

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PHYSICAL ROAD NUMBER (PR#) & MILEPOST (MP) DATA ARE FROM MICHIGAN GEOGRAPHIC FRAMEWORK VERSION # 20

MICHIGAN DEPARTMENT OF TRANSPORTATION

ROUTES: US-131, M-120, M-37 & M-66
GRAND REGION

MUSKEGON, NEWAYGO, OSCEOLA & MONTCALM COUNTIES

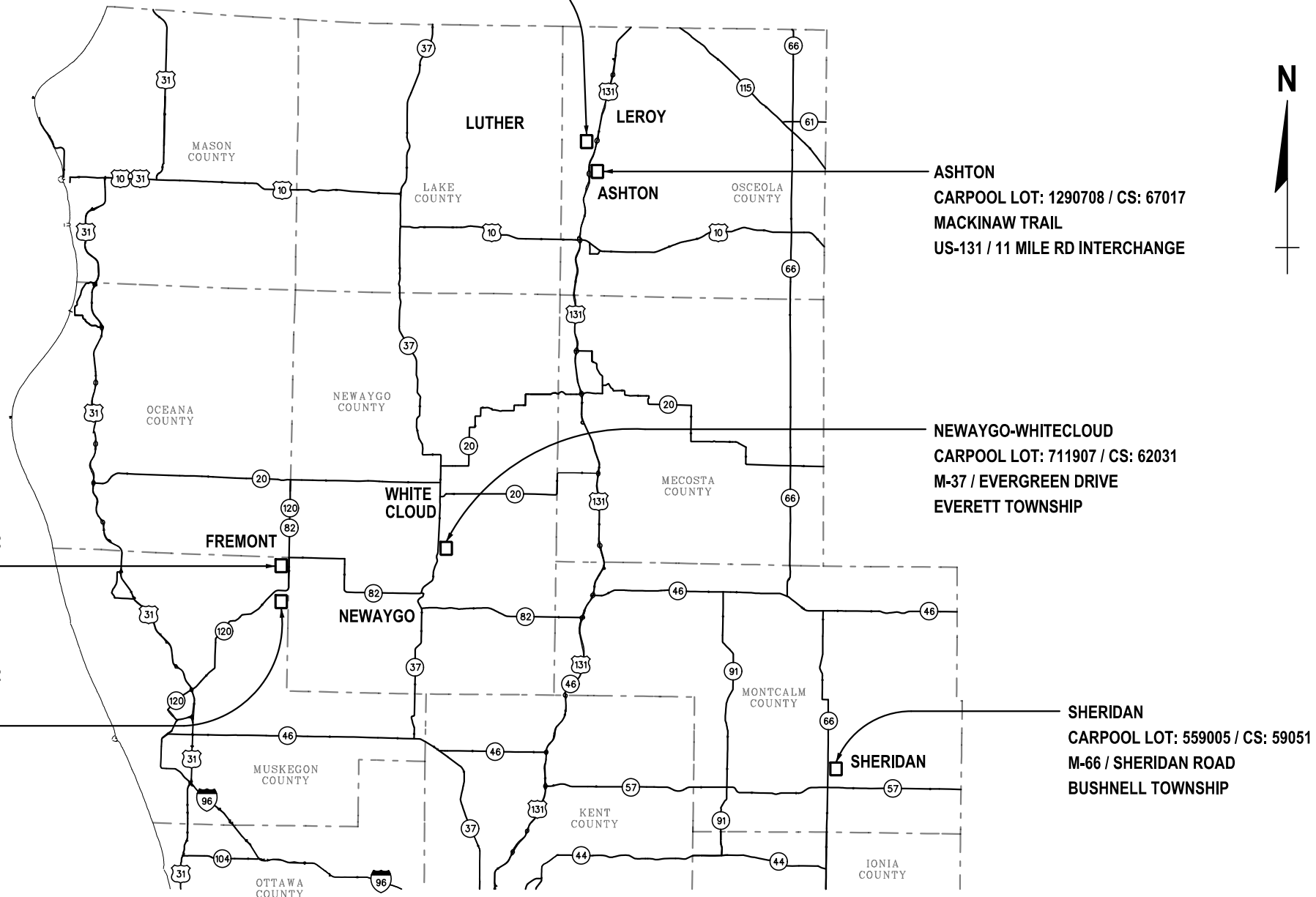


MUSKEGON, NEWAYGO
OSCEOLA, MONTCALM
COUNTIES

COUNTY KEY

LUTHER-LEROY
CARPOOL LOT: 1293802 / CS: 67017
REED ROAD
US-131 / LUTHER RD - 14 MILE ROAD INTERCHANGE

SECTION	CONTROL SEC	JOB NO.	FED AID PROJ
1	59051	211816A	NO
	61012		
	62031		
	67017		



Addendum on plan sheet # 3 of 12.
Removal of horticultural work line item from
Miscellaneous Quantities.

FREMONT
CARPOOL LOT: 3610270 / CS: 61012
M-120 / MAPLE ISLAND ROAD

MAPLE ISLAND
CARPOOL LOT: 3610271 / CS: 61012
MAPLE ISLAND ROAD, OFF M-120
HOLTON TOWNSHIP

ASHTON
CARPOOL LOT: 1290708 / CS: 67017
MACKINAW TRAIL
US-131 / 11 MILE RD INTERCHANGE

NEWAYGO-WHITECLOUD
CARPOOL LOT: 711907 / CS: 62031
M-37 / EVERGREEN DRIVE
EVERETT TOWNSHIP

SHERIDAN
CARPOOL LOT: 559005 / CS: 59051
M-66 / SHERIDAN ROAD
BUSHNELL TOWNSHIP

MICHIGAN
DEPARTMENT OF TRANSPORTATION
PAUL C. AJEGBA, P.E. - DIRECTOR

MILES:
CONTRACT FOR: CARPOOL LOT LIGHTING

FINAL ROW PLAN REVISIONS				(SUBMITTAL DATE:)			
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



NO SCALE

FILE: 211816 Title.dgn

DATE: 06/22/21

DESIGN UNIT: MILLER

TSC: CADILLAC

CS: 59051, 61012, 62031, 67017

