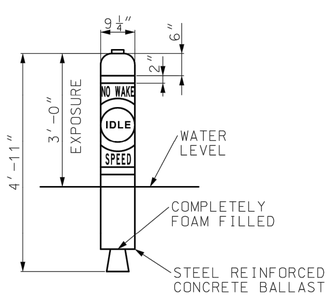
EACH SIGN SHALL BE EQUIPPED WITH TWO (2) FLASHING LIGHT UNITS WITH AMBER LENS. FLASHING LIGHT UNITS SHALL BE FURNISHED AND MAINTAINED BY THE CONTRACTOR

ALL LETTERING TO BE BLACK IN COLOR IN BLOCK FORM.

FOR OTHER INFORMATION AND LOCATION OF SIGNS AND BUOYS SEE SPECIAL PROVISIONS.

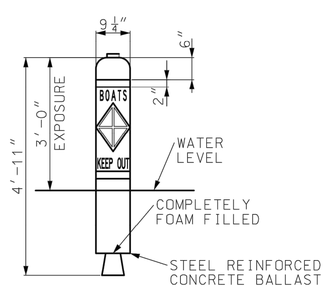
SCHEMATIC SHOWN IS FOR ONE NAVIGATIONAL SPAN. FOR WORK ON OTHER SPANS MOVE APPROPRIATE SIGNS WITH NO DIRECT PAY

COLOR:
BACKGROUND - WHITE
LEGEND - BLACK
2″ REFLECTIVE BAND AND SYMBOL - INTERNATIONAL ORANGE



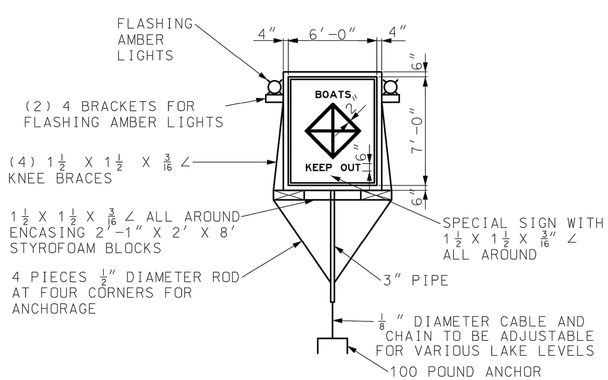
51 POUND ANCHOR
TACKLE PERMITTED

RESTRICTED AREA BUOY
("NO WAKE")
(6 REQUIRED - ROADWAY ITEM)



51 POUND ANCHOR
TACKLE PERMITTED

CONTROLLED AREA BUOY
("BOATS KEEP OUT")
(8 REQUIRED - ROADWAY ITEM)



SPECIAL SIGN ASSEMBLY
("BOATS KEEP OUT")
(4 REQUIRED - ROADWAY ITEM)

MODOT

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.

TEMPORARY
TRAFFIC CONTROL DEVICES
TRAFFIC CONTROL
FOR WATERWAYS

DATE EFFECTIVE: 10/01/2021	616.10AY	SHEET NO. 9 OF 9
DATE PREPARED: 7/13/2021		

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/18/23
4	PER MODOT COMMENT	JGD	04/07/23

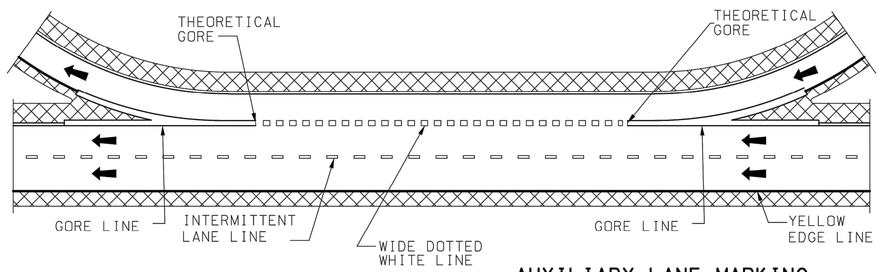
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

TRAFFIC CONTROL DETAILS-9

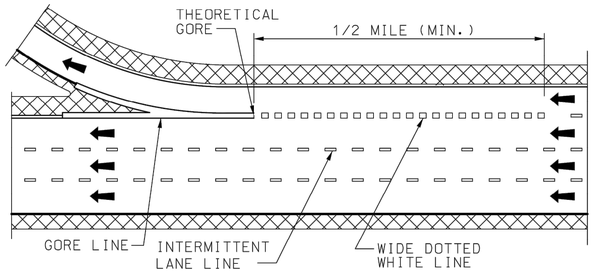
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

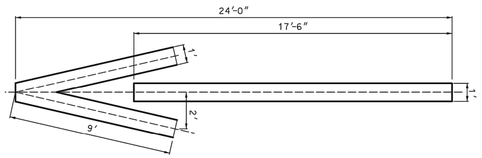
STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
41
41 OF 66



AUXILIARY LANE MARKING





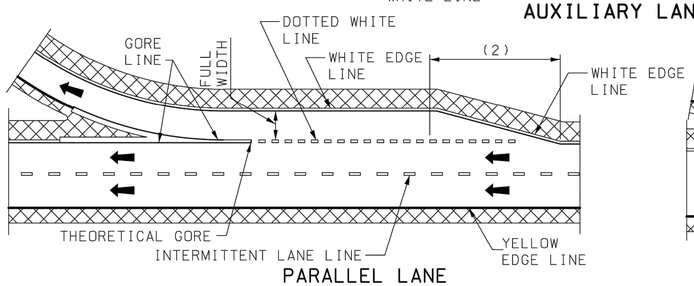
FIRST ARROW 25' FROM CROSSROAD OR STOP LINE.

MAXIMUM 3 ARROWS AT 100' INTERVALS.

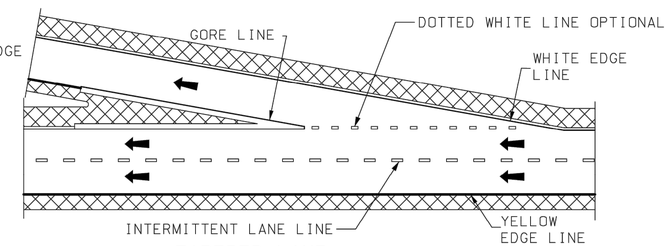
ON MULTI-LANE RAMP USE ARROW IN EACH LANE.

WRONG WAY ARROWS ARE NOT USED WHEN RAMP HAS LANE USE CONTROL ARROWS.

OFF RAMP WRONG WAY ARROW



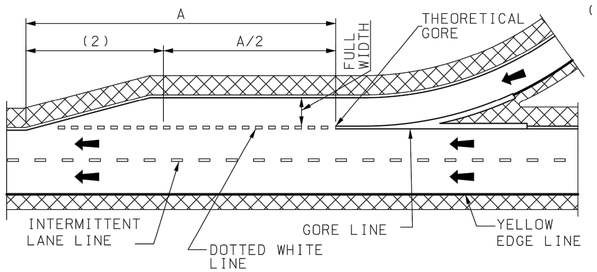
PARALLEL LANE



TAPERED LANE

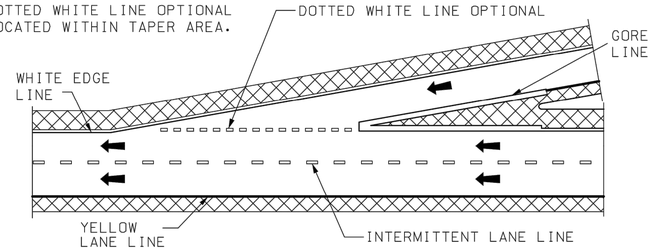
EXIT RAMP MARKING

A = LENGTH OF ACCERLERATION LANE PLUS TAPER.



PARALLEL LANE

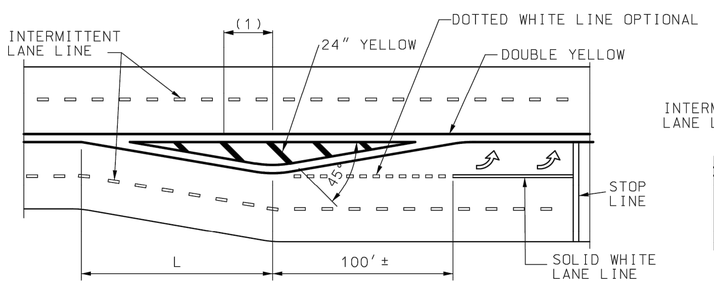
(2) DOTTED WHITE LINE OPTIONAL LOCATED WITHIN TAPER AREA.



TAPERED LANE

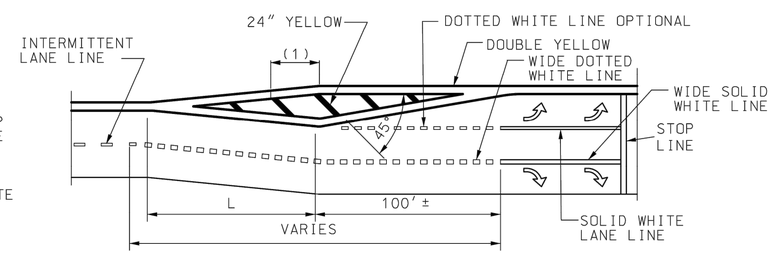
ENTRANCE RAMP MARKING

L = LENGTH OF TAPER IN FEET.



MEDIAN ISLAND MARKING

(1) 50' (TYP.) SPACE BETWEEN BARS. A MINIMUM OF 3 BARS ARE REQUIRED. IF NECESSARY, THE DISTANCE BETWEEN THE BARS SHALL BE DECREASED TO INSTALL 3 BARS.



LANE DROP MARKING

GENERAL NOTES:

DOTTED LINES SHALL BE 3 FEET IN LENGTH SEPARATED BY 9 FOOT GAPS.

REFER TO THE STANDARD PLAN 626.00 WHEN INSTALLING PAVEMENT MARKINGS OVER RUMBLE STRIPS.

WIDE LINES ARE TWICE THE WIDTH OF NORMAL LINES.

LANE LINES SHALL BE AN INTERMITTENT OR SOLID WHITE.

INTERMITTENT LINES SHALL BE 10 FEET IN LENGTH SEPARATED BY 30 FOOT GAPS.

EDGELINES SHALL BE CONTINUOUS SOLID WHITE OR YELLOW LINES. RIGHT SIDE EDGELINES SHALL BE SOLID WHITE. MEDIAN OR LEFT SIDE EDGELINES ON DIVIDED HIGHWAYS AND ON THE LEFT SIDE OF RAMPS SHALL BE SOLID YELLOW. EDGELINES SHALL BE CONTINUOUS ACROSS DRIVEWAYS AND MINOR INTERSECTING ROADS.

"NO PASSING" LINES SHALL BE CONTINUOUS SOLID YELLOW.

"NO PASSING" LINES SHALL BE PLACED AS SHOWN IN "LINE DETAIL". "NO PASSING" LINES ON A TWO-LANE, TWO-WAY HIGHWAY WHEN PASSING IS PROHIBITED IN EACH DIRECTION SHALL BE PLACED 4 INCHES APART AND THE INTERMITTENT CENTERLINE SHALL BE OMITTED.

STOP LINES SHALL BE A SOLID WHITE TRANSVERSE LINE 24 INCHES WIDE, LOCATED AT LEAST 4 FEET FROM THE NEAREST EDGE OF THE INTERSECTING ROADWAY.

CROSSWALK LINES SHALL BE SOLID WHITE TRANSVERSE LINES 6 INCHES WIDE AT LEAST 6 FEET APART. CROSSWALK LINES ON THE INTERSECTION SIDE OF THE CROSSWALK SHALL MEET AT THE CURB.

GORE LINES SHALL BE A SOLID WHITE LINE WITH A WIDTH TWICE THAT OF THE EDGELINE.

ARROWS AND WORD SYMBOLS SHALL BE SOLID WHITE.

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.

PAVEMENT MARKING

DATE EFFECTIVE: 04/01/2022
DATE PREPARED: 1/19/2022

620.00N

SHEET NO. 1 OF 6

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

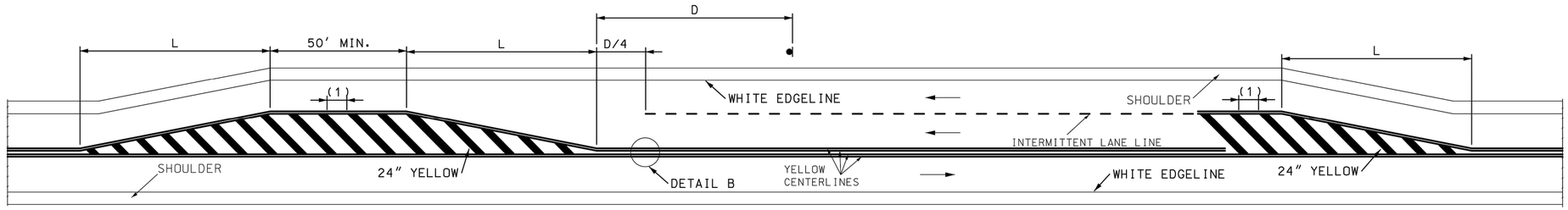
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

PAVEMENT MARKINGS-1

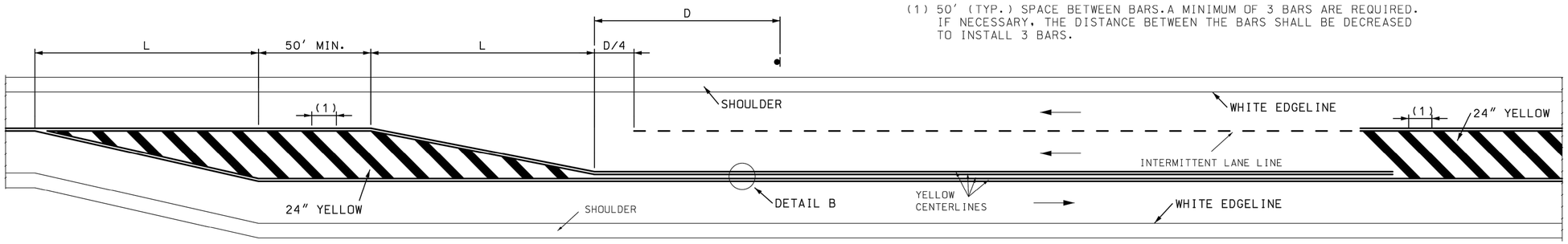
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

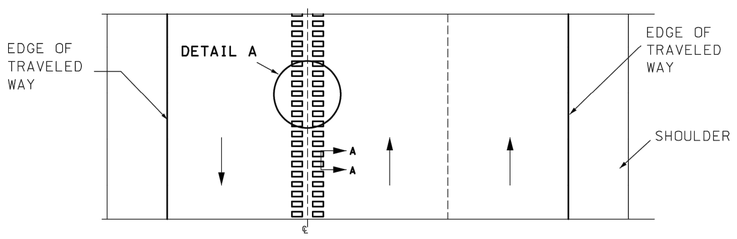
STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
42
42 OF 66



(1) 50′ (TYP.) SPACE BETWEEN BARS. A MINIMUM OF 3 BARS ARE REQUIRED. IF NECESSARY, THE DISTANCE BETWEEN THE BARS SHALL BE DECREASED TO INSTALL 3 BARS.





L = S x W WHEN POSTED SPEED 45 MPH OR GREATER OR WS^2 /60 WHEN POSTED SPEED IS 40 MPH OR LESS. EXTEND DISTANCE (L) AS REQUIRED BY SIGHT DISTANCE CONDITIONS.

L = LENGTH OF TAPER IN FEET.

S = POSTED OR 85 PERCENTILE SPEED IN MPH.

W = OFFSET DISTANCE IN FEET.

D = WARNING SIGN SPACING MEASURED FROM BEGINNING OF THE TAPER TO WARNING SIGN "LANE ENDS MERGE RIGHT"

GENERAL NOTES:

INTERMITTENT LINES SHALL BE 10 FEET IN LENGTH SEPARATED BY 30 FOOT GAPS.

RIGHT SIDE EDGELINES SHALL BE SOLID WHITE. EDGELINES SHALL BE CONTINUOUS ACROSS DRIVEWAYS AND MINOR INTERSECTING ROADS.

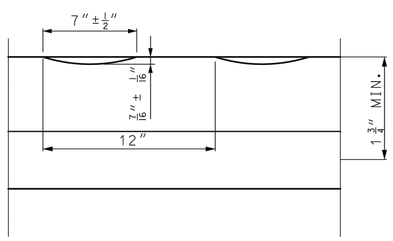
CENTERLINE RUMBLE STRIPS ON PASSING ROADWAYS SHALL FOLLOW PAVEMENT STRIPING THROUGH TRANSITIONS. SEE CONTRACT PLANS FOR STRIPING DETAILS.

RUMBLE STRIPS SHALL NOT BE PLACED ON BRIDGES.

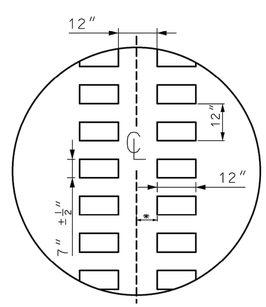
ALL RUMBLE STRIPS SHALL BE MILLED.

CENTERLINE RUMBLE STRIPS SHALL BE CONTINUOUS THROUGH CONNECTIONS OF SIDEROADS WITH NO LEFT TURN LANES.

DISCONTINUE CENTERLINE RUMBLE STRIPS THROUGH THE LIMITS OF ALL LEFT TURN LANES. INCLUDING ANY LANE TAPER SECTIONS.

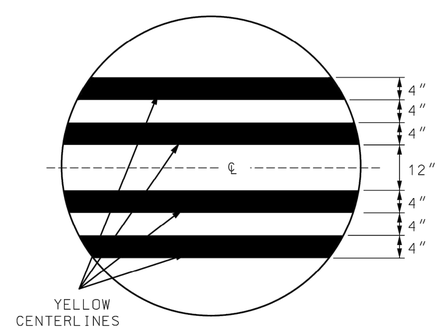


SECTION A-A



DETAIL A

* = LATERAL DEVIATION SHALL NOT EXCEED ONE INCH IN 100 FEET.



DETAIL B

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.

PAVEMENT MARKING

ALTERNATE PASSING LANE

DATE EFFECTIVE: 04/01/2022	620.00N	SHEET NO.
DATE PREPARED: 1/19/2022		2 OF 6

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/15/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

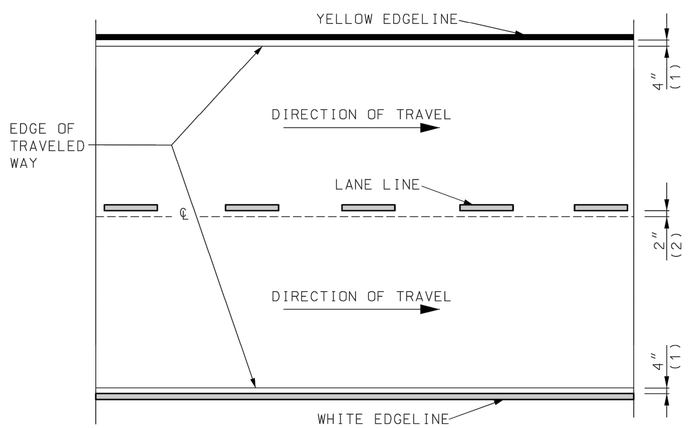
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

PAVEMENT MARKINGS-2

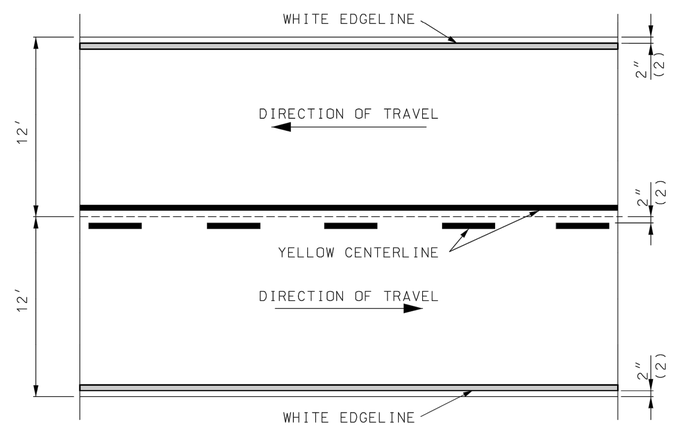
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOHNSON
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
43
43 OF 66

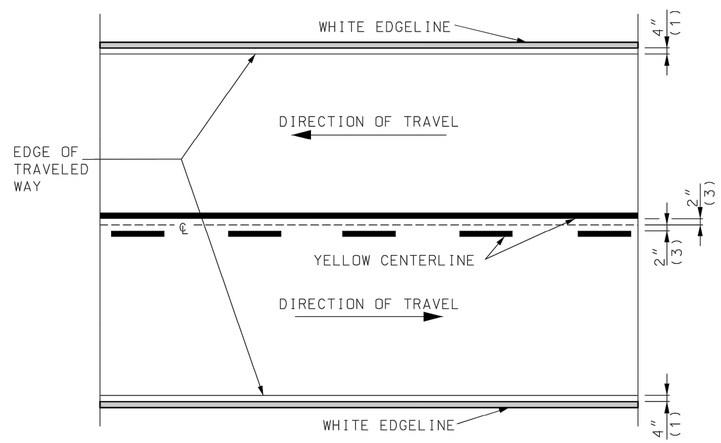


DIVIDED PAVEMENT



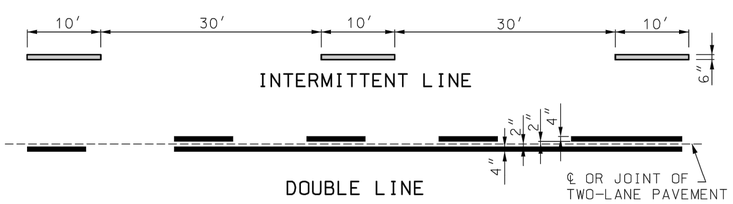
TWO-LANE TWO-WAY

TYPICAL STRIPING OFFSETS
WITHOUT RUMBLE STRIPES



TWO-LANE TWO-WAY

TYPICAL STRIPING OFFSETS
FOR RUMBLE STRIPES



LEGEND
WHITE LINE
YELLOW LINE

(1) OFFSET FROM EDGE OF TRAVELED WAY (TYP.)
(2) OFFSET FROM JOINT (TYP.)
(3) OFFSET FROM CENTERLINE (TYP.)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MODOT

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.

PAVEMENT MARKING

DATE EFFECTIVE:	04/01/2022	620.00N	SHEET NO.
DATE PREPARED:	1/19/2022		3 OF 6

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/11/22
3	PER MODOT COMMENT	JGD	01/18/23
4	PER MODOT COMMENT	JGD	04/07/23

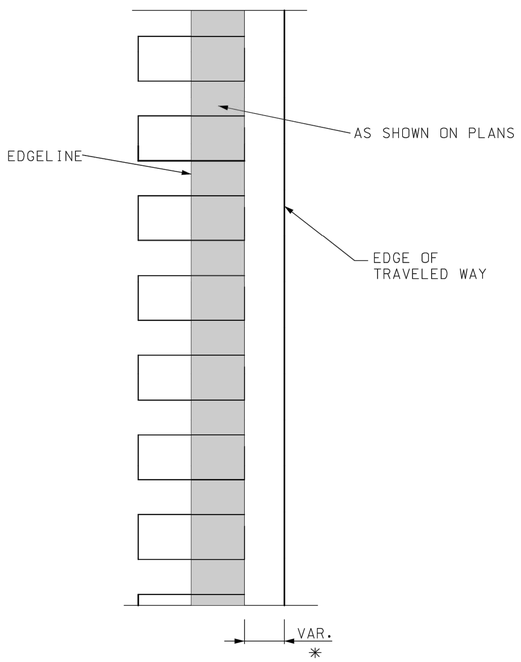
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

PAVEMENT MARKINGS-3

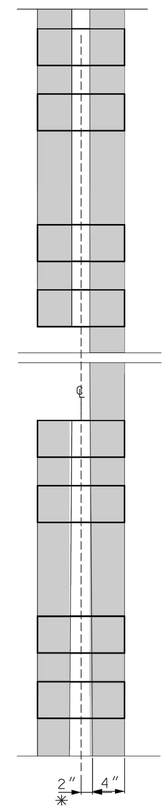
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOHNSON
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
44
44 OF 66



FOR SHOULDERS



2 WAY 2 LANE
(SEE TYPICAL STRIPING
FOR RUMBLESTRIPS)

✳ = LATERAL DEVIATION SHALL NOT EXCEED ONE INCH IN 100 FEET.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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.

PAVEMENT MARKING
STRIPING THROUGH
RUMBLE STRIPS

DATE EFFECTIVE: 04/01/2022
DATE PREPARED: 1/19/2022

620.00N

SHEET NO. 4 OF 6

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/17/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

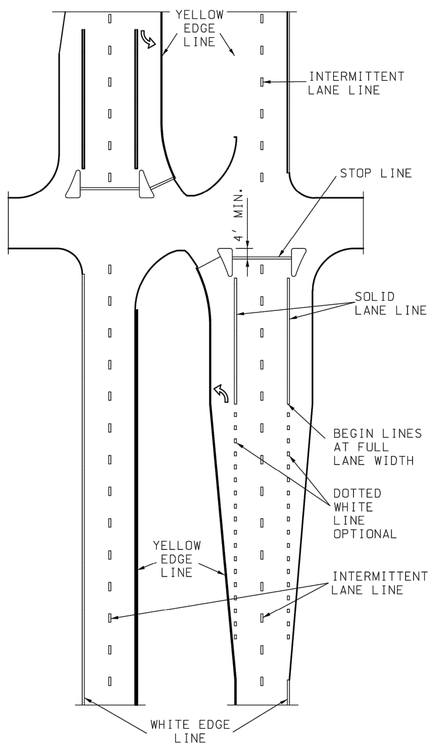
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

PAVEMENT MARKINGS-4

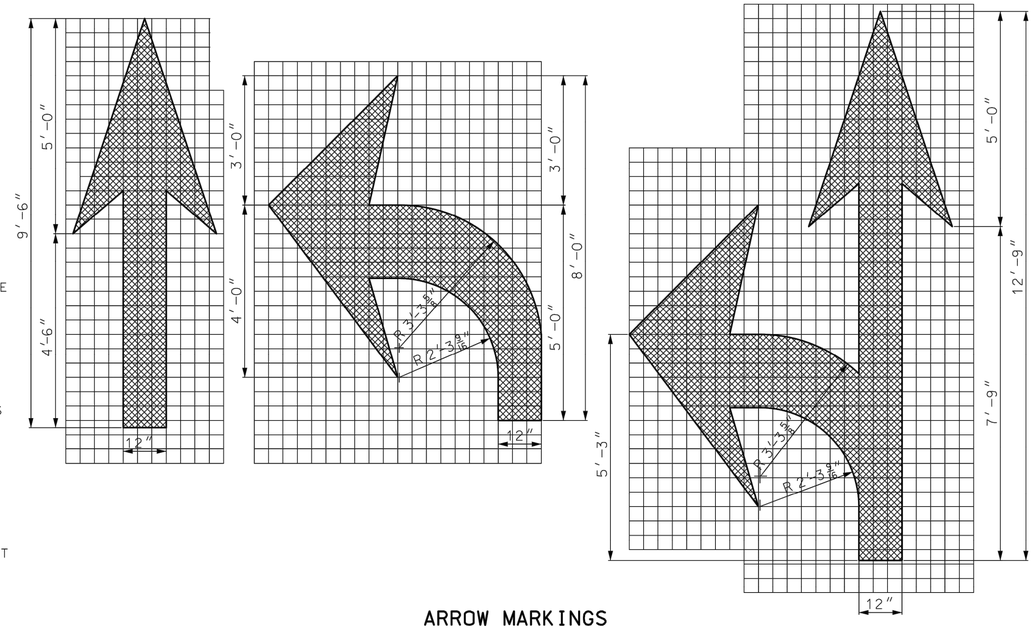
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. BOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
45
45 OF 66

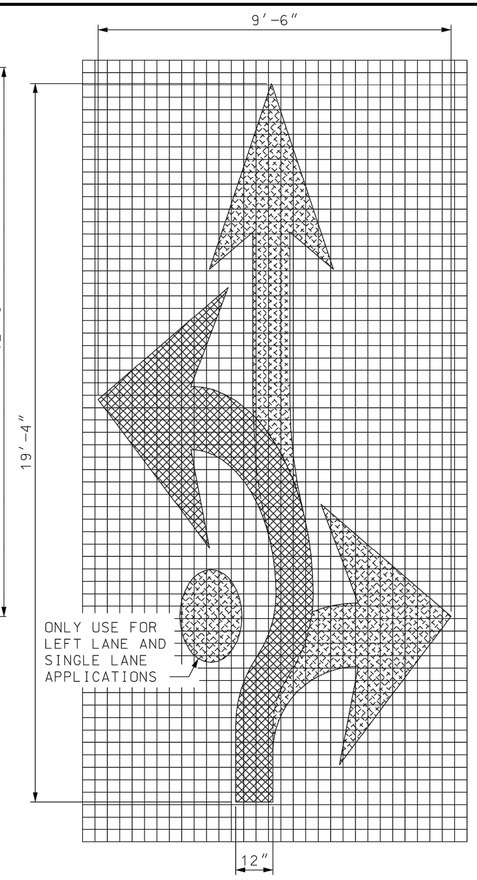


SIGNALIZED GRADE INTERSECTION MARKING

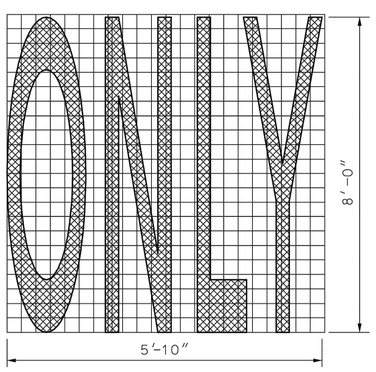


ARROW MARKINGS

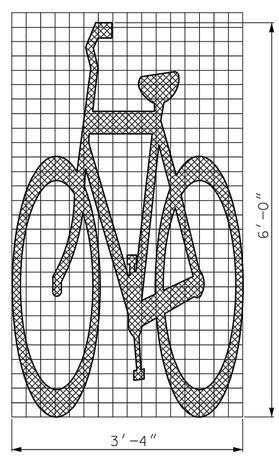
TWO LANE USE CONTROL ARROWS FOR FIRST 200 FEET WITH ONE ADDITIONAL ARROW EVERY 400 FEET OF MANDATORY MOVEMENT LANE. FIRST ARROW 75 FEET FROM STOP LINE.



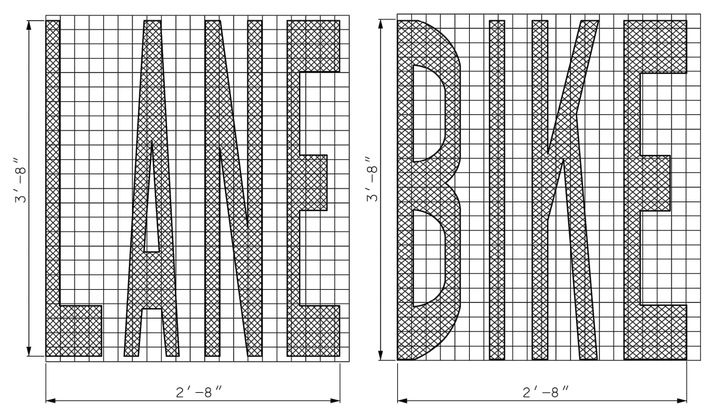
FISH-HOOK ARROW
ROUNDABOUT APPROACH MARKINGS



WORD MARKING
ELONGATED WORD & SYMBOL



BICYCLE SYMBOL



WORD MARKING
ELONGATED WORD & SYMBOL

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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.

PAVEMENT MARKING

DATE EFFECTIVE:	04/01/2022	620.00N	SHEET NO. 5 OF 6
DATE PREPARED:	1/19/2022		

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

PAVEMENT MARKINGS-5

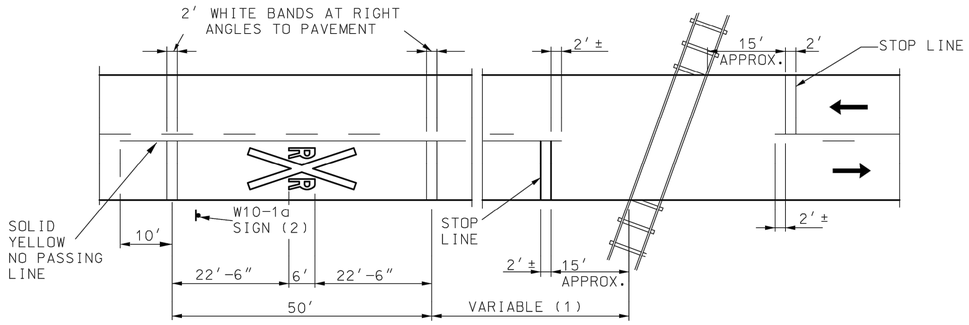
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
46
46 OF 66

Apr 07, 2023 - 2:04pm Plotted By: jgdd G:\Shared drives\KC10 - Land Development\Projects\2021\21KC10060 Cobey Creek Residential\01 CIVIL\03-DWG\Sheet\MoDOT 150 HWY WIDENING\21KC10060-CIV-STD7-3.dwg Layout: PAVEMENT MARKING-5

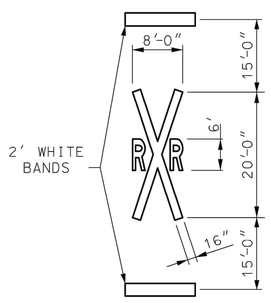
1. STOP LINES SHALL BE PLACED 90° TO THE ROADWAY.
2. IF RAILROAD GATE IS PRESENT THE STOP LINE SHALL BE 8′ FROM GATE.



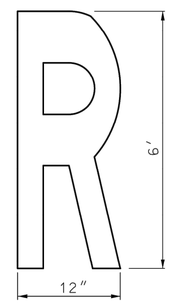
PAVEMENT DETAIL

(1) THE DISTANCE FROM THE RAILROAD CROSSING MARKING TO THE NEAREST TRACK WILL VARY ACCORDING TO THE APPROACH SPEED AND THE SIGHT DISTANCE OF THE VEHICULAR TRAFFIC APPROACHING, BUT SHALL BE NO LESS THAN 50 FEET.
A THREE-LANE ROADWAY SHALL BE MARKED WITH A CENTERLINE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING. ON MULTI-LANE ROADWAYS THE TRANSVERSE BANDS SHALL EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL "R X R" SYMBOLS SHALL BE USED IN EACH APPROACH LANE.

(2) PLACEMENT OF W10-1a SIGN BY OTHERS.

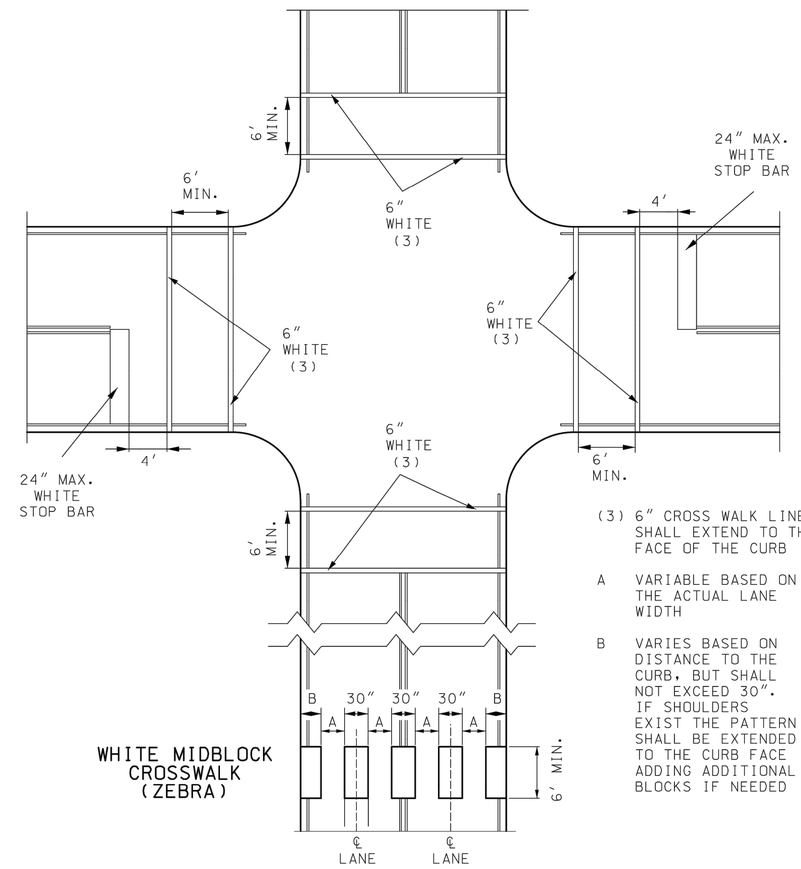


SYMBOL DETAIL



LETTER DETAIL

RAILROAD GRADE CROSSING



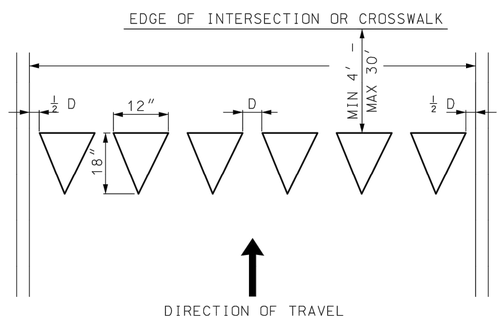
WHITE MIDBLOCK CROSSWALK (ZEBRA)

(3) 6″ CROSS WALK LINE SHALL EXTEND TO THE FACE OF THE CURB

A VARIABLE BASED ON THE ACTUAL LANE WIDTH

B VARIES BASED ON DISTANCE TO THE CURB, BUT SHALL NOT EXCEED 30″. IF SHOULDERS EXIST THE PATTERN SHALL BE EXTENDED TO THE CURB FACE ADDING ADDITIONAL BLOCKS IF NEEDED

PEDESTRIAN CROSSWALKS



WHITE YIELD LINE TRIANGLES

D = 3″ TO 12″

TRIANGLES SHALL BE UNIFORMLY SPACED AND COVER THE COMPLETE WIDTH OF THE TRAVEL LANE. SPACING SHALL BE ADJUSTED SO THERE ARE NO PARTIAL TRIANGLES WITHIN THE YIELD MARKING.

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.

PAVEMENT MARKING

DATE EFFECTIVE: 04/01/2022
DATE PREPARED: 1/19/2022

620.00N

SHEET NO. 6 OF 6

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	01/13/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

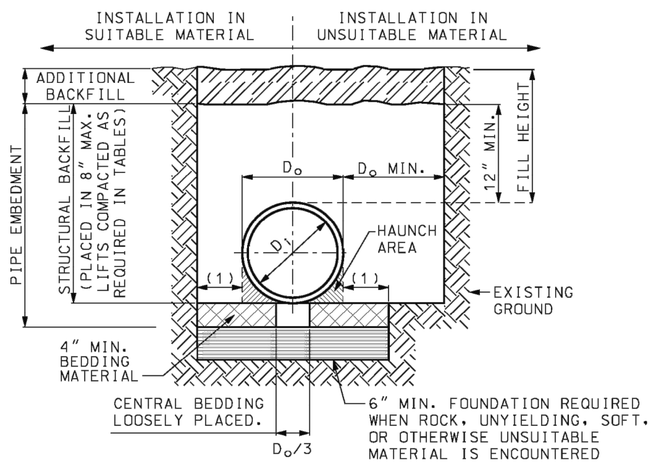
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

PAVEMENT MARKINGS-6

S 29 T47N R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
47
47 OF 66

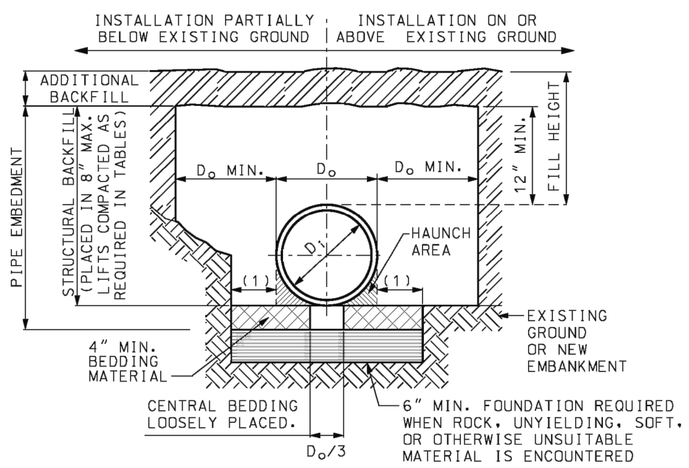


TRENCH INSTALLATION

LEGEND

D_i = INSIDE DIAMETER OF PIPE.
D_o = OUTSIDE DIAMETER OF PIPE.
(1) = $(D_o/4)+6''$ (MIN.)