JN: 211816A

TITLE SHEET
CARPOOL LOT LIGHTING

DRAWING	SHEET
CP LOTS	1
LTG	
01	

NOTES APPLYING TO STANDARD PLANS

Where the following items are called for on plans, they are to be constructed according to the standard plan given below opposite each item unless otherwise indicated.

Title	Plan No.
ROAD	
SEEDING AND TREE PLANTING	R-100-H
WORK ZONE DEVICES	
TEMPORARY TRAFFIC CONTROL DEVICES	WZD-125-E *


* Denotes Special Detail

SHEET INDEX

Section 1 - Lighting Plans	
Title	LTG 01
Project Information	LTG 02
Miscellaneous Quantities	LTG 03
General Notes	LTG 04
Lighting Notes & Legend	LTG 05
Carpool Lot Lighting Plans	LTG 06 - 11
Light Standard Details	LTG 12

FUNDING CATEGORIES

JN 211816 Project Description
Category 0001 = State

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)								NO SCALE	DATE: 06/22/21	CS: 59051, 61012, 62031, 67017	PROJECT INFORMATION CARPOOL LOT LIGHTING	DRAWING	SHEET	
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH			DESCRIPTION	DESIGN UNIT: MILLER		JN: 211816A	CP LOTS	SECT 1
										TSC: CADILLAC			LTG 02	


FILE: 211816_Project_Info.doc

MISCELLANEOUS QUANTITIES

The following items of work shall be done as they apply to each carpool lot location. The items are not detailed or included on the plan sheets. Quantities and units are an estimate only and costs for each item shall be included in the pay item Lighting Std Fdn as noted on each plan sheet and will not be paid for separately.

<u>ITEM DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNITS</u>
Mobilization, Max	1	LSUM
Minor Traf Devices	1	LSUM
Slope Restoration, Type A	150	Syd
Exploratory Investigation, Vertical	15	Ft
Horticultural Work	8	Hr
Temp Casing-Left in Place	25	Ft

REMOVE- Horticultural Work
from Miscellaneous Quantities.

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)								NO SCALE	DATE: 06/22/21	CS: 59051, 61012, 62021, 67017	MISCELLANEOUS QUANTITIES	DRAWING	SHEET	
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH			DESCRIPTION	DESIGN UNIT: MILLER	JN: 211816A	CARPOOL LOT LIGHTING	CP LOTS	SECT 1
										FILE: 211816_Miscellaneous_Quantities_Estimate.doc	TSC: CADILLAC		LTG	
											03			

GENERAL NOTES

UTILITIES

UNDERGROUND UTILITIES / MISS DIG

For protection of underground utilities and in conformance with Public Act 53, 1974, the Contractor shall dial 1-800-482-7171 a minimum of three full working days, excluding Saturdays, Sundays, and holidays prior to beginning each excavation in areas where public utilities have not been previously located. Members will thus be routinely notified. This does not relieve the Contractor of the responsibility of notifying utility owners who may not be a part of the "Miss Dig" alert system.

MDOT's freeway lighting system, Intelligent Transportation Systems (ITS) and other miscellaneous electrical systems are not a part of Miss Dig. Therefore, Contractors shall call:

MDOT MAINTENANCE FREEWAY LIGHTING COORDINATOR:
Cadillac TSC: (231) 590-4533

MDOT FREEWAY ITS OPERATIONS CENTER:
Grand: (616) 451-6060

MDOT ELECTRICAL SYSTEMS
Contractors shall contact the maintenance representative at the TSC Office to have MDOT electrical systems staked.

If plan information indicates an existing underground utility is or will be out of service within the limits of this contract. The Contractor is cautioned to treat such a line as if it were still in service and notify "Miss Dig" when working in the area of the out of service facility.

EARTHWORK

SLOPES

Class A slopes shall be constructed on this project.

SOIL EROSION MEASURES

Appropriate soil erosion and sedimentation control measures shall be in place prior to earth-disturbing activities. Place turf establishment items as soon as possible on potential erodable slopes as directed by the Engineer. Critical ditch grades shall be protected with either sod or seed/mulch or mulch blanket as directed by the Engineer.