NOTE:
MULTIPLE PIPE SHALL BE INSTALLED WITH A MINIMUM CLEARANCE BETWEEN PIPES OF $\frac{1}{2}D_o$ OR 12", WHICHEVER IS GREATER, BUT NOT TO EXCEED 36".



EMBANKMENT INSTALLATION

CONSTRUCTION SEQUENCE

1. PLACE BEDDING MATERIAL TO GRADE.
2. COMPACT BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
3. INSTALL PIPE TO GRADE.
4. COMPLETE STRUCTURAL BACKFILL ACCORDING TO SPECIFICATIONS.

FILL HEIGHT LIMITS

STRUCTURAL BACKFILL	SPECIFIED NOMINAL DIA OF PIPE (IN.)	POLYETHYLENE				STEEL REINFORCED POLYETHYLENE		POLYVINYL				DOUBLE WALL POLYPROPYLENE				TRIPLE WALL POLYPROPYLENE			
		COMPACTION 90% SPD		COMPACTION 95% SPD		COMPACTION 90% SPD		COMPACTION 90% SPD		COMPACTION 95% SPD		COMPACTION 90% SPD		COMPACTION 95% SPD		COMPACTION 90% SPD		COMPACTION 95% SPD	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
GRAVEL (AASHTO M145 SOIL TYPE A1 & A3)	12	2'	19'	2'	26'	--	--	2'	32'	2'	61'	2'	21'	2'	29'	--	--	--	--
	15	2'	19'	2'	27'	--	--	2'	32'	2'	55'	2'	22'	2'	31'	--	--	--	--
	18	2'	17'	2'	25'	--	--	2'	31'	2'	60'	2'	19'	2'	27'	--	--	--	--
	24	2'	15'	2'	21'	2'	50'	2'	30'	2'	54'	2'	16'	2'	22'	--	--	--	--
	30	2'	17'	2'	24'	2'	50'	2'	31'	2'	52'	2'	11'	2'	15'	2'	17'	2'	23'
	36	2'	13'	2'	19'	2'	50'	2'	30'	2'	53'	--	--	--	--	2'	15'	2'	21'
	42	2'	13'	2'	19'	2'	50'	--	--	--	--	--	--	--	--	2'	19'	2'	27'
	48	2'	12'	2'	18'	2'	30'	--	--	--	--	--	--	--	--	2'	12'	2'	17'
	60	2'	13'	2'	20'	2'	30'	--	--	--	--	--	--	--	--	2'	16'	2'	23'
COURSE SAND (AASHTO M145 SOIL TYPE A-1-b)	12	2'	17'	2'	23'	--	--	2'	32'	2'	55'	2'	18'	2'	24'	--	--	--	--
	15	2'	16'	2'	22'	--	--	2'	32'	2'	49'	2'	22'	2'	31'	--	--	--	--
	18	2'	15'	2'	21'	--	--	2'	31'	2'	53'	2'	16'	2'	21'	--	--	--	--
	24	2'	14'	2'	20'	2'	50'	2'	30'	2'	48'	2'	13'	2'	17'	--	--	--	--
	30	2'	13'	2'	19'	2'	50'	2'	31'	2'	46'	2'	7'	2'	10'	2'	17'	2'	23'
	36	2'	12'	2'	17'	2'	50'	2'	30'	2'	46'	--	--	--	--	2'	15'	2'	21'
	42	2'	13'	2'	18'	2'	50'	--	--	--	--	--	--	--	--	2'	19'	2'	27'
	48	2'	12'	2'	17'	2'	30'	--	--	--	--	--	--	--	--	2'	12'	2'	17'
	60	2'	13'	2'	20'	2'	30'	--	--	--	--	--	--	--	--	2'	16'	2'	23'
SILTY SAND OR SILTY GRAVEL (AASHTO M145 SOIL TYPES A-2-4 & A-2-5)	12	3.3'	10'	2'	17'	--	--	2.7'	16'	2'	33'	2.8'	11'	2'	19'	--	--	--	--
	15	3.4'	10'	2'	16'	--	--	2.7'	16'	2'	33'	2.8'	11'	2'	23'	--	--	--	--
	18	3.6'	10'	2'	15'	--	--	2.7'	15'	2'	32'	3'	11'	2'	16'	--	--	--	--
	24	3.8'	9'	2'	14'	2'	50'	2.7'	15'	2'	31'	3.3'	10'	2'	13'	--	--	--	--
	30	3.7'	10'	2'	14'	2'	50'	2.8'	15'	2'	31'	3.4'	6'	2'	7'	3'	10'	2'	17'
	36	4.2'	7'	2'	12'	2'	50'	2.8'	14'	2'	31'	--	--	--	--	3.3'	10'	2'	15'
	42	4.2'	7'	2'	13'	2'	50'	--	--	--	--	--	--	--	--	3.2'	11'	2'	20'
	48	4.5'	6'	2'	12'	2'	30'	--	--	--	--	--	--	--	--	3.1'	9'	2'	13'
	60	3.3'	7'	2'	14'	2'	30'	--	--	--	--	--	--	--	--	2'	10'	2'	17'

NOTE:

SPD = STANDARD PROCTOR DENSITY.

FILL HEIGHT MEASURED FROM THE TOP OF PIPE TO SURFACE.

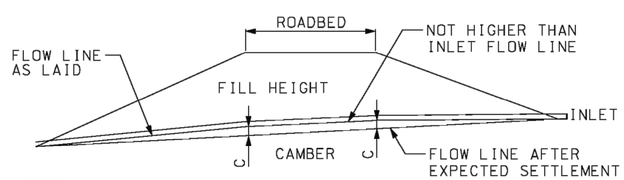
LIMITS ACCOUNT FOR SHORT-TERM TEMPORARY WATER TABLE DEPTHS OF FIVE FEET ABOVE SPRINGLINE. TABLES ARE NOT APPLICABLE FOR LONG-TERM PERMANENT WATER TABLE DEPTHS ABOVE SPRINGLINE.

WHEN PIPES ARE USED AS GROUP A, FILL HEIGHTS ARE LIMITED TO SHADED VALUES.

MINIMUM COVER FOR CONSTRUCTION LOADS

NOMINAL PIPE DIA. (IN.)	MINIMUM COVER (FT) FOR INDICATED AXLE LOADS (THOUSANDS OF POUNDS)			
	18-50	50-75	75-110	110-150
12-36	2.0	2.5	3.0	3.0
42-60	3.0	3.0	3.5	4.0

MINIMUM COVER LIMITS ARE NOT SUFFICIENT FOR SILTY SAND OR SILTY GRAVEL STRUCTURAL BACKFILL COMPACTED TO 90% STANDARD PROCTOR DENSITY. THE CONTRACTOR SHALL PROVIDE MINIMUM COVER PLUS ANY ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. IN UNPAVED SITUATIONS, THE SURFACE MUST BE MAINTAINED TO A LEVEL AND NON-RUTTED CONDITION.



NOTE:
ON YIELDING SOIL, PIPE CULVERTS SHALL BE PLACED ON A CAMBERED FLOW LINE. THE AMOUNT OF CAMBER WILL VARY WITH SOIL CONDITION AND WILL BE SPECIFIED ON THE DESIGN PLANS.

TYPICAL CAMBERED FLOW LINE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

STATE OF MISSOURI — ERIC E. SCHROETER — NUMBER PE-28411 — PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

THERMOPLASTIC PIPE INSTALLATION METHODS

DATE EFFECTIVE: 04/01/2015
DATE PREPARED: 2/27/2015

730.00E

SHEET NO. 1 OF 1

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

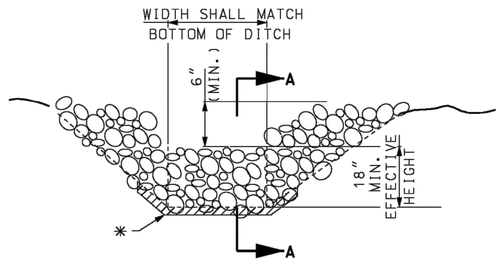
PIPE INSTALL DETAILS

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

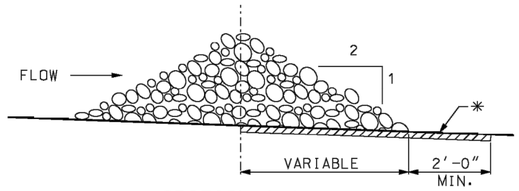
STATE OF MISSOURI — PATRICK J. JOYCE — NUMBER PE-2009030032 — PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
48
48 OF 66

ROCK DITCH CHECK



END VIEW



SECTION A-A

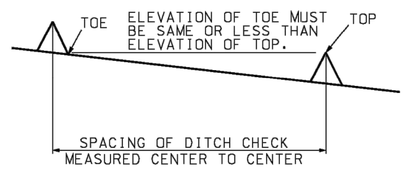
* GEOTEXTILE LINING MAY BE INSTALLED AS REQUIRED BY THE ENGINEER.

NOTE:

ROCK DITCH CHECK IN THE CLEAR ZONE SHALL BE REMOVED OR LEVELED (IF ALLOWABLE) AFTER THE VEGETATION HAS SUFFICIENTLY MATURED TO PROTECT THE DITCH OR SWALE.

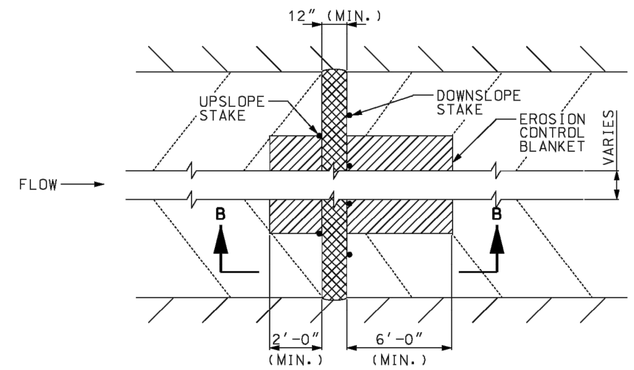
EXAMPLE DITCH CHECK SPACING FOR STANDARD HEIGHTS (FT.)

DITCH ℄ SLOPE %	SPACING FOR 9" EFF. HEIGHT	SPACING FOR 18" EFF. HEIGHT
0.5	150	300
1.0	75	150
1.5	50	100
2.0	37	75
2.5	30	60
3.0	25	50
3.5	21	43
4.0	19	38
4.5	16	33
5.0	15	30
5.5	13	27
6.0	12	25
6.5	11	23
7.0	10	21
7.5	10	20
8.0	9	19
8.5	9	18
9.0	8	17
9.5	8	16
10.0	7	15

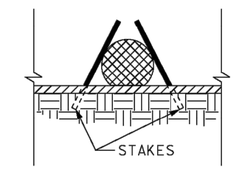


MINIMUM DITCH CHECK SPACING

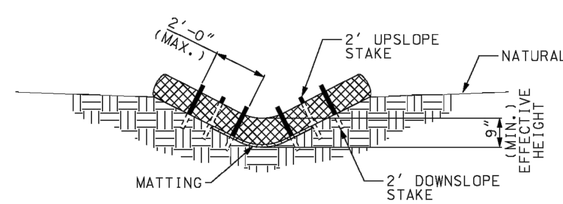
ALTERNATE DITCH CHECK



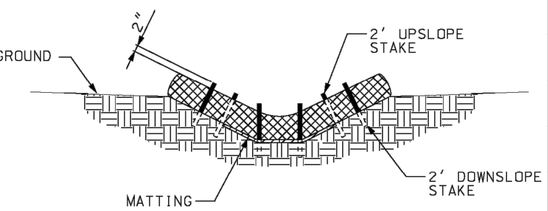
PLAN VIEW



SECTION B-B



TYPICAL SECTION
VEE DITCH



TYPICAL SECTION
TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER LOG/SOCK.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL LOG/SOCK TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND LOG/SOCK AND SCOUR DITCH SLOPES OR AS DIRECTED BY ENGINEER.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE LOG/SOCK TO BOTTOM OF DITCH.

EROSION CONTROL BLANKET SHALL BE ANCHORED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

GENERAL NOTES:

OTHER PROPRIETARY DITCH CHECKS MAY BE SUBSTITUTED IN ACCORDANCE WITH SEC 806 OR AS DIRECTED BY THE ENGINEER.

INSTALLATION OF PROPRIETARY DITCH CHECKS SHALL BE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

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

STATE OF MISSOURI
ERIC E. SCHROETER
NUMBER PE-28411
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

TEMPORARY EROSION CONTROL MEASURES

TEMPORARY DITCH CHECKS

DATE EFFECTIVE: 04/01/2015
DATE PREPARED: 2/20/2015

806.10J

SHEET NO. 1 OF 6

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

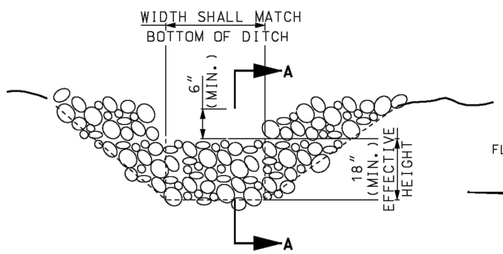
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

ESC DETAILS - 1

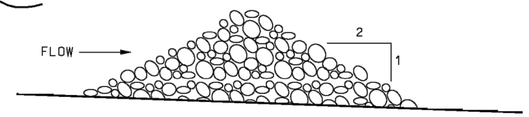
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
49
49 OF 66



END VIEW

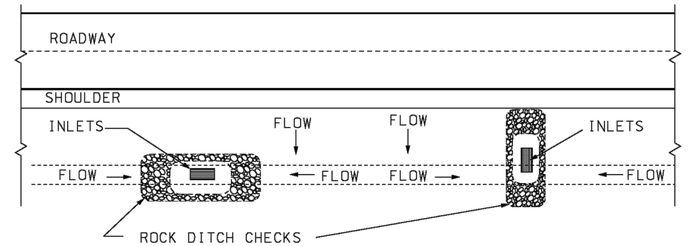


SECTION A-A

SEDIMENT TRAP

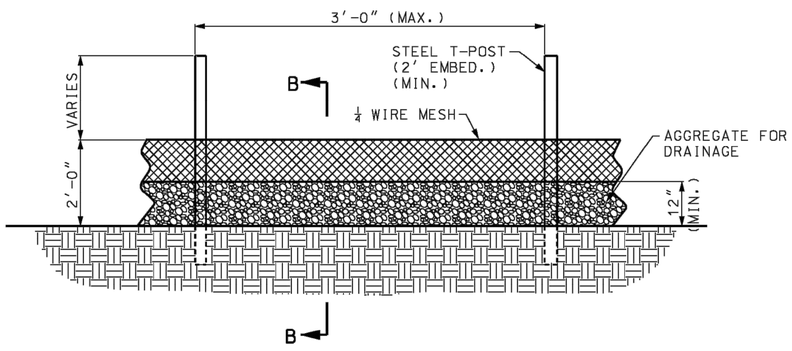
NOTE:

SEDIMENT TRAP IN THE CLEAR ZONE SHALL BE REMOVED OR LEVELED (IF ALLOWABLE) AFTER THE VEGETATION HAS SUFFICIENTLY MATURED TO PROTECT THE DITCH OR SWALE.

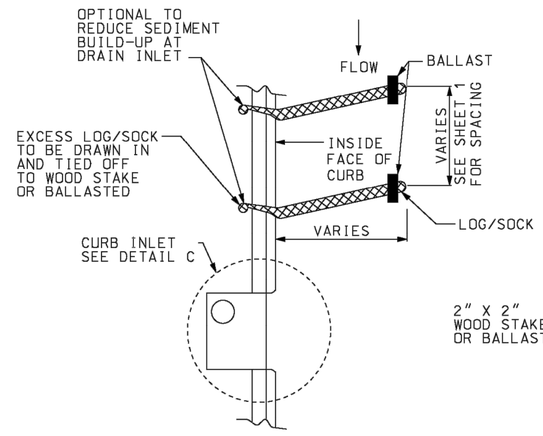


DROP INLET CHECK

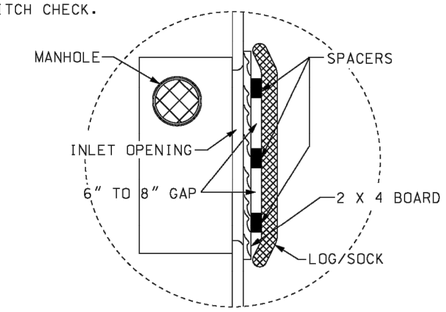
SEE SHEET 1 OF 6 FOR DETAILS OF ROCK DITCH CHECK.



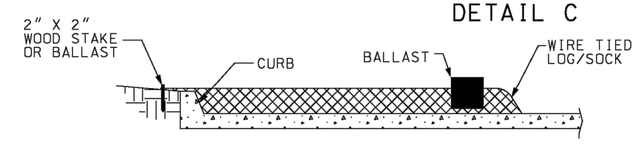
ELEVATION DETAIL



PLAN



DETAIL C



SECTION

INLET PROTECTION DROP CONTAINMENT

NOTES:

AGGREGATE FOR DRAINAGE SHALL BE IN ACCORDANCE WITH SEC 1009, GRADE 4 OR GRADE 5.

USE HARDWARE CLOTH 24 GAUGE WIRE MESH WITH ¼ INCH MESH OPENINGS.

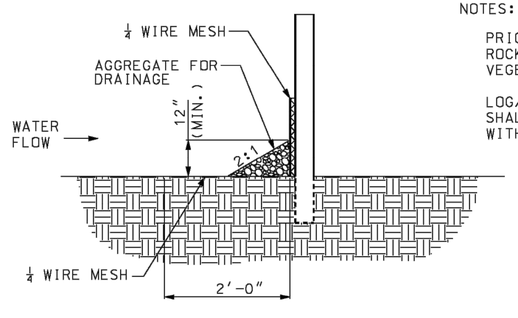
INSTALL 5 FT. T-POST WITH A 2 FOOT EMBEDMENT DEPTH (MIN.).

ATTACH HARDWARE CLOTH TO POST WITH WIRE STAPLE OR OTHER ACCEPTABLE METHODS

SPACE POST A MAXIMUM OF 3 FT.

FOR INSTALLATION BETWEEN SECTIONS OF SILT FENCE, EXTEND AGGREGATE FOR DRAINAGE A MINIMUM OF 12 INCHES ON EACH SIDE OF SPECIAL SEDIMENT CONTROL FENCE SECTION.

INSTALLATION SHALL BE FOR AREA INLETS AND PERIMETER PROTECTION BMP'S.



SECTION B-B

ROCK/MESH SEDIMENT CONTROL FENCE

NOTES:

PRIOR TO PLACEMENT ALL DEBRIS, ROCK, LARGE CLODS AND WOOD VEGETATION SHALL BE CLEARED.

LOG/SOCK PLACED ON PAVEMENT SHALL BE WEIGHTED DOWN WITH GRAVEL/SAND BALLAST.

GENERAL NOTES:

OTHER PROPERIETARY INLET PROTECTION MAY BE SUBSTITUTED IN ACCORDANCE WITH SEC 806 OR AS DIRECTED BY THE ENGINEER.

FOR SEDIMENT CONTROL SPACING SEE SHEET 1 OF 6.