TURF ESTABLISHMENT

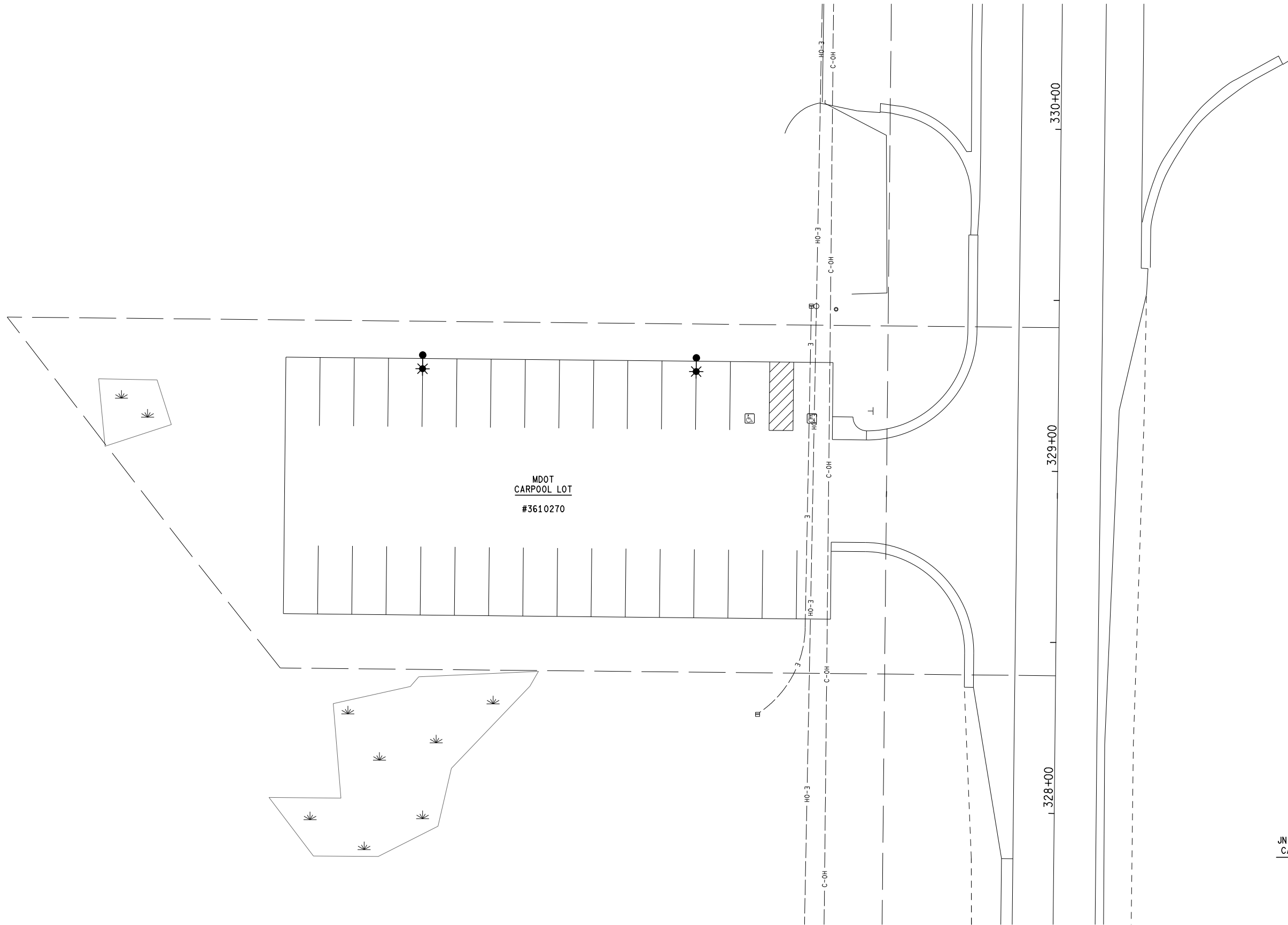
SEED MIXTURE

The symbol for the permanent turf seed mixture on this project is symbol THV.

SIGNS

All signs on the plans or in the log that do not have a recommendation are to be retained.

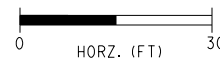
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NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH			DESCRIPTION	DESIGN UNIT: MILLER	JN: 211816A	CARPOOL LOT LIGHTING	CP LOTS LTG	SECT 1
										FILE: 211816_General_Notes.doc	TSC: CADILLAC		04	



MDOT
CARPOOL LOT
#3610270

JN 211816
CAT 0001 PROPOSED QUANTITIES - THIS SHEET
2 Ea Light Std Fdn
2 Ea Solar Lighting System