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

STATE OF MISSOURI
ERIC E. SCHROETER
NUMBER PE-28411
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

TEMPORARY EROSION CONTROL MEASURES

DATE EFFECTIVE: 04/01/2015
DATE PREPARED: 2/20/2015

806.10J

SHEET NO. 2 OF 6

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/15/22
3	PER MODOT COMMENT	JGD	01/18/23
4	PER MODOT COMMENT	JGD	04/07/23

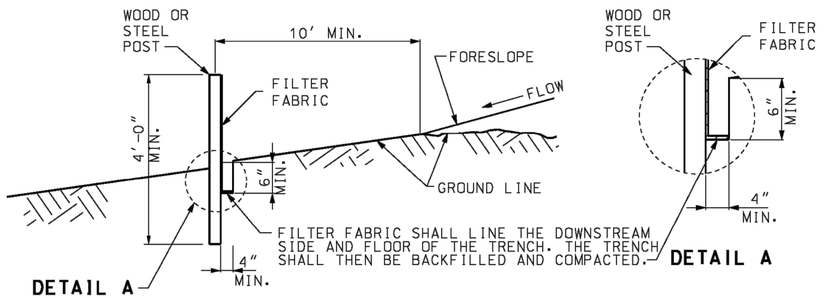
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

ESC DETAILS - 2

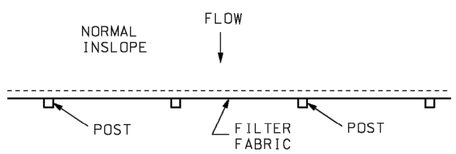
S 29 T47N R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

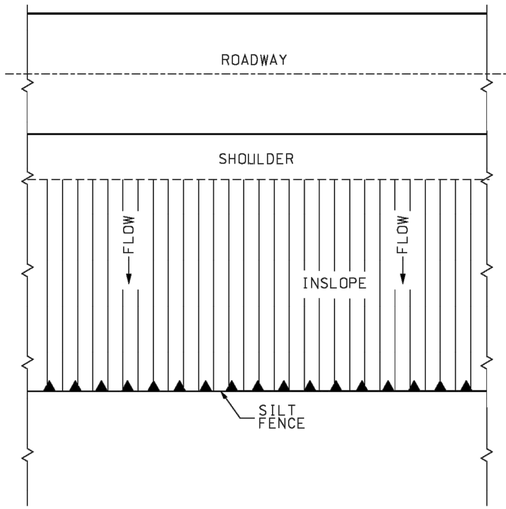
SHEET NUMBER
50
50 OF 66



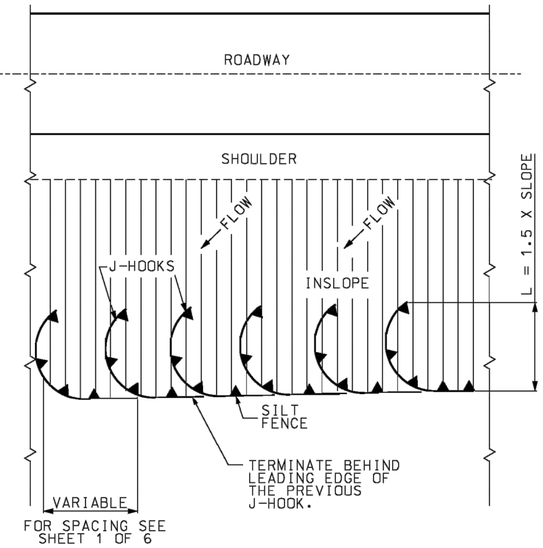
TYPICAL B-B



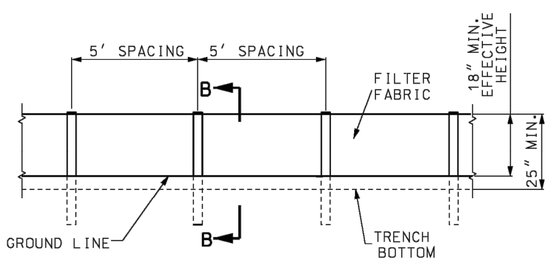
PLAN VIEW



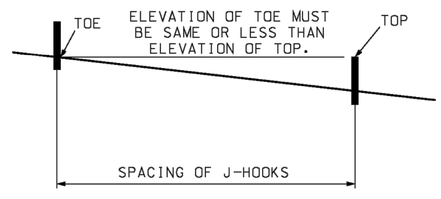
PERIMETER SILT FENCE
FOR TRANSVERSE FLOW



PERIMETER SILT FENCE
FOR ANGULAR FLOW



ELEVATION DETAIL
FABRIC SILT FENCE



MINIMUM J-HOOK SPACING

GENERAL NOTES:

USE SILT FENCE FOR FILL HEIGHTS GREATER OR EQUAL TO 10 FEET. ON ALL FILLS GREATER THAN 10 FEET HIGH, MID-SLOPE RUNS OF SILT FENCE SHOULD BE CONSIDERED.

FOR FABRIC SILT FENCE:

MINIMUM LONGITUDINAL SPLICE OVERLAP SHALL BE 2' WITH A POST AT EACH END.

SECURE FABRIC TO POSTS.

INSTEAD OF SILT FENCE ACROSS DRAINAGE DITCHES AND DRAINS, DITCH CHECKS SHALL BE USED AS SHOWN ON PLANS OR AS DIRECTED BY ENGINEER.

AT CULVERTS, PLACE SEDIMENT BARRIERS OVER THE TOP OF THE CULVERTS (NOT IN THE STREAM CHANNEL).

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

STATE OF MISSOURI
ERIC E. SCHROETER
NUMBER PE-28411
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

TEMPORARY EROSION CONTROL MEASURES

SILT FENCE

DATE EFFECTIVE: 04/01/2015
DATE PREPARED: 2/20/2015

806.10J

SHEET NO. 5 OF 6

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/15/22
3	PER MODOT COMMENT	JGD	01/18/23
4	PER MODOT COMMENT	JGD	04/07/23

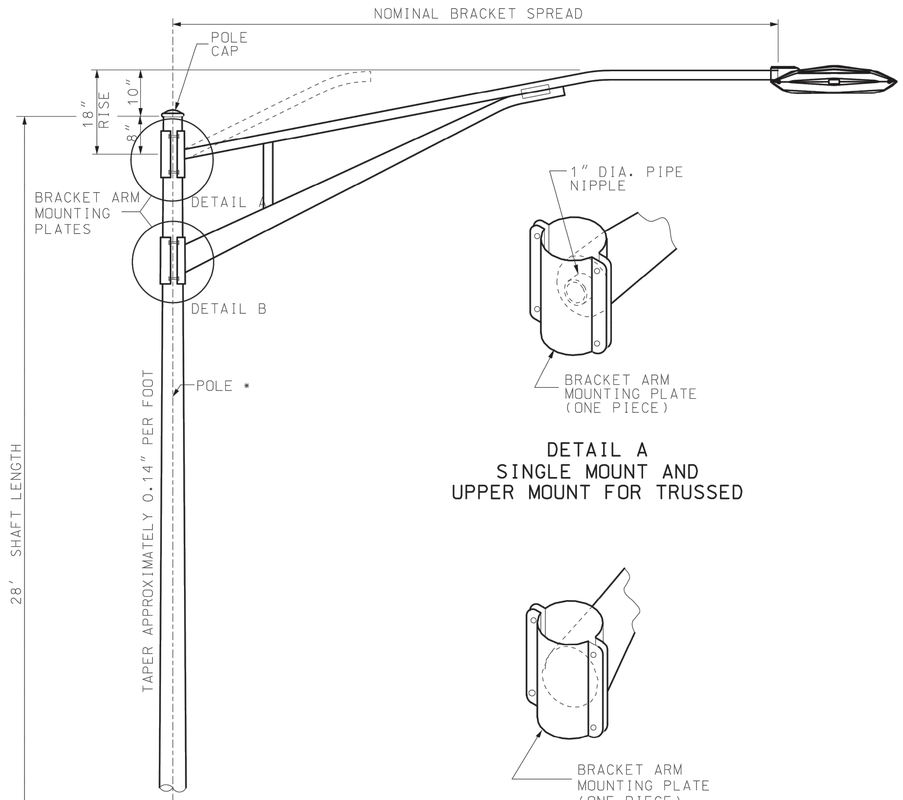
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

ESC DETAILS - 3

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

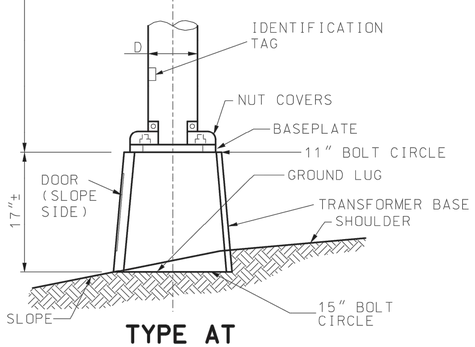
SHEET NUMBER
51
51 OF 66



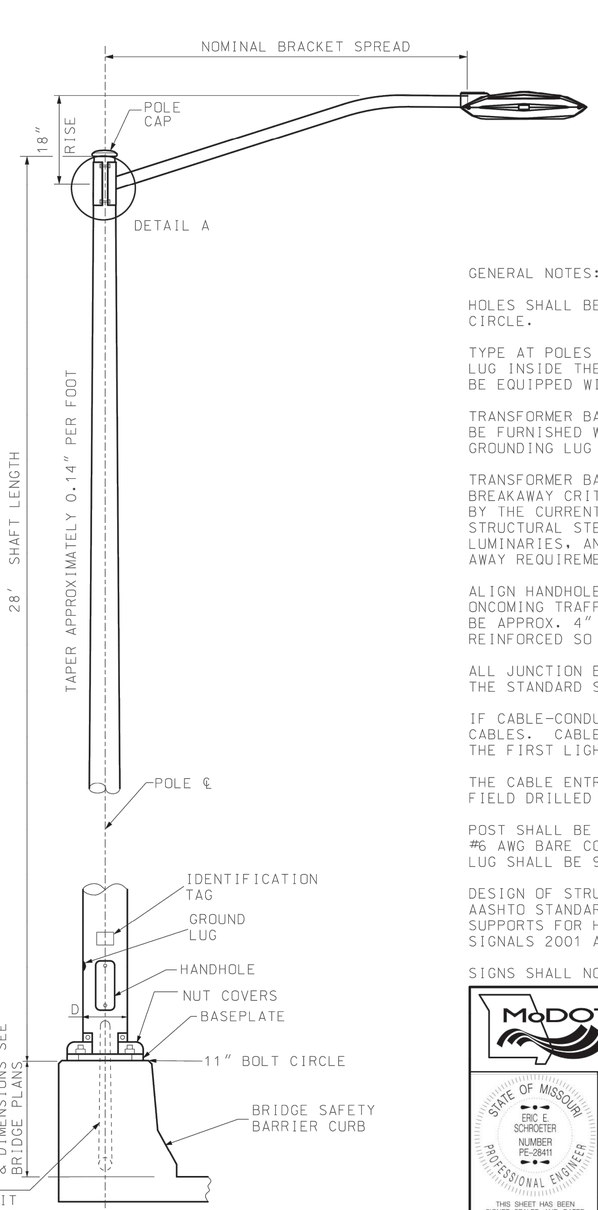
DETAIL A
SINGLE MOUNT AND
UPPER MOUNT FOR TRUSSED

DETAIL B
LOWER MOUNT FOR TRUSSED

TYPICAL BRACKET ARM MOUNTING

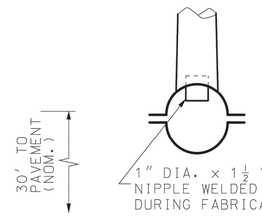


TYPE AT



WIRES SHALL BE SPLICED AT FUSED CONNECTOR IN POLE BASE. IF CABLE-CONDUIT IS SPECIFIED, CUT CONDUIT AWAY FROM THE CABLES WHERE CABLE-CONDUIT ENTERS THE RIGID CONDUIT SYSTEM.
(SEE DRAWING 901.02)

TYPE B



PLAN VIEW OF DETAIL A

GENERAL NOTES:

HOLES SHALL BE PUNCHED ONLY FOR SPECIFIED BOLT CIRCLE.

TYPE AT POLES SHALL BE EQUIPPED WITH THE GROUNDING LUG INSIDE THE TRANSFORMER BASE. TYPE B POLES SHALL BE EQUIPPED WITH A GROUNDING LUG INSIDE THE POLE.

TRANSFORMER BASES FOR 30 FOOT MOUNTING HEIGHT SHALL BE FURNISHED WITH ONE (1) DRILLED AND TAPPED HOLE AND GROUNDING LUG FOR GROUNDING EQUIPMENT.

TRANSFORMER BASE SHALL BE CERTIFIED AS MEETING THE BREAKAWAY CRITERIA AND STRUCTURAL REQUIREMENTS AS SET BY THE CURRENT AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL STEEL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS" AND MEET THE BREAK-AWAY REQUIREMENTS OF NCHRP 350.

ALIGN HANDHOLE SO THAT THE POLE IS BETWEEN THE ONCOMING TRAFFIC AND THE HANDHOLE. HANDHOLE SHALL BE APPROX. 4″ X 6-1/2″. HANDHOLE FRAME SHALL BE REINFORCED SO THAT THE POLE STRENGTH IS NOT REDUCED.

ALL JUNCTION BOXES SHALL CONFORM TO SECTION 1062 OF THE STANDARD SPECIFICATIONS.

IF CABLE-CONDUIT IS SPECIFIED, CUT CONDUIT AWAY FROM CABLES. CABLES SHALL BE CONTINUOUS AND UNSPLICED TO THE FIRST LIGHT POLE.

THE CABLE ENTRANCE AT THE BRACKET ARM SHALL BE A FIELD DRILLED 1-1/4″ DIAMETER HOLE.

POST SHALL BE GROUNDED FROM GROUND LUG IN POST WITH #6 AWG BARE COPPER WIRE TO CONDUIT SYSTEM. GROUND LUG SHALL BE 90° OR 180° FROM THE HANDHOLE.

DESIGN OF STRUCTURAL SUPPORTS SHALL COMPLY WITH AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS 2001 AND INTERIMS THROUGH 2003.

SIGNS SHALL NOT BE MOUNTED ON LIGHTING POLES.

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

STATE OF MISSOURI
ERIC E. SCHROETER
NUMBER PE-28411
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

HIGHWAY LIGHTING
POLES, FOUNDATIONS AND APPURTENANCES FOR 30′ MOUNTING HEIGHT

DATE EFFECTIVE:	04/01/2018	901.00AB	SHEET NO.
DATE PREPARED:	2/9/2018		1 OF 4

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

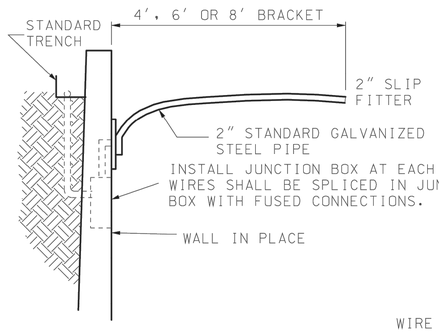
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

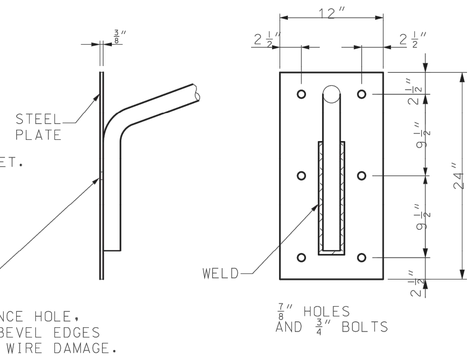
LIGHTING DETAIL-1

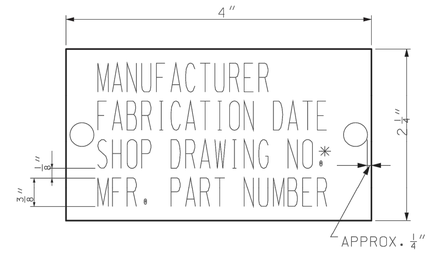
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
52
52 OF 66



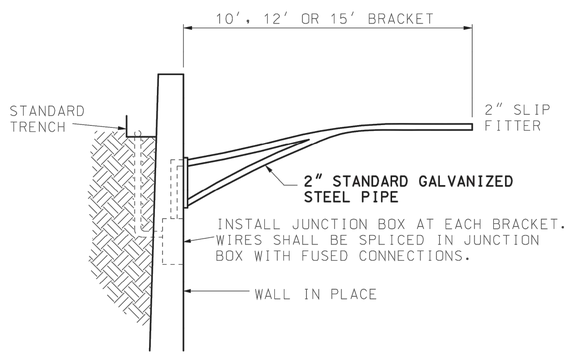




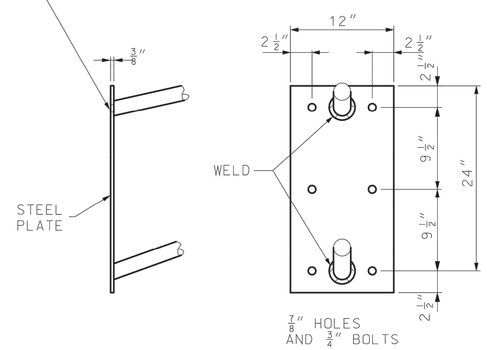
ID TAG NOTE:
TAG SHALL BE ALUMINUM OR STAINLESS STEEL AND ATTACHED TO POLE USING TWO RIVETS OR STAINLESS STEEL DRIVE SCREWS.

* INCLUDING REVISION

IDENTIFICATION TAG



WALL BRACKETS



FACE PLATE DETAILS

GENERAL NOTES:

HOLES SHALL BE PUNCHED ONLY FOR SPECIFIED BOLT CIRCLE.

TYPE AT POLES SHALL BE EQUIPPED WITH THE GROUNDING LUG INSIDE THE TRANSFORMER BASE. TYPE B POLES SHALL BE EQUIPPED WITH A GROUNDING LUG INSIDE THE POLE.

TRANSFORMER BASES FOR 30 FOOT MOUNTING HEIGHT SHALL BE FURNISHED WITH ONE (1) DRILLED AND TAPPED HOLE AND GROUNDING LUG FOR GROUNDING EQUIPMENT.

TRANSFORMER BASE SHALL BE CERTIFIED AS MEETING THE BREAKAWAY CRITERIA AND STRUCTURAL REQUIREMENTS AS SET BY THE CURRENT AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL STEEL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS" AND MEET THE BREAK-AWAY REQUIREMENTS OF NCHRP 350.

ALIGN HANDHOLE SO THAT THE POLE IS BETWEEN THE ONCOMING TRAFFIC AND THE HANDHOLE. HANDHOLE SHALL BE APPROX. 4″ X 6-1/2″. HANDHOLE FRAME SHALL BE REINFORCED SO THAT THE POLE STRENGTH IS NOT REDUCED.

ALL JUNCTION BOXES SHALL CONFORM TO SECTION 1062 OF THE STANDARD SPECIFICATIONS.

IF CABLE-CONDUIT IS SPECIFIED, CUT CONDUIT AWAY FROM CABLES. CABLES SHALL BE CONTINUOUS AND UNSPLICED TO THE FIRST LIGHT POLE.

THE CABLE ENTRANCE AT THE BRACKET ARM SHALL BE A FIELD DRILLED 1-1/4″ DIA. HOLE.

POST SHALL BE GROUNDED FROM GROUND LUG IN POST WITH #6 AWG BARE COPPER WIRE TO CONDUIT SYSTEM. GROUND LUG SHALL BE 90° OR 180° FROM THE HANDHOLE.

ID TAG HOLES SHALL BE DRILLED INTO POLE PRIOR TO GALVANIZING.

LED LUMINAIRES

FUSE RATING	DESIGNATION	MAX. WATT	DISTRIBUTION TYPE	BACKLIGHT-UPLIGHT-GLARE (BUG) RATING
3 A	LED-A	103	III	B2-U0-G2
LUMINAIRE PER CHART UNLESS OTHERWISE SPECIFIED ON PLANS.				

TYPE AT POLE

BRACKET SPREAD		4′-10′	12′	15′
MAX. LUMINAIRE WEIGHT		75 LB	71 LB	66 LB
MAX. PROJECTED AREA		3.3 SQ. FT.		
SINGLE AND TRUSSED BRACKET ARMS				
LOCATION	LENGTH POLE	BRACKET SPREAD	TRANS. BASE BOLT CIRC.	D
SHOULDER	28′	4′,6′,8′, 10′,12′,15′	15″	8″

TYPE B POLE

BRACKET SPREAD		4′	6′	8′
MAX. LUMINAIRE WEIGHT		75 LB	75 LB	54 LB
MAX. PROJECTED AREA		3.3 SQ. FT.		
SINGLE BRACKET ARM				
LOCATION	LENGTH POLE	BRACKET SPREAD	D	ANCHOR BOLT DIA.
BRIDGE SAFETY BARRIER CURB	28′	4′,6′ 8′	8″	1″

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

STATE OF MISSOURI — ERIC E. SCHROETER — NUMBER PE-28411 — PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

HIGHWAY LIGHTING

POLES, FOUNDATIONS AND APPURTENANCES FOR 30′ MOUNTING HEIGHT

DATE EFFECTIVE: 04/01/2018
DATE PREPARED: 2/9/2018

901.00AB

SHEET NO. 2 OF 4

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

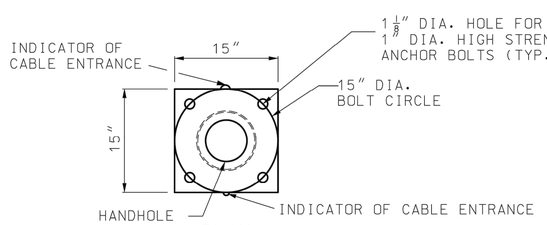
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

LIGHTING DETAIL-2

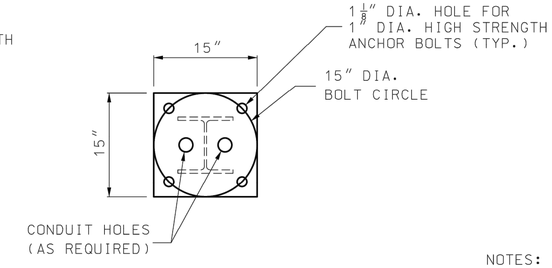
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI — PATRICK J. JOYCE — NUMBER PE-2009030032 — PROFESSIONAL ENGINEER
04/07/2023

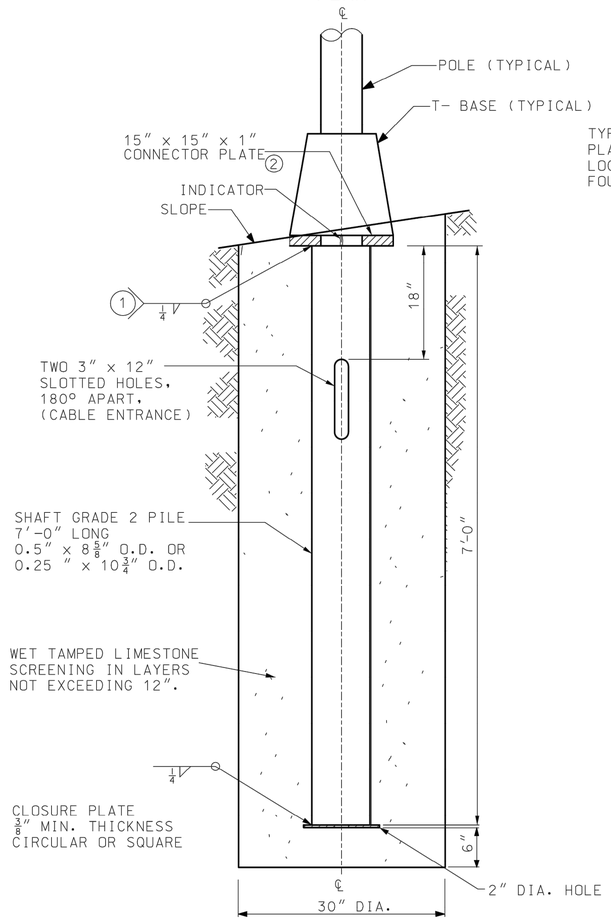
SHEET NUMBER
53
53 OF 66



PLAN

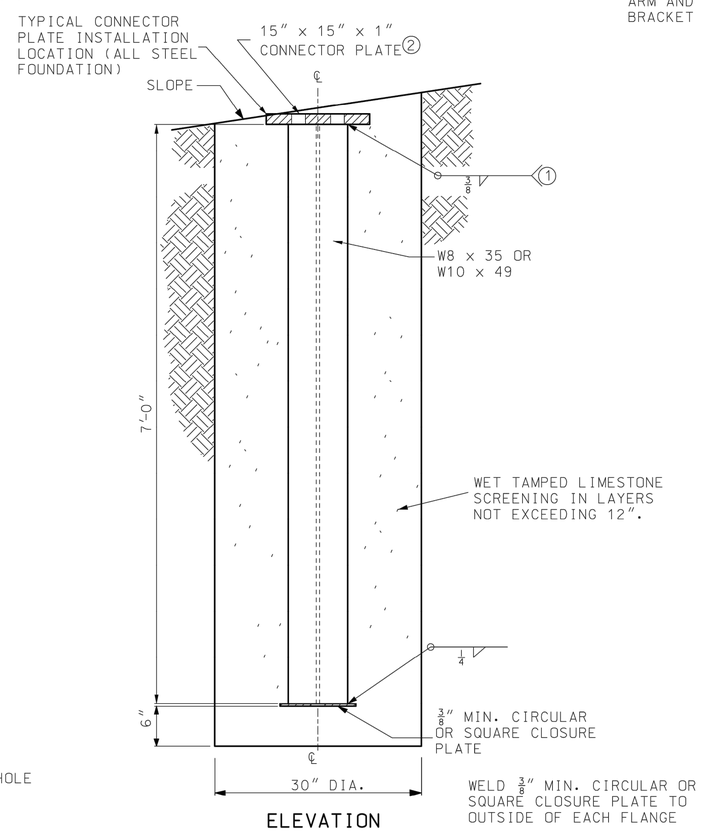


PLAN



ELEVATION

DETAILS OF CIRCULAR STEEL PILE FOUNDATION



ELEVATION

DETAILS OF STEEL "H" PILE FOUNDATION

NOTES:

① GRIND WELD AS NECESSARY TO CLEAR BOLT HEAD.

② FOUNDATIONS SHALL BE INSTALLED SO THAT CONNECTOR PLATES ARE LEVEL PERPENDICULAR TO THE BRACKET ARM AND SLOPED FOR POLE RAKING PARALLEL TO THE BRACKET ARM.

GENERAL NOTES:

ALL CLASSIFICATIONS ARE ASTM UNLESS OTHERWISE NOTED. SEE STANDARD SPECIFICATIONS FOR CLASSIFICATIONS NOT SHOWN.

ALL CONNECTOR PLATE AND CLOSURE PLATE THICKNESSES SHOWN ARE MINIMUM DIMENSIONS.

ALL ANCHOR BOLTS SHALL BE FULLY GALVANIZED 1″ DIA. HIGH STRENGTH ANCHOR BOLTS.

ALL STEEL COMPONENTS SHALL BE HOT DIP GALVANIZED.

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

STATE OF MISSOURI
NICOLE A. KOLB HOOD
NUMBER PE-2001018754
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

HIGHWAY LIGHTING

POLES, FOUNDATIONS AND APPURTENANCES FOR 30′ MOUNTING HEIGHT

DATE EFFECTIVE: 01/01/2021
DATE PREPARED: 10/14/2020

901.00AB

SHEET NO. 3 OF 4

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.	
DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/11/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

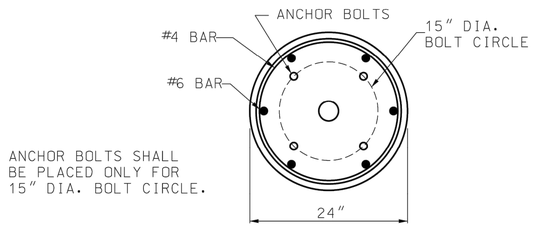
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

LIGHTING DETAIL-3

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

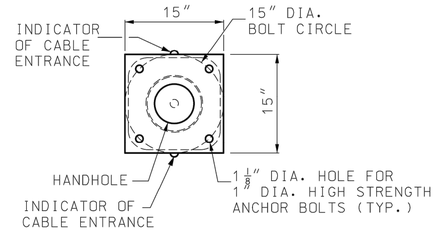
STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
54
54 OF 66



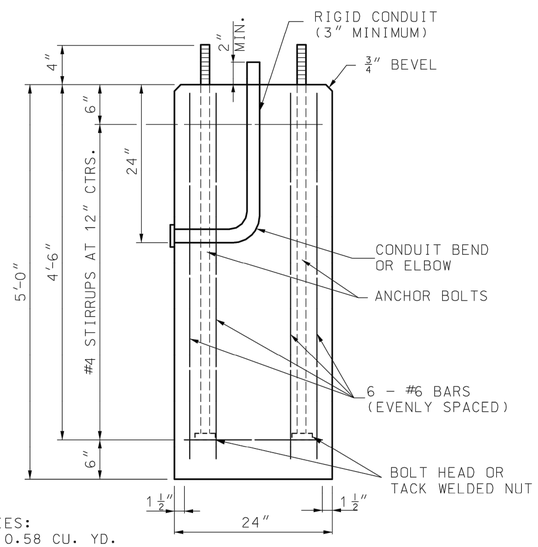
ANCHOR BOLTS SHALL BE PLACED ONLY FOR 15″ DIA. BOLT CIRCLE.

PLAN



PLAN

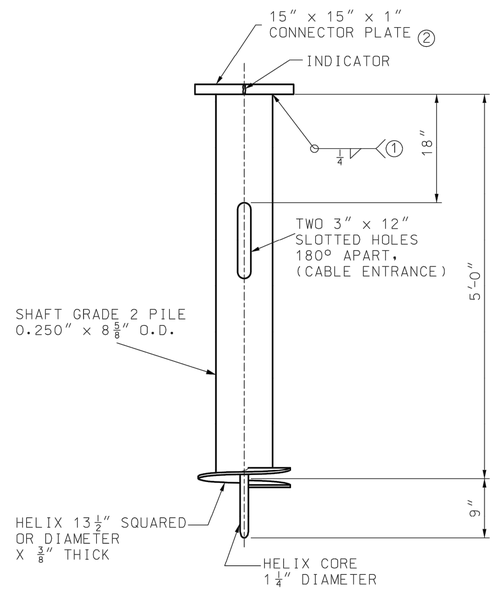
DRIVE HOLES WILL BE PERMITTED PROVIDED THAT THEY DO NOT CONFLICT WITH OR COMPROMISE THE STRUCTURAL INTEGRITY OF THE PLATE, THE WELD BETWEEN THE PLATE AND SHAFT, OR THE BOLT HOLES.



QUANTITIES:
CONC. = 0.58 CU. YD.
REIN. = 64 LBS.

ELEVATION

DETAILS OF CONCRETE FOUNDATION ③

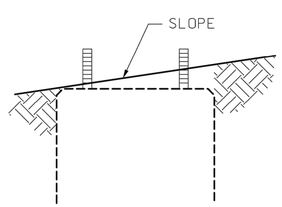


ELEVATION

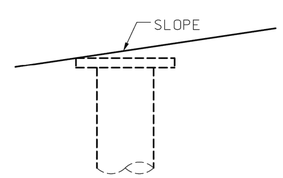
DETAILS OF SCREW ANCHOR FOUNDATION

NOTES:

1. GRIND WELD AS NECESSARY TO CLEAR BOLT HEAD.
2. FOUNDATIONS SHALL BE INSTALLED SO THAT CONNECTOR PLATES ARE LEVEL PERPENDICULAR TO THE BRACKET ARM AND SLOPED FOR POLE RAKING PARALLEL TO THE BRACKET ARM.
3. AT THE OPTION OF THE CONTRACTOR THE CONCRETE FOUNDATION MAY BE PRECAST. IF PRECAST, THEY SHALL BE SET IN DRILLED HOLES 3 FEET IN DIAMETER AND 6 INCHES DEEPER THAN THE BOTTOM OF THE CONCRETE FOUNDATION. THE BOTTOM 6 INCHES OF THE HOLE AND THE REMAINING SPACE AROUND THE FOUNDATION SHALL BE BACKFILLED WITH WET TAMPED LIMESTONE SCREENINGS IN LAYERS NOT EXCEEDING 12 INCHES.



CONCRETE FOUNDATION EMBEDMENT



SCREW ANCHOR EMBEDMENT

GENERAL NOTES:

ALL CLASSIFICATIONS ARE ASTM UNLESS OTHERWISE NOTED. SEE STANDARD SPECIFICATIONS FOR CLASSIFICATIONS NOT SHOWN.

ALL CONNECTOR PLATE AND CLOSURE PLATE THICKNESSES SHOWN ARE MINIMUM DIMENSIONS.

ALL ANCHOR BOLTS SHALL BE FULLY GALVANIZED 1″ DIA. HIGH STRENGTH ANCHOR BOLTS.

ALL STEEL COMPONENTS SHALL BE HOT DIP GALVANIZED.

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

STATE OF MISSOURI
NICOLE A. KOLB HOOD
NUMBER
PE-2001018754
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

HIGHWAY LIGHTING

POLES, FOUNDATIONS AND APPURTENANCES FOR 30′ MOUNTING HEIGHT

DATE EFFECTIVE: 01/01/2021
DATE PREPARED: 10/14/2020

901.00AB

SHEET NO. 4 OF 4

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

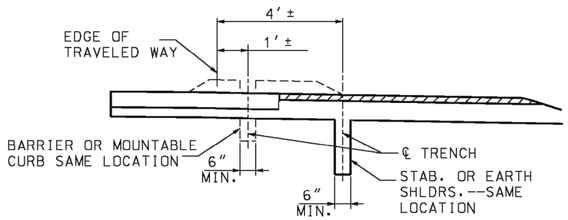
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

LIGHTING DETAIL-4

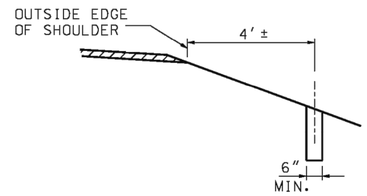
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

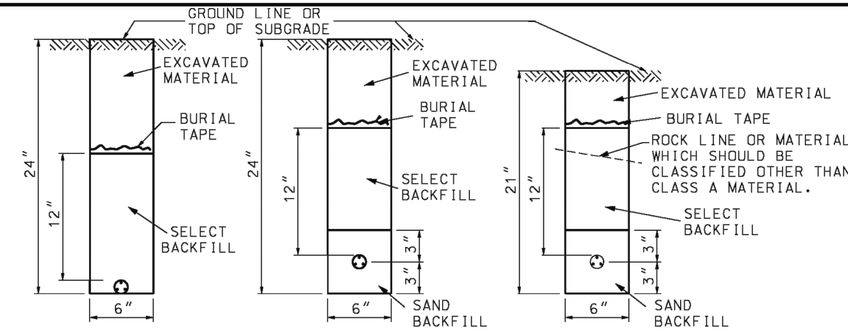
SHEET NUMBER
55
55 OF 66



TRENCH LOCATION - INSIDE SHOULDER

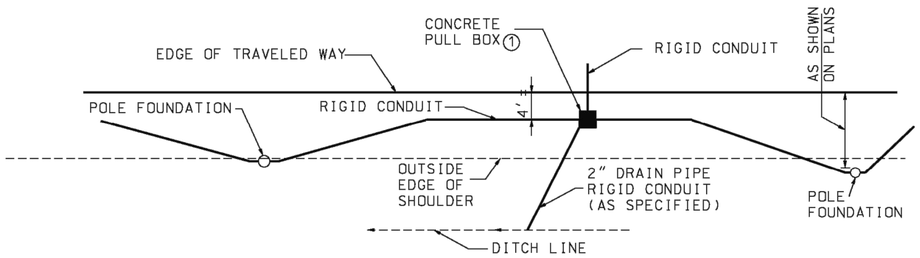


TRENCH LOCATION - OUTSIDE SHOULDER



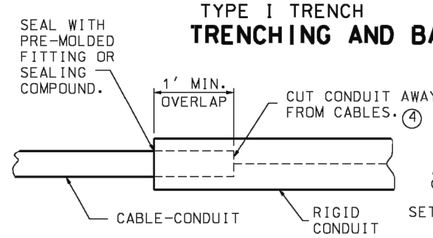
TYPE I TRENCH TYPE II TRENCH TYPE III TRENCH

TRENCHING AND BACKFILLING FOR CABLE-CONDUIT

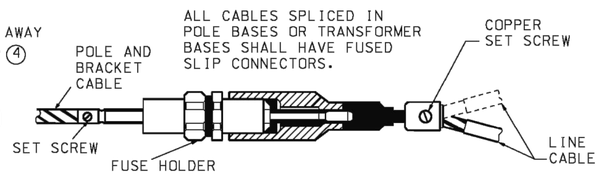


PLAN

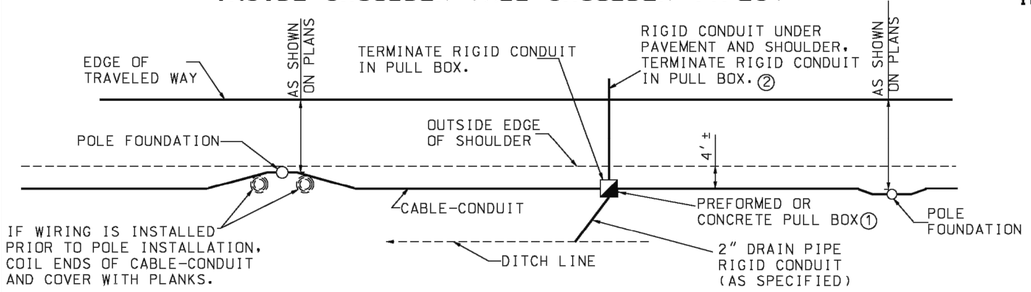
INSIDE SHOULDER (ALL SHOULDER TYPES)



TERMINATION OF CABLE-CONDUIT INTO RIGID CONDUIT SYSTEM

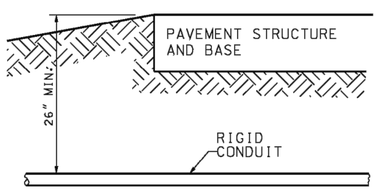


SINGLE OR DUAL CABLE FUSED SLIP CONNECTOR ASSEMBLY ③

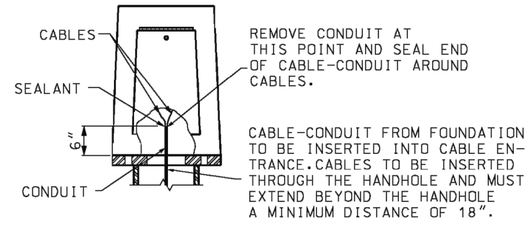


PLAN

OUTSIDE SHOULDER (ALL SHOULDER TYPES)



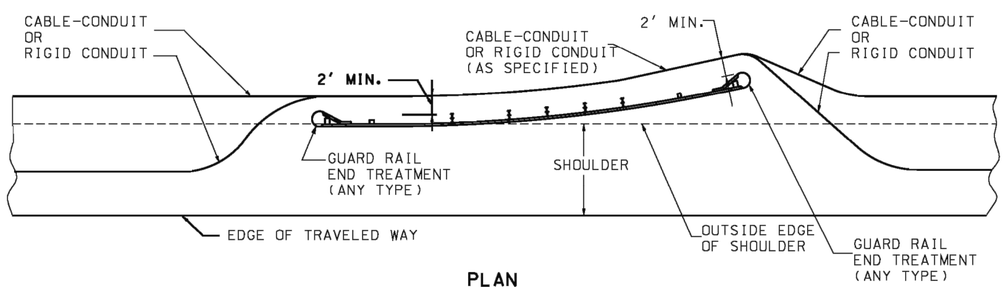
RIGID CONDUIT UNDER PAVEMENT



TYPICAL TRANSFORMER BASE ATTACHMENT

GENERAL NOTES:

THE CONDUIT OF THE CABLE-CONDUIT SHALL BE CUT AWAY FROM THE CABLES WHERE THEY ENTER THE RIGID CONDUIT INSIDE A CONCRETE BARRIER OR STRUCTURE.



PLAN

BEHIND GUARD RAIL

NOTES:

① SEE DRAWING 902.20 FOR PULL BOXES.

② CONDUIT MAY BE REMOVED FROM CABLES IN RIGID CONDUIT. SPLICES SHALL NOT BE MADE UNLESS SHOWN ON PLANS.

③ BRAND AND MODEL OF FUSE HOLDER SHALL BE APPROVED BY THE ENGINEER.

④ CABLES SHALL BE CONTINUOUS TO THE FIRST LIGHT POLE. SPLICES SHALL NOT BEMADE FOR THE PURPOSE OF TERMINATING CABLE-CONDUIT.