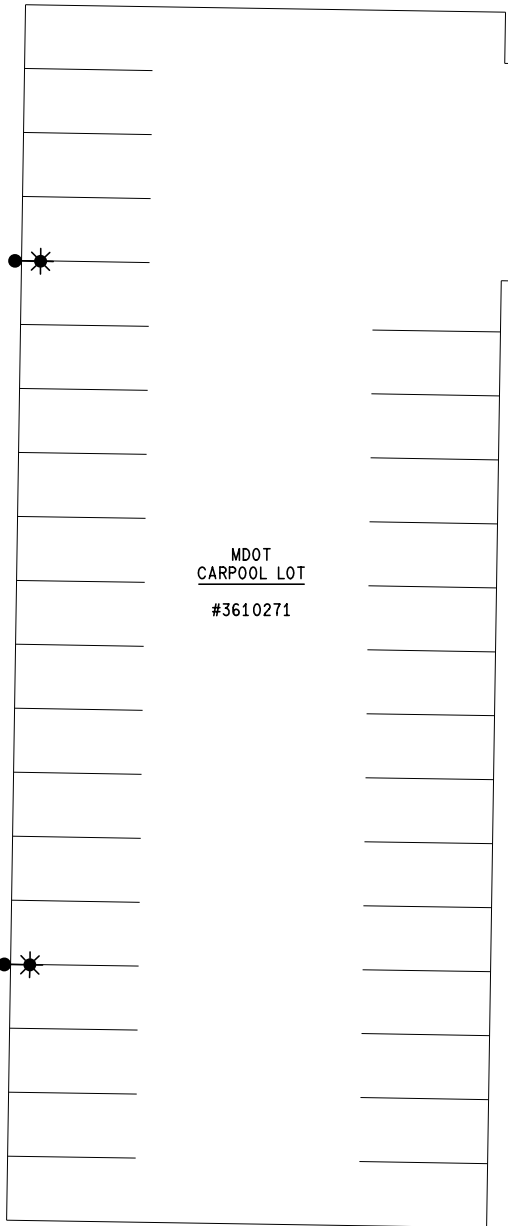
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NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



DATE: 06/22/21	CS: 59051, 61012, 62031, 67017	FREEMONT CARPOOL LOT	DRAWING	SHEET
DESIGN UNIT: MILLER	JN: 211816A	CARPOOL LOT LIGHTING	CP LOTS	SECT 1
TSC: CADILLAC	FILE: 211816 Freemont CarLot.dgn	M-120 / MAPLE ISLAND ROAD	LTG	06

MAPLE ISLAND ROAD

N



MDOT
CARPOOL LOT
#3610271

91+00

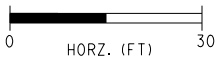
90+00

89+00

MAPLE ISLAND ROAD

JN 211816
 CAT 0001 PROPOSED QUANTITIES - THIS SHEET
 2 Ea Light Std Fdn
 2 Ea Solar Lighting System

FINAL ROW PLAN REVISIONS				(SUBMITTAL DATE:)			
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