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

STATE OF MISSOURI — EILEEN H. RACKERS — NUMBER PE-28336 — PROFESSIONAL ENGINEER — THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

HIGHWAY LIGHTING
CABLE, CONDUIT AND TRENCHING

DATE EFFECTIVE: 04/01/2002
DATE PREPARED: 3/10/2011

901.02B

SHEET NO. 1 OF 1

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/18/23
4	PER MODOT COMMENT	JGD	04/07/23

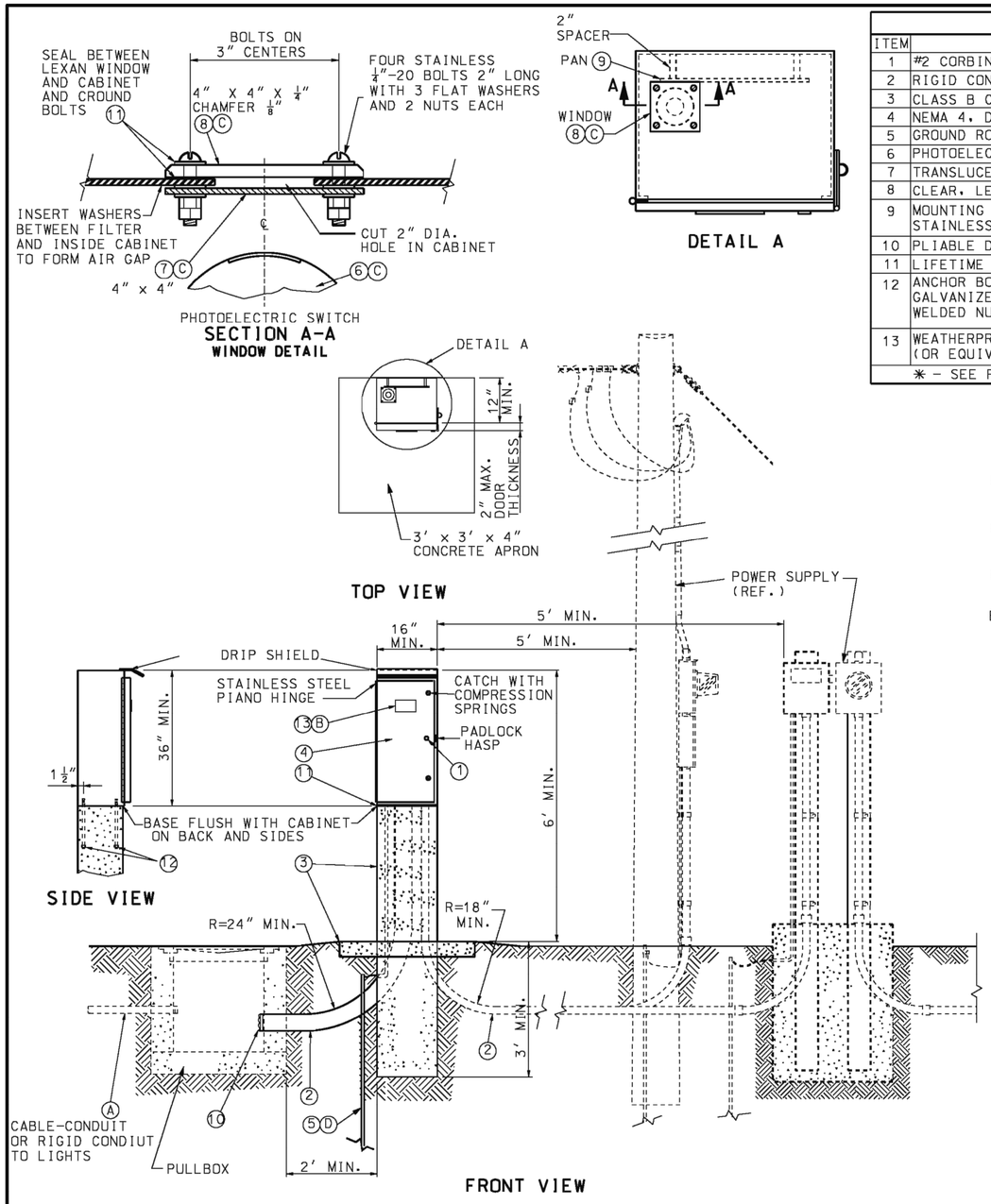
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

LIGHTING DETAIL-5

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI — PATRICK J. JOYCE — NUMBER PE-2009030032 — PROFESSIONAL ENGINEER — 04/07/2023

SHEET NUMBER
56
56 OF 66



LIST OF MATERIALS

ITEM	DESCRIPTION
1	#2 CORBIN LOCK
2	RIGID CONDUIT ✳
3	CLASS B CONCRETE, 0.4 C.Y.±
4	NEMA 4, DUST-TIGHT, WATERTIGHT, CABINET
5	GROUND ROD, 3/4" DIA. X 8' MIN.
6	PHOTOELECTRIC SWITCH AND SOCKET, 105/285 V., 1000-WATT
7	TRANSLUCENT, PLEXIGLASS FILTER #W2067, 1/8" THICK
8	CLEAR, LEXAN #9034 WINDOW, 1/4" THICK MIN.
9	MOUNTING PAN, 31 1/2" x 12" x 1/4" ALUMINUM OR STAINLESS STEEL
10	PLIABLE DUCT SEALANT
11	LIFETIME SILICONE CAULK
12	ANCHOR BOLTS, 5/8-11 x 14" LONG BOLTS, HOT DIP GALVANIZED, 4 REQUIRED.USE BOLT HEAD OR TACK WELDED NUT ON EMBEDDED END
13	WEATHERPROOF ADHESIVE LABEL, VINYL RAISED LETTERING (OR EQUIVALENT, SEE DETAIL)
	✳ - SEE PLANS

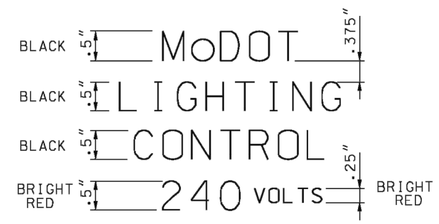
NOTES

(A) IF CABLE-CONDUIT IS SPECIFIED, THE CONDUIT SHALL BE CUT AWAY FROM CABINET BETWEEN PULL BOX AND CONTROL STATION.

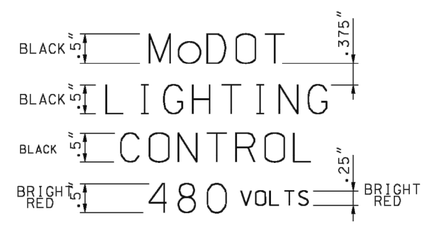
(B) LIGHTING SYSTEM VOLTAGE AS SPECIFIED ON PLANS.

(C) PHOTOELECTRIC SWITCH BRACKETS MAY VARY. LOCATE CENTER OF WIDOW OVER CENTER OF PHOTOELECTRIC SWITCH.

(D) IF SUBSURFACE CONDITIONS EXIST WHICH PROHIBIT THE PLACEMENT OF THE GROUND ROD IN A VERTICAL POSITION, THE ROD MAY BE DRIVEN AT AN OBLIQUE ANGLE NOT TO EXCEED 45 DEGREES FROM VERTICAL OR BURIED IN A TRENCH AT LEAST 30 IN. DEEP. CONNECTION TO GROUND ROD SHALL BE CADWELDED.



LABEL DETAIL
(240 VOLT) (13B)



LABEL DETAIL
(480 VOLT) (13B)

GENERAL NOTES:

ALTERNATE CABINET DIMENSIONS WILL BE ALLOWED AS APPROVED BY THE ENGINEER. INTERIOR CABINET VOLUME SHALL BE EQUAL TO OR GREATER THAN THAT SHOWN ON PLANS AND PROPER CLEARANCES SHALL BE PROVIDED FOR ALL EQUIPMENT. CONCRETE BASE DIMENSIONS SHALL BE MODIFIED TO FIT THE CABINET SUPPLIER.

PLACEMENT OF ALL ITEMS SHALL BE APPROVED BY THE ENGINEER.

CABINET SHALL BE LOCATED AWAY FROM TRAFFIC. TOP MOUNT PHOTO CONTROL SHALL FACE AN OPEN SKY. SIDE MOUNT PHOTO CONTROL SHALL FACE NORTH.

SEE PLANS FOR CIRCUIT WIRING: MAXIMUM LOADING PER CIRCUIT IS 7,400 WATTS FOR 240 VOLT AND 11,000 WATTS FOR 480 VOLT.

SCHEMATIC DIAGRAM SHALL BE MOUNTED ON INSIDE OF CABINET DOOR.

THE UTILITY SHALL BE NOTIFIED IN WRITING 30 DAYS PRIOR TO DATE SERVICE WILL BE REQUIRED.

ALL OPENINGS IN CABINET SHALL BE COVERED AND SEALED WITH LIFETIME SILICONE CAULK.

ALL MATERIALS REQUIRED EXCLUDING REFERENCE ITEMS AS SHOWN ON DRAWING SHALL BE INCLUDED IN PRICE BID FOR CONTROL STATION.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

STATE OF MISSOURI
EILEEN H. RACKERS
NUMBER PE-28336
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

HIGHWAY LIGHTING
BASE MOUNTED CONTROL STATION
240 V OR 480 V - 4 CIRCUIT

DATE EFFECTIVE:	04/01/2005	901.30F	SHEET NO.
DATE PREPARED:	9/14/2010		1 OF 2

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	01/11/23
3	PER MODOT COMMENT	JGD	01/18/23
4	PER MODOT COMMENT	JGD	04/07/23

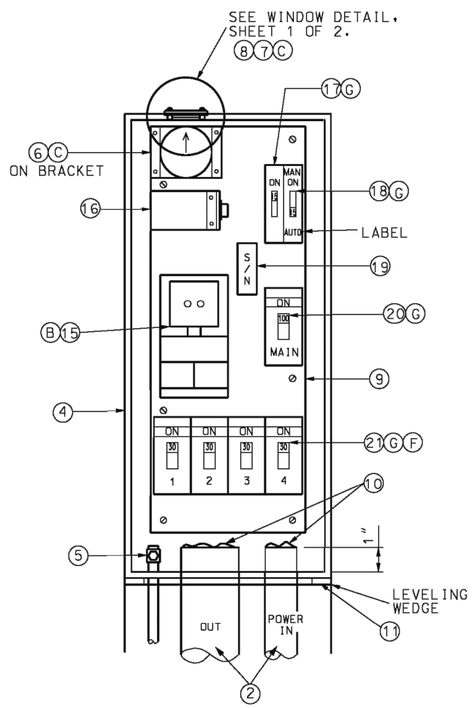
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

LIGHTING DETAIL-6

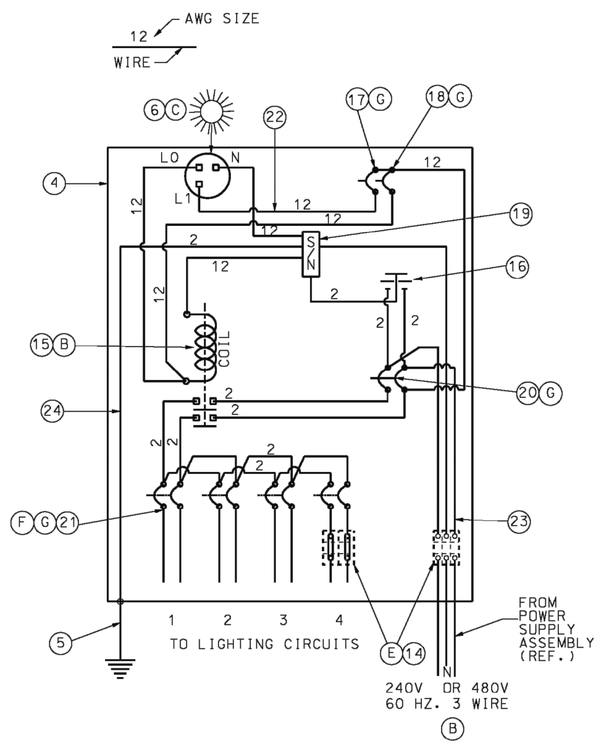
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
57
57 OF 66



EQUIPMENT LAYOUT



WIRING DIAGRAM

LIST OF MATERIALS	
ITEM	DESCRIPTION
2	RIGID CONDUIT ✳
4	NEMA 4, DUST-TIGHT, WATERTIGHT CABINET
5	GROUND ROD, $\frac{3}{4}$" DIA. X 8' MIN.
6	PHOTOELECTRIC SWITCH AND SOCKET, 105/285 V., 1000 WATT
7	TRANSLUCENT, PLEXIGLASS FILTER #W2067, $\frac{1}{8}$" THICK
8	CLEAR, LEXAN #9034 WINDOW, $\frac{1}{4}$" THICK MIN.
9	MOUNTING PAN, $31\frac{1}{2}$" x 12" x $\frac{1}{4}$" ALUMINUM OR STAINLESS STEEL
10	PLIABLE SEALANT
11	LIFETIME SILICONE CAULK
14	INSULATED TERMINAL BLOCK, FOR GREATER THAN 4/0 CABLE
15(240V)	2-POLE, 100 AMP, 120V COIL LIGHTING CONTACTOR
15(480V)	2-POLE, 100 AMP, 240V COIL LIGHTING CONTACTOR
16	2-POLE, 650 VOLT LIGHTING ARRESTER
17	1-POLE, 15 AMP, TYPE B CONTROL BREAKER
18	1-POLE, 15 AMP,TYPE B MANUAL-AUTO SWITCH
19	INSULATED GROUNDABLE NEUTRAL, 100 AMP
20	2-POLE, 100 AMP, TYPE A MAIN BREAKER
21	2-POLE, 15 AMP(MIN), TYPE A LIGHTING BREAKERS
22	#12 AWG MIN., 600 V. CONTROL CABLE
23	#2 AWG MIN., 600 V. ✳ POWER CABLE
24	#2 AWG MIN., 600 V. GROUND CABLE
✳	SEE PLANS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

NOTES

(B) LIGHTING SYSTEM VOLTAGE AS SPECIFIED ON PLANS.

(C) PHOTOELECTRIC SWITCH BRACKETS MAY VARY. LOCATE CENTER OF WINDOW OVER CENTER OF PHOTOELECTRIC SWITCH.

(E) IF FOR REASONS OF VOLTAGE DROP A WIRE SIZE IS SPECIFIED LARGER THAN THE BREAKER LUGS CAN ACCOMMODATE, AN INSULATED HEAVY DUTY TERMINAL BLOCK SHALL BE INSTALLED TO TERMINATE THE LARGER WIRES AND A SMALLER JUMPER CONNECTED TO THE BREAKER ITSELF.

(F) LIGHTING BREAKER SIZING:

SIZE (AMPS)	240V TOTAL CIRCUIT LOAD (WATTS)	480V TOTAL CIRCUIT LOAD (WATTS)
15	0-2800	0 - 5500
20	2850-3700	5550 - 7400
25	3750-4600	7450 - 9200
30	4650-5500	9250 - 11,000
35	5550-6500	--
40	6550-7400	--

CIRCUIT LOAD INCLUDES LOAD DUE TO LINE LOSS, LAMP, AND BALLAST LOAD.

(G) ALL CIRCUIT BREAKERS SHALL CONFORM TO SECTION 901.4 OF THE STANDARD SPECIFICATIONS.

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

STATE OF MISSOURI
EILEEN H. RACKERS
NUMBER PE-28336
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

HIGHWAY LIGHTING
BASE MOUNTED
CONTROL STATION
240 V OR 480 V - 4 CIRCUIT

DATE EFFECTIVE: 04/01/2005
DATE PREPARED: 8/26/2009

901.30F

SHEET NO. 2 OF 2

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

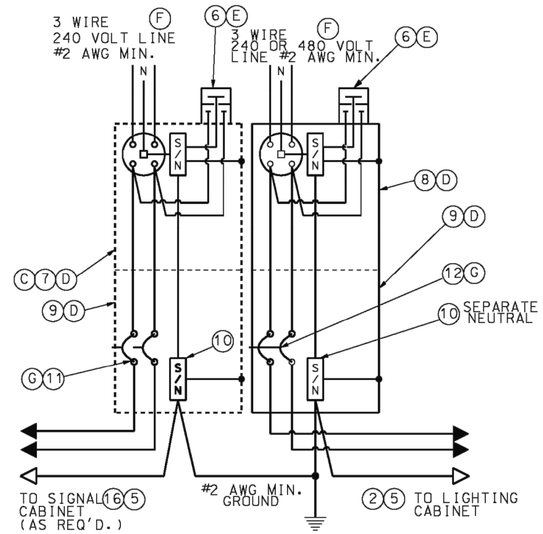
LIGHTING DETAIL-7

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. BOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
58
58 OF 66

LIST OF MATERIALS	
ITEM	DESCRIPTION
1	SERVICE POLE 30' MIN..CLASS 4 WOOD. CONTRACTOR PROVIDED. MoDOT OWNED✳
2	#2 AWG MIN. CABLE, 600 VOLT ✳
3	SERVICE ENTRANCE HEAD
4	GUY CABLE, AS REQUIRED
5	RIGID CONDUIT, 2" MIN., WITH PREFORMED ELBOWS
6	LIGHTNING ARRESTER, VALVE TYPE, 2 POLE, 650 VOLT
7	METER SOCKET, 200 AMP, FOR SIGNALS
8	METER SOCKET, 200 AMP, FOR LIGHTING
9	LOCKING, RAINTIGHT, NEMA 4 SERVICE DISCONNECT BOX
10	INSULATED, GROUNDABLE NEUTRAL WIRE, 200 AMP MINIMUM
11	SIGNAL BREAKERS, SINGLE POLE, 40A MIN, TYPE A OR B ✳
12	LIGHTING BREAKER, 2 POLE, 240 VOLT, 100A, TYPE A OR B
13	1/2" METAL CONDUIT
14	#2 AWG MIN. GROUND WIRE
15	GROUND ROD, 3/4" x 8' MIN.
16	#8 AWG MIN. CABLE, 600 VOLT ✳
17	CLASS B CONCRETE, 0.92 C.Y.±
18	THREADED CONDUIT HUB WITH SEALING WASHERS
19	WEATHERPROOF ADHESIVE LABEL (LIGHTING), VINYL RAISED LETTERING (OR EQUIVALENT, SEE DETAIL)
20	WEATHERPROOF ADHESIVE LABEL (SIGNALS), VINYL RAISED LETTERING (OR EQUIVALENT, SEE DETAIL)
21	W6 x 9 OR W6 x 15 GALVANIZED POST
22	#2 AWG MIN. CABLE, 600 VOLT
23	RIGID CONDUIT, 2" MINIMUM
✳	SEE PLANS



WIRING DIAGRAM

LIGHTING AND/OR SIGNALS

NOTES:

(A) SERVICE POLE SHALL BE GUYED WHEN SPAN OF OVERHEAD SERVICE WIRE EXCEEDS 50 FEET.

(B) INCREASE 1 FOOT FOR EACH 5 FEET ABOVE 30 FEET.

(C) SERVICE DISCONNECT BOXES AND METER BOXES SHALL BE ALUMINUM OR STAINLESS STEEL. ALL HARDWARE, HINGES, CATCHES, ETC. SHALL BE STAINLESS STEEL.METER SOCKET FOR SIGNALS OR LIGHTING AND OTHER EQUIPMENT AND MATERIALS SHALL BE U.L. APPROVED, AND CONFORM TO THE REQUIREMENTS OF THE UTILITY COMPANY OR MUNICIPALITY PROVIDING POWER.

(D) SCHEMATIC DIAGRAM SHALL BE MOUNTED ON INSIDE OF CABINET DOOR.

(E) UTILITY COMPANY SHALL DECIDE IF LIGHTNING ARRESTERS ARE TO BE CONNECTED ON THE LOAD OR LINE SIDE OF THE METER. THE UTILITY COMPANY SHALL ALSO DECIDE IF THE LIGHTNING ARRESTER IS TERMINATED IN THE METER OR DISCONNECT CABINET. IF TERMINATED IN THE DISCONNECT CABINET, IT SHALL BE INSTALLED ON THE DISCONNECT CABINET.

(F) LIGHTING SYSTEM VOLTAGE OF 240 VOLTS OR 480 VOLTS AS SHOWN ON THE PLANS.

(G) BREAKERS SHALL CONFORM TO SEC. 901.4 OF THE STANDARD SPECIFICATIONS.

(H) IF SUBSURFACE CONDITIONS EXIST WHICH PROHIBIT THE PLACEMENT OF THE GROUND ROD IN A VERTICAL POSITION, THE ROD MAY BE DRIVEN AT AN OBLIQUE ANGLE NOT TO EXCEED 45 DEGREES FROM VERTICAL OR BURIED IN A TRENCH AT LEAST 30 IN. DEEP. CONNECTION TO GROUND ROD SHALL BE CADWELDED.

GENERAL NOTES:

FOR CABLE TYPES AND INSTALLATION, SEE STANDARD SPECIFICATIONS.

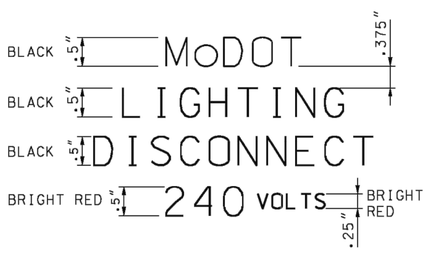
THE POWER SUPPLY ASSEMBLY TYPE IS SHOWN ON THE PLANS OR IS DESIGNATED IN THE CONTRACT.

THE UTILITY COMPANY SHALL BE NOTIFIED IN WRITING 30 DAYS PRIOR TO DATE SERVICE WILL BE REQUIRED.

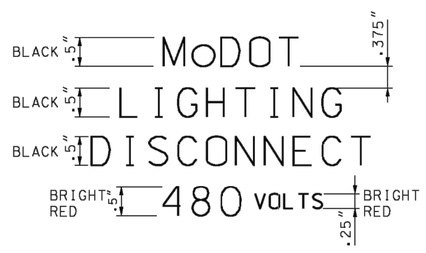
WHERE SIGNAL OR LIGHTING POWER ONLY IS DESIGNATED, OMIT ITEMS NOT REQUIRED.

ALL OPENINGS IN ANY SERVICE BOX OR METER BOX SHALL BE COVERED AND SEALED WITH LIFETIME SILICONE CAULK.

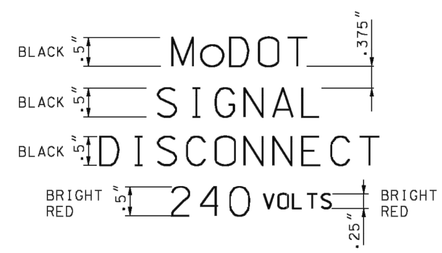
ALL MATERIALS REQUIRED AS SHOWN ON DRAWING, INCLUDING CABLE AND CONDUIT FROM POWER SUPPLY ASSEMBLY TO UTILITY COMPANY FACILITIES, SHALL BE INCLUDED IN UNIT BID PRICE FOR POWER SUPPLY ASSEMBLY.



LABEL DETAIL 19 (240 VOLT) F



LABEL DETAIL 19 (480 VOLT) F



LABEL DETAIL 20

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

STATE OF MISSOURI
ELEEN H. PACKERS
NUMBER PE-28336
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

HIGHWAY LIGHTING
POWER SUPPLY ASSEMBLY
SECONDARY SERVICE

DATE EFFECTIVE: 04/01/2002
DATE PREPARED: 4/1/2010

901.80D

SHEET NO. 1 OF 2

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/15/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

LIGHTING DETAIL-8

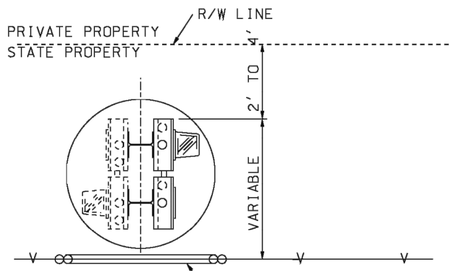
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
59
59 OF 66

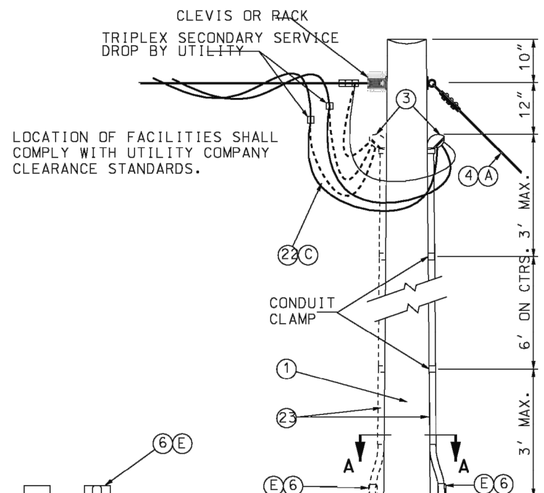
PEDESTAL OR NEW STATE-OWNED POLE TO BE SET WITHIN 2' TO 4' OF RIGHT-OF-WAY LINE.

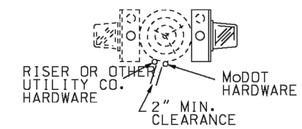
ALL SERVICE POWER SUPPLY ASSEMBLIES ARE TO BE LOCATED ON STATE PROPERTY.



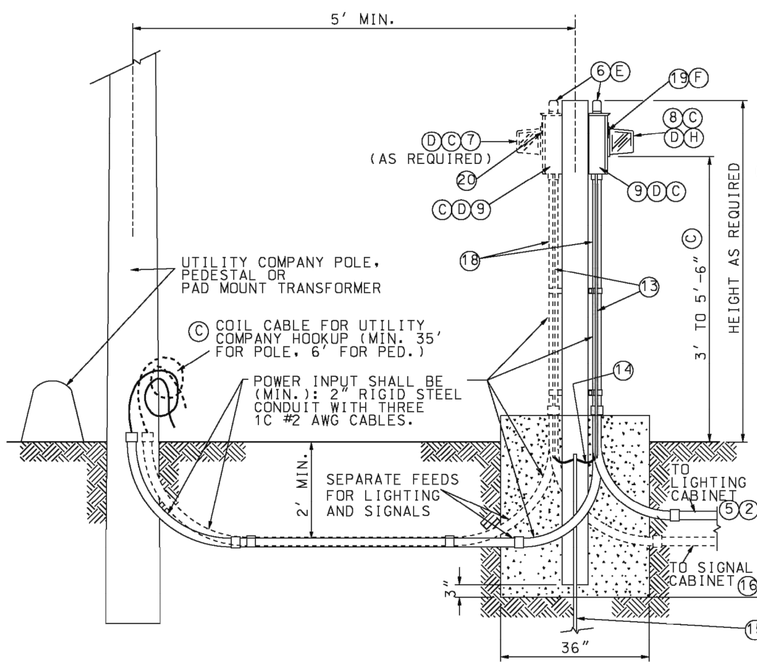
TOP VIEW

IF FENCE BLOCKS ACCESS TO POWER SUPPLY A 3' MIN. LOCKING GATE IS TO BE INSTALLED. (NO DIRECT PAY)

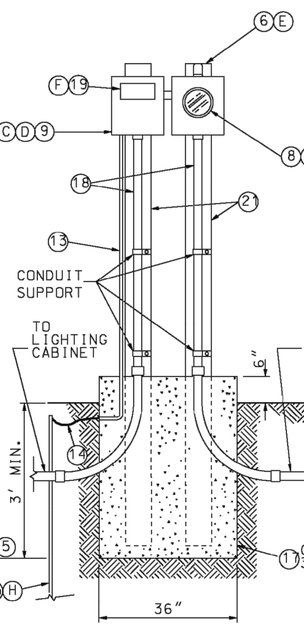




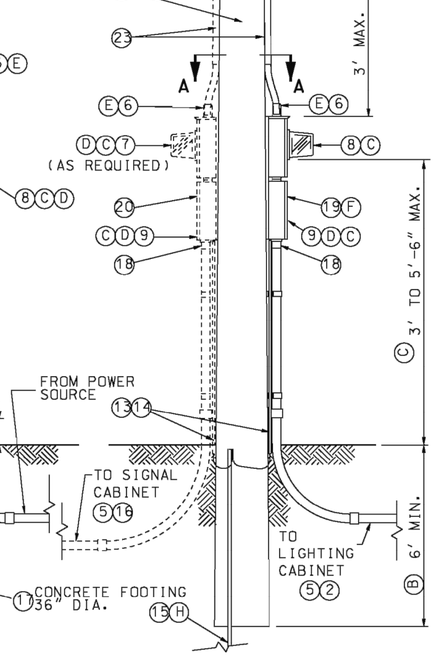
SECTION A-A



SIDE VIEW



FRONT VIEW



NOTE:
CABLE AND CONDUIT FROM POWER SUPPLY ASSEMBLY TO UTILITY COMPANY FACILITIES SHALL BE INCLUDED IN PRICE BID FOR POWER SUPPLY ASSEMBLY.

TYPE 2 (PEDESTAL) UNDERGROUND SERVICE

TYPE 1 (POLE) OVERHEAD SERVICE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

STATE OF MISSOURI — EILEEN H. RACKERS — NUMBER PE-28336 — PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

HIGHWAY LIGHTING
POWER SUPPLY ASSEMBLY SECONDARY SERVICE

DATE EFFECTIVE: 04/01/2002
DATE PREPARED: 5/19/2010

901.80D

SHEET NO. 2 OF 2

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

LIGHTING DETAIL-9

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI — PATRICK J. JOYCE — NUMBER PE-2009030032 — PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
60
60 OF 66

LED-C LUMINAIRE

BRACKET ARM

BOLT DOWN LIGHT STANDARD

EXISTING LIGHT STANDARD AND LUMINAIRE

LED-A LUMINAIRE

LED-B LUMINAIRE

150 WATT UNDERPASS LUMINAIRE

HIGH MAST TOWER WITH LUMINAIRE AIM

PULL BOX, TYPE I DRAIN, CONCRETE

PULL BOX, TYPE II DRAIN, CONCRETE

PULL BOX, TYPE I DRAIN, PREFORMED

PULL BOX, TYPE II DRAIN, PREFORMED

EXISTING PULL BOX, TYPE I DRAIN, CONCRETE

EXISTING PULL BOX, TYPE II DRAIN, CONCRETE

EXISTING PULL BOX, TYPE I DRAIN, PREFORMED

EXISTING PULL BOX, TYPE II DRAIN, PREFORMED

SERVICE POLE OR PEDESTAL AND POWER SUPPLY

TRANSFORMER OR SUBSTATION POLE

BASE MOUNTED LIGHTING CONTROL STATION WITH PAD

EXISTING BASE MOUNTED CONTROL STATION

GROUND CONNECTION

RIGID CONDUIT IN TRENCH

CAPPED RIGID CONDUIT

RIGID CONDUIT PUSHED

EXISTING RIGID CONDUIT

B B RIGID CONDUIT ON BRIDGE

M M RIGID CONDUIT IN MEDIAN

1 CABLE CONDUIT WITH CIRCUIT NUMBER

EXISTING CABLE CONDUIT

EXPOSED CONDUIT ON UNDER SIDE OF BRIDGES. NUMBER OF HATCHES DENOTES NUMBER OF WIRES IN CONDUIT

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

STATE OF MISSOURI
ERIC E. SCHROETER
NUMBER PE-28411
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

HIGHWAY LIGHTING SYMBOLS

DATE EFFECTIVE: 04/01/2018
DATE PREPARED: 2/9/2018

901.85B

SHEET NO. 1 OF 1

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/17/22
3	PER MODOT COMMENT	JGD	01/18/23
4	PER MODOT COMMENT	JGD	04/07/23

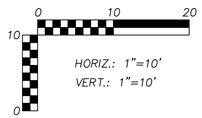
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

LIGHTING DETAIL-10

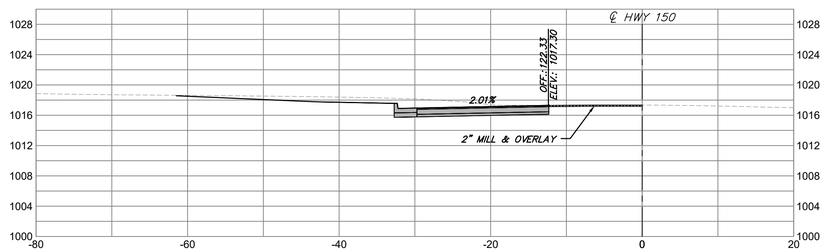
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOSEPH
NUMBER PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

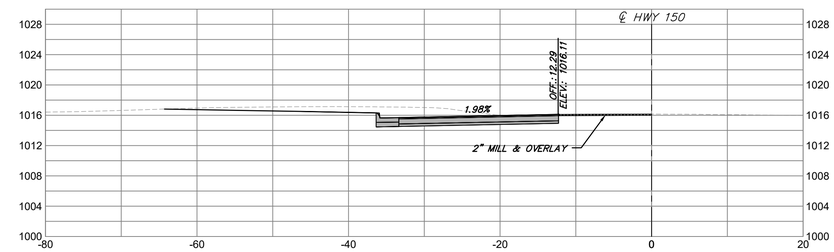
SHEET NUMBER
61
61 OF 66



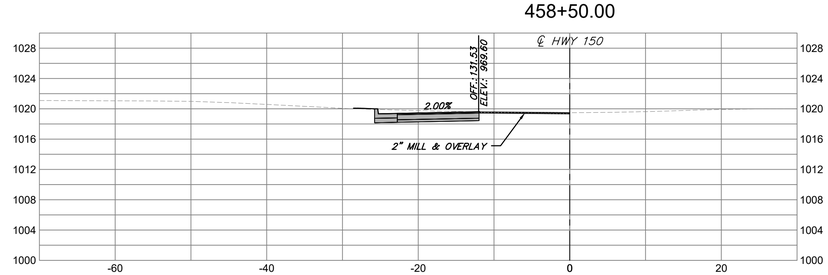
459+50.00



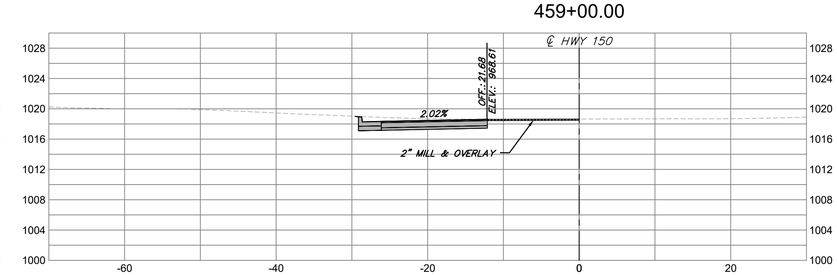
460+00.00



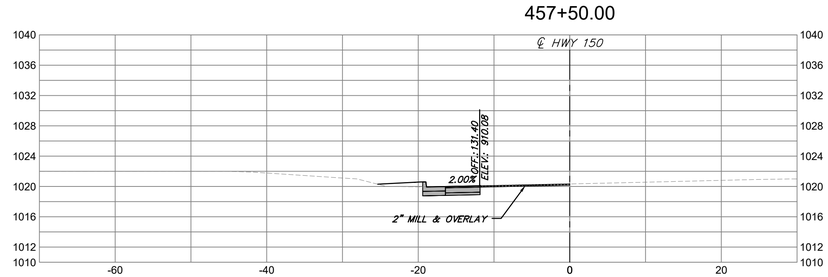
458+50.00



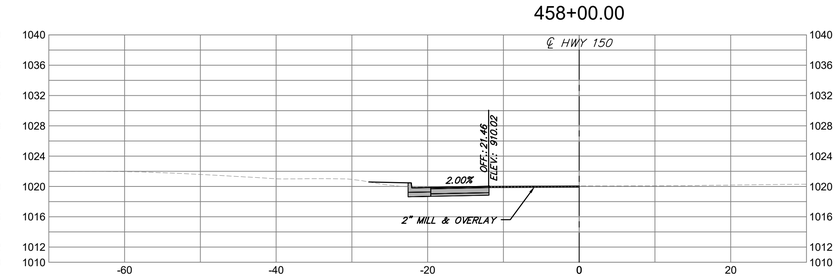
459+00.00



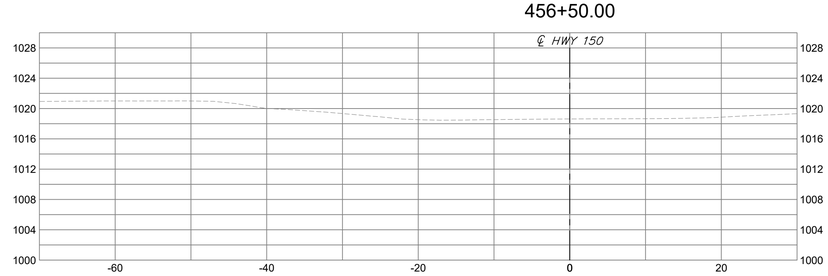
457+50.00



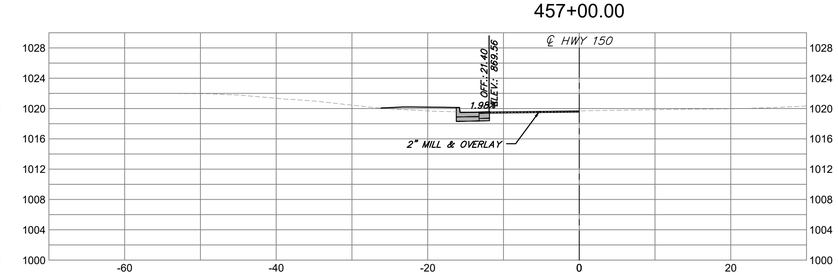
458+00.00



456+50.00



457+00.00



Apr 07, 2023 – 2:08pm Plotted By: jdold G:\Shared drives\KC10 – Land Development\Projects\2021\21KC10060 Cobey Creek Residential\01 CIVIL\05-DWG\Sheet\MoDOT 150 HWY WIDENING\21KC10060-CV-CRS-SEC.dwg Layout: CROSS SECTIONS-1

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/11/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

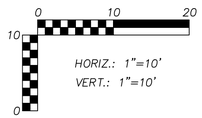
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

CROSS SECTIONS-1

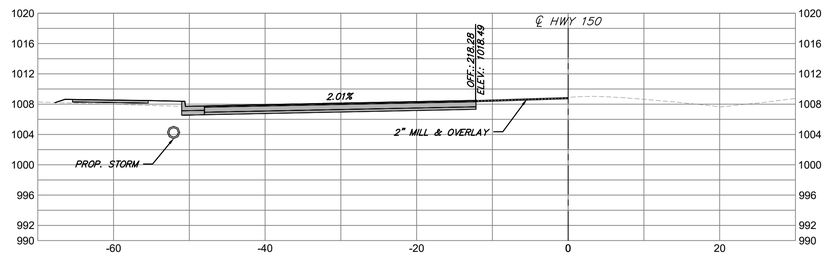
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

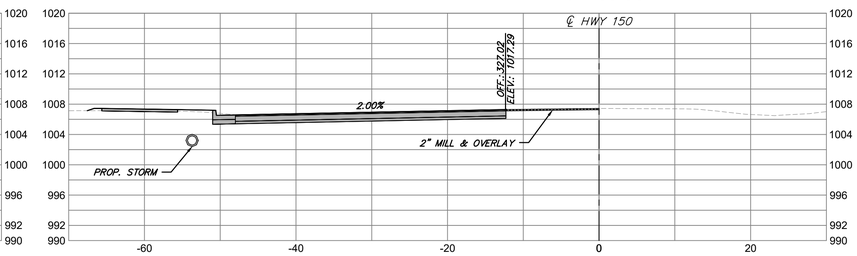
SHEET NUMBER
62
62 OF 66



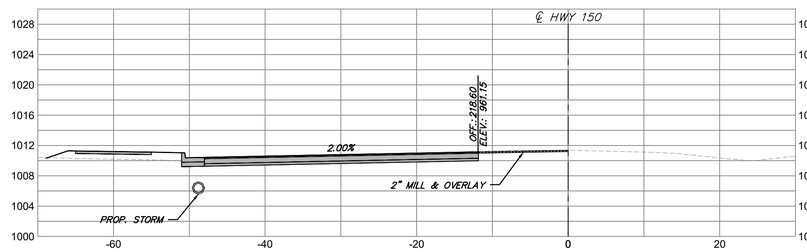
463+50.00



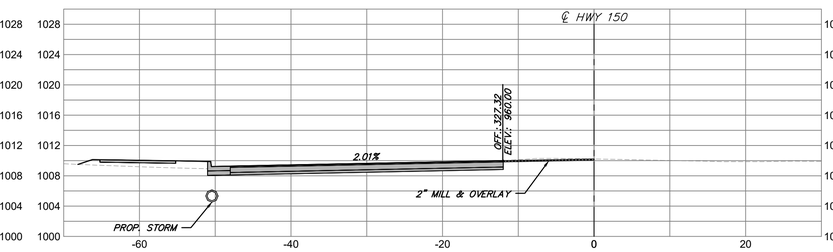
464+00.00



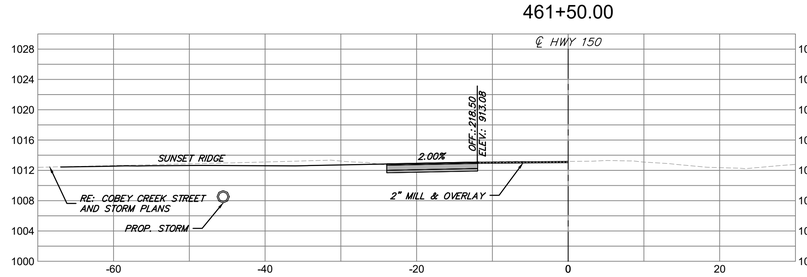
462+50.00



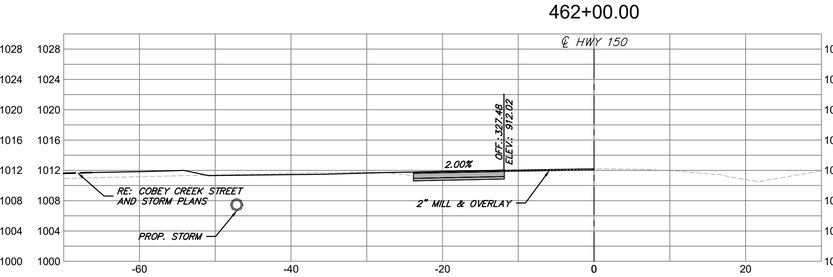
463+00.00



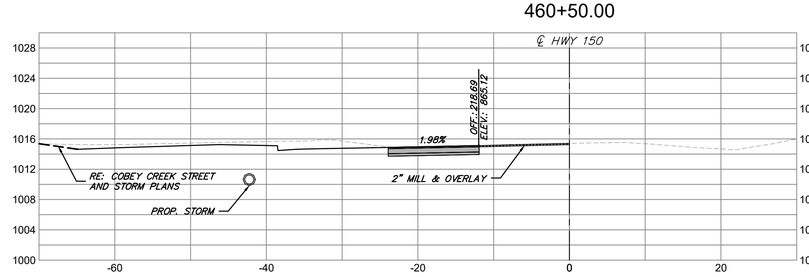
461+50.00



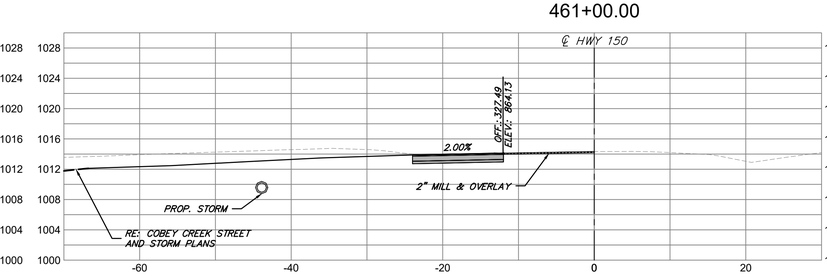
462+00.00



460+50.00



461+00.00



ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/11/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

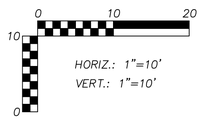
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

CROSS SECTIONS-2

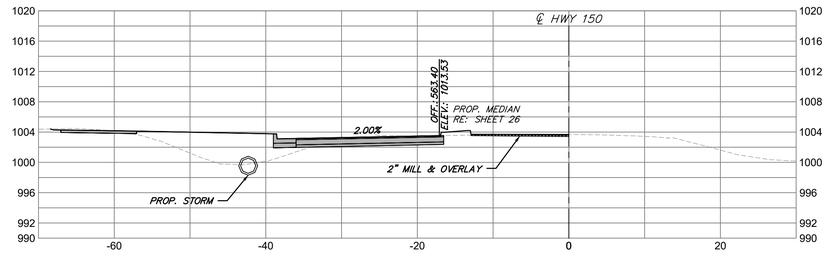
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOHNSON
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

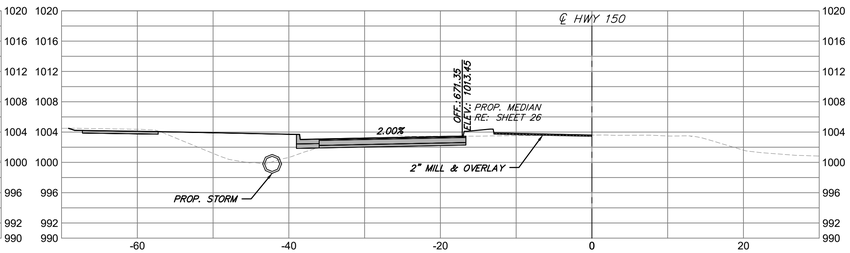
SHEET NUMBER
63
63 OF 66



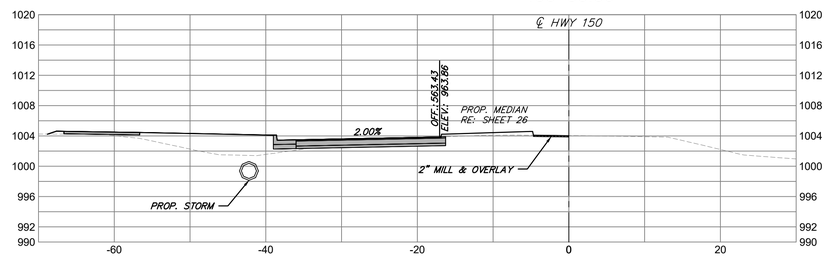
467+50.00



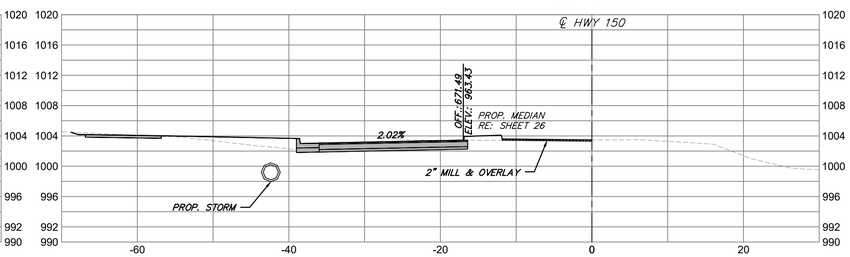
468+00.00



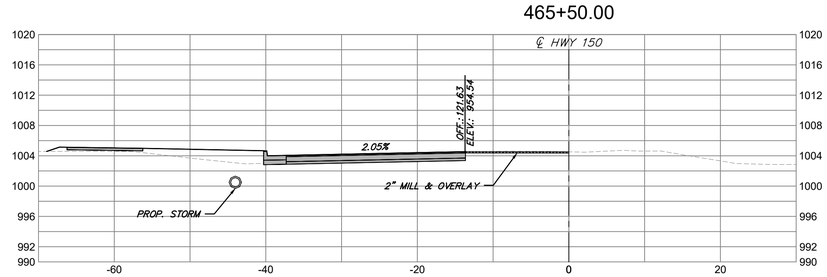
466+50.00



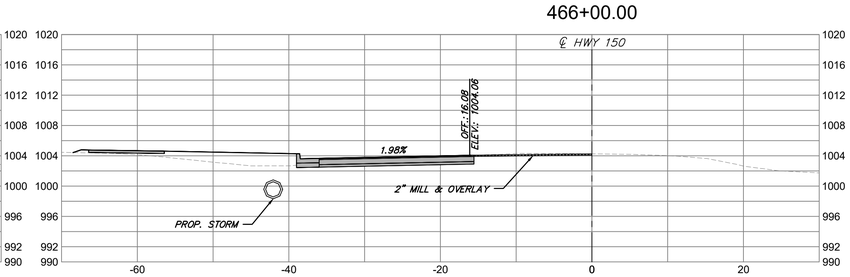
467+00.00



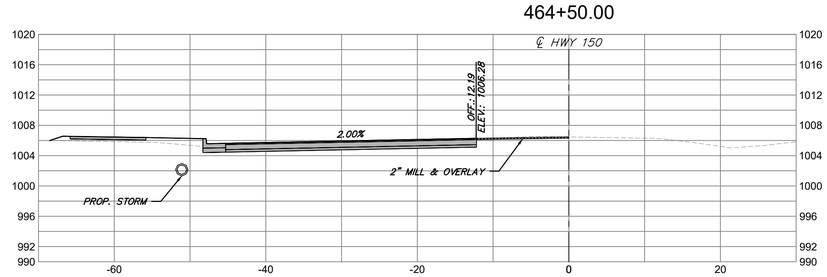
465+50.00



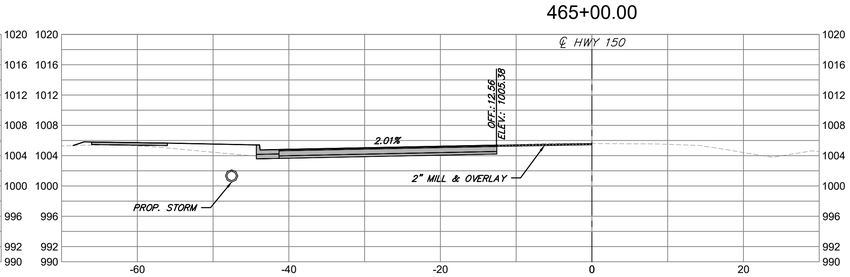
466+00.00



464+50.00



465+00.00



ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

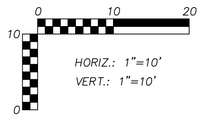
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

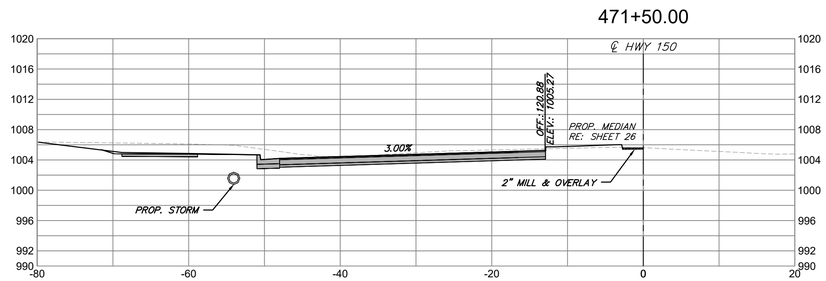
CROSS SECTIONS-3

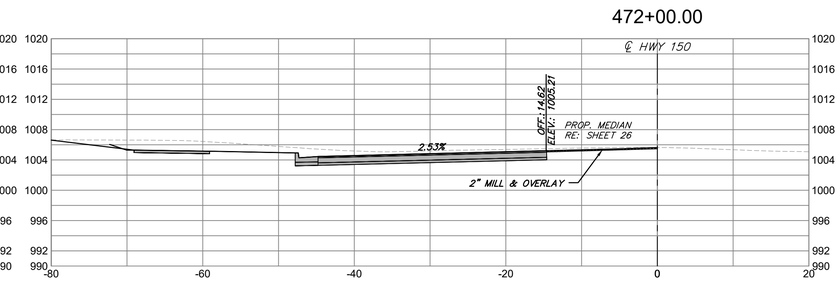
S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

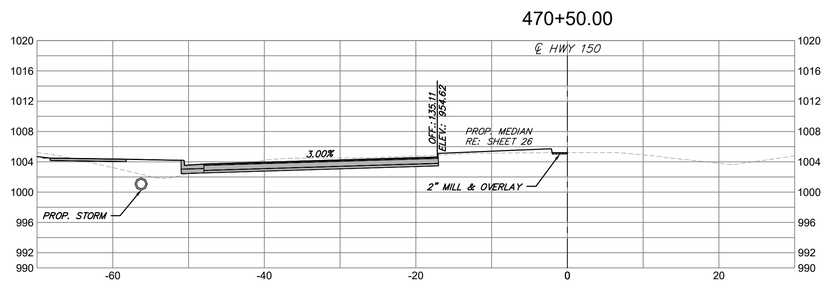
STATE OF MISSOURI
PATRICK J. JOHNSON
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

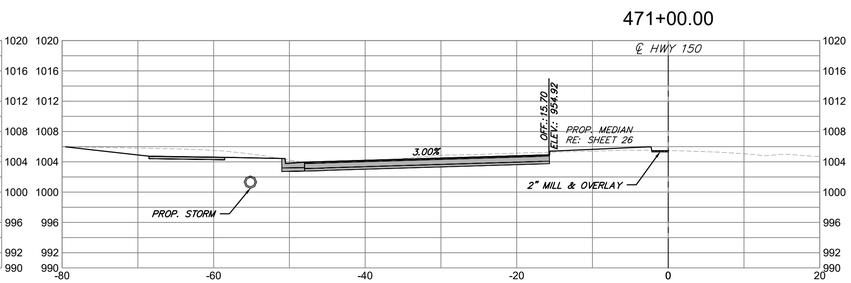
SHEET NUMBER
64
64 OF 66

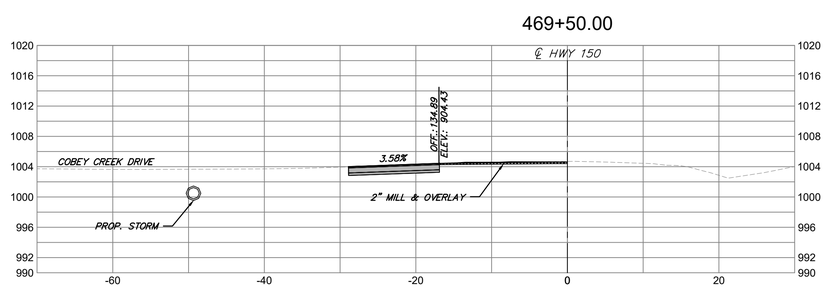


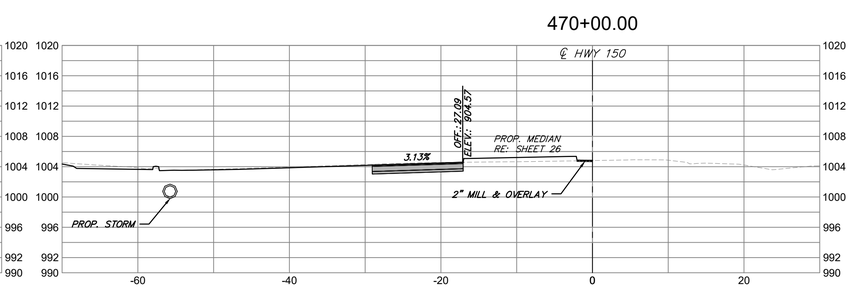


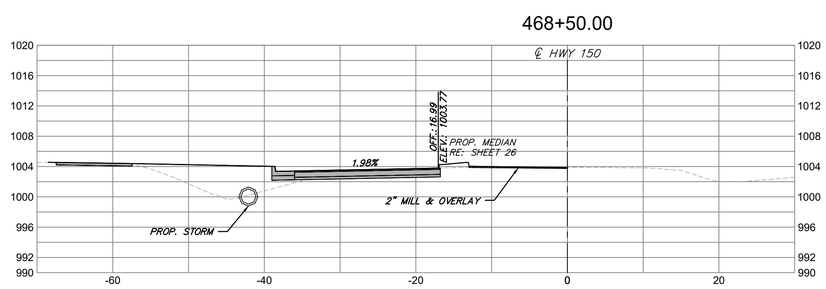


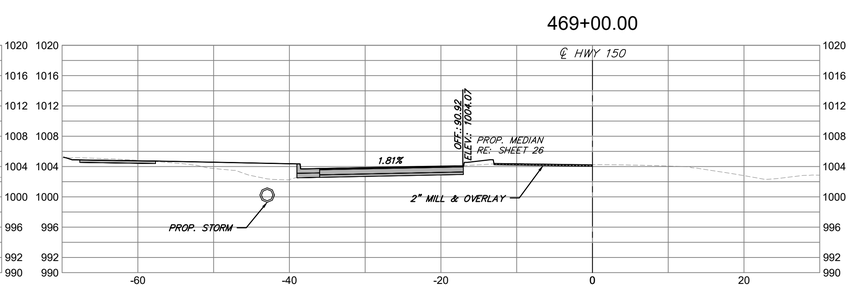












ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR, STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/15/22
2	PER MODOT COMMENT	JGD	11/11/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

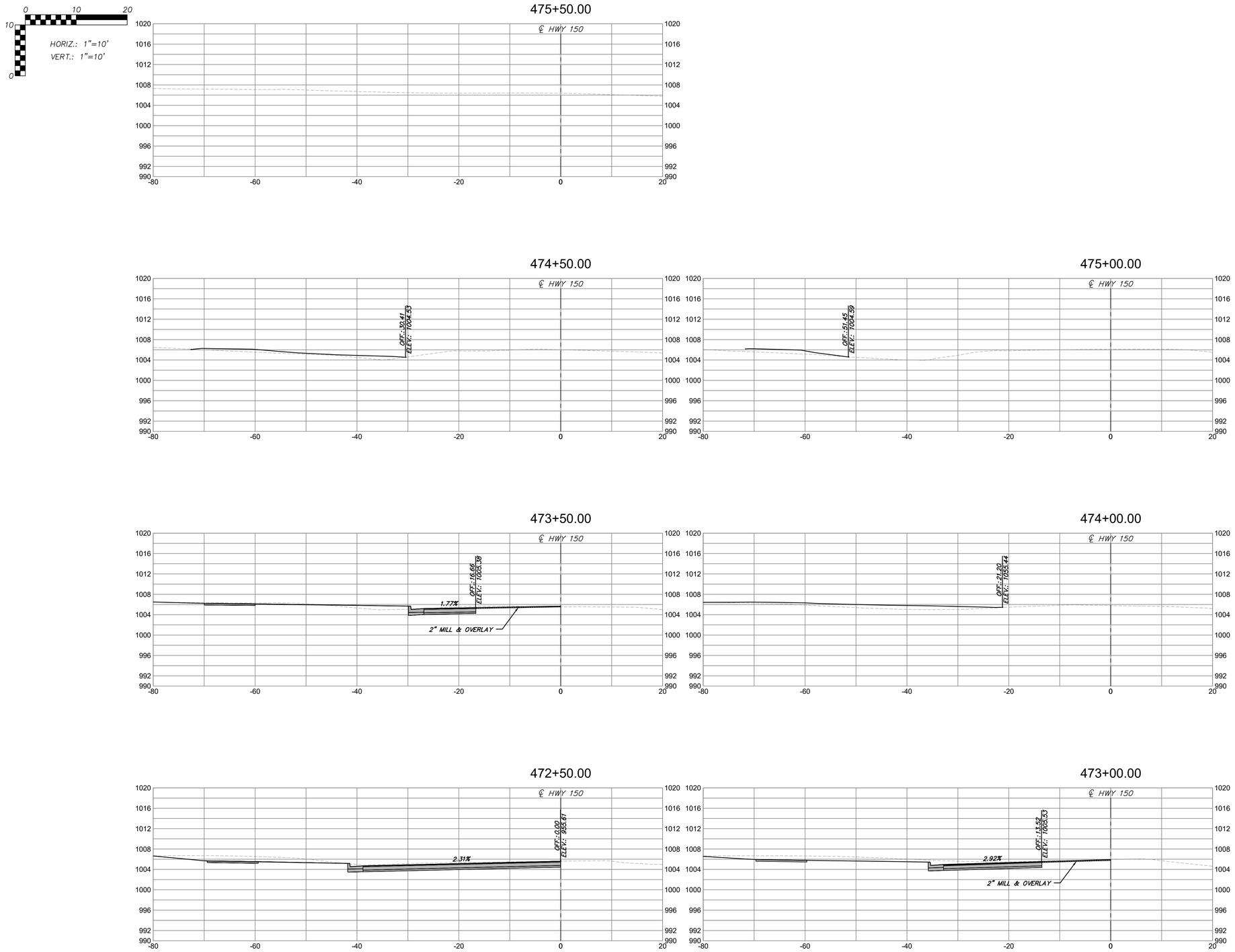
SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

CROSS SECTIONS-4

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOYCE
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
65
65 OF 66



Apr 07, 2023 – 2:09pm Plotted By: jdold G:\Shared drives\KC10 – Land Development\Projects\2021\21KC10060 Cobey Creek Residential\01 CIVIL\05-DWG\Sheet\MoDOT 150 HWY WIDENING\21KC10060-CV-CRS-SEC.dwg Layout: CROSS SECTIONS-5

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141ST TERR. STE A • KANSAS CITY, MO 64145 • PHONE (816) 777-0400
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

DRAWING INFO.

DRAWN BY:	JGD
CHECK BY:	PJJ
LICENSE NO.	PE-2009030032
DATE:	04/07/22
FIELD BOOK:	FOR REVIEW
JOB NUMBER:	21KC10060

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	JGD	04/07/22
1	PER MODOT COMMENT	JGD	09/19/22
2	PER MODOT COMMENT	JGD	11/10/22
3	PER MODOT COMMENT	JGD	01/19/23
4	PER MODOT COMMENT	JGD	04/07/23

SUMMIT HOMES
COBEY CREEK - 2ND PLAT
MODOT STATE HWY 150 WIDENING

CROSS SECTIONS-5

S 29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MO

STATE OF MISSOURI
PATRICK J. JOHNSON
NUMBER
PE-2009030032
PROFESSIONAL ENGINEER
04/07/2023

SHEET NUMBER
66
66 OF 66