FILE: 211816 MapleIsland_CarLot.dgn

DATE: 06/22/21

DESIGN UNIT: MILLER

TSC: CADILLAC

CS: 59051, 61012, 62031, 67017

JN: 211816A

MAPLE ISLAND CARPOOL LOT

CARPOOL LOT LIGHTING

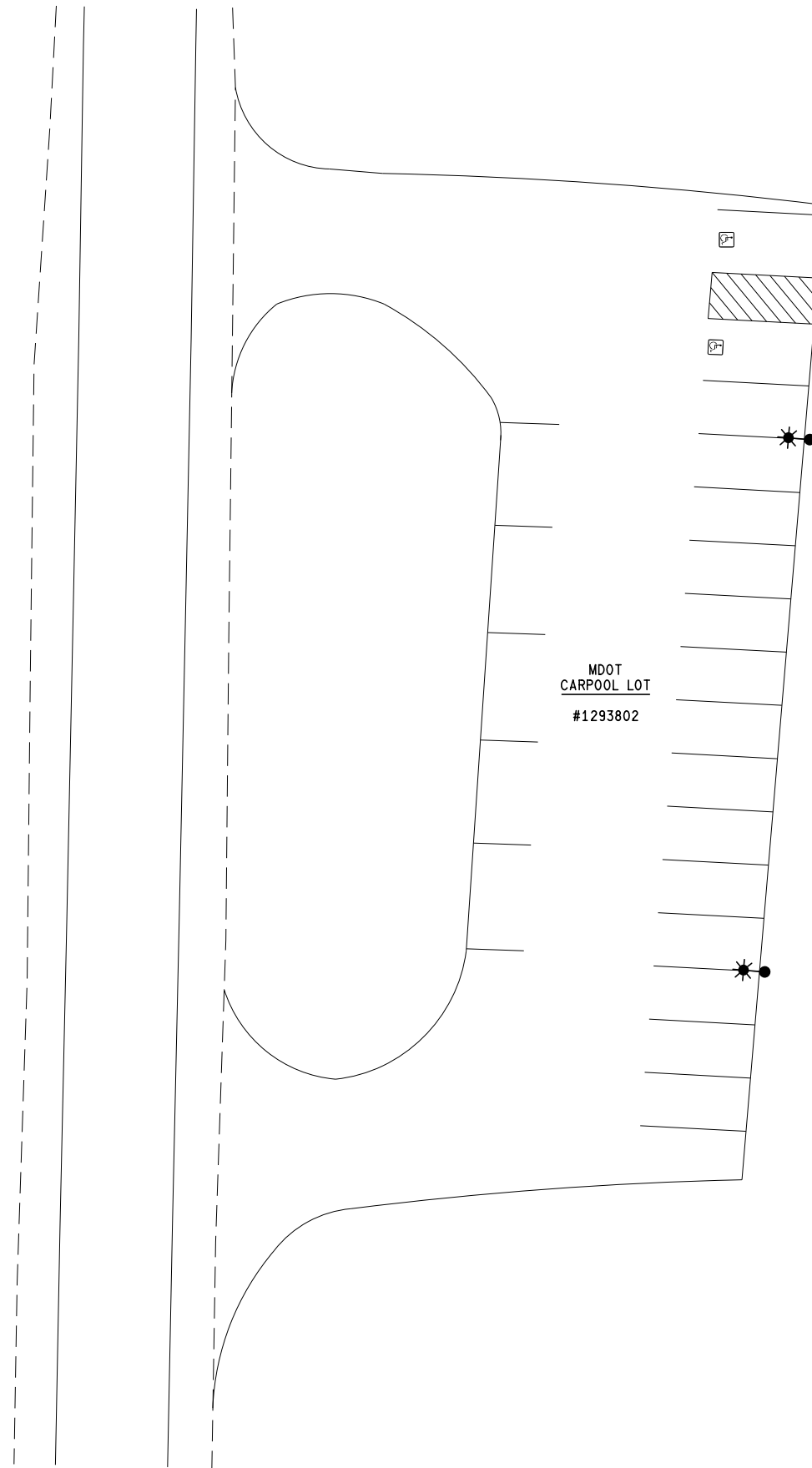
MAPLE ISLAND ROAD, OFF M-120

DRAWING SHEET

CP LOTS SECT 1

LTG 07

REED RD

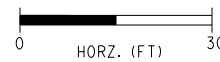


MDOT
CARPOOL LOT
#1293802

REED RD

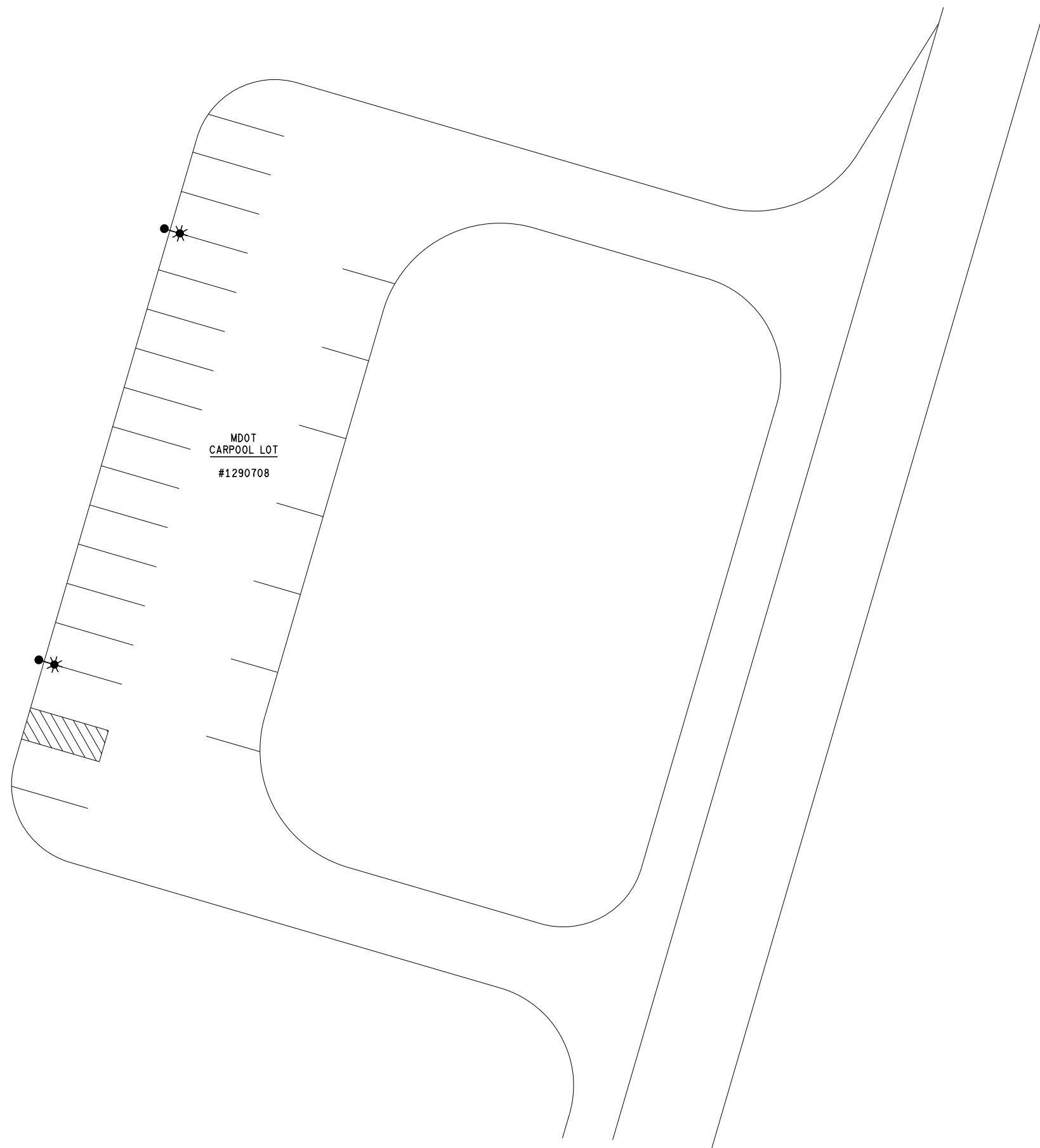
JN 211816
CAT 0001 PROPOSED QUANTITIES - THIS SHEET
2 Ea Light Std Fdn
2 Ea Solar Lighting System

FINAL ROW PLAN REVISIONS				(SUBMITTAL DATE:)			
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



DATE: 06/22/21	CS: 59051, 61012, 62031, 67017	LUTHER / LEROY CARPOOL LOT	DRAWING	SHEET
DESIGN UNIT: MILLER	JN: 211816A	CARPOOL LOT LIGHTING	CP LOTS	SECT 1
TSC: CADILLAC	FILE: 211816 LutherLeRoy CarLot.dgn	REED RD	LTG	08

MACKINAW TRAIL

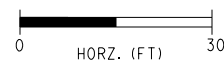


MDOT
CARPOOL LOT
#1290708

JN 211816
CAT 0001 PROPOSED QUANTITIES - THIS SHEET
2 Ea Light Std Fdn
2 Ea Solar Lighting System

MACKINAW TRAIL

FINAL ROW PLAN REVISIONS				(SUBMITTAL DATE:)			
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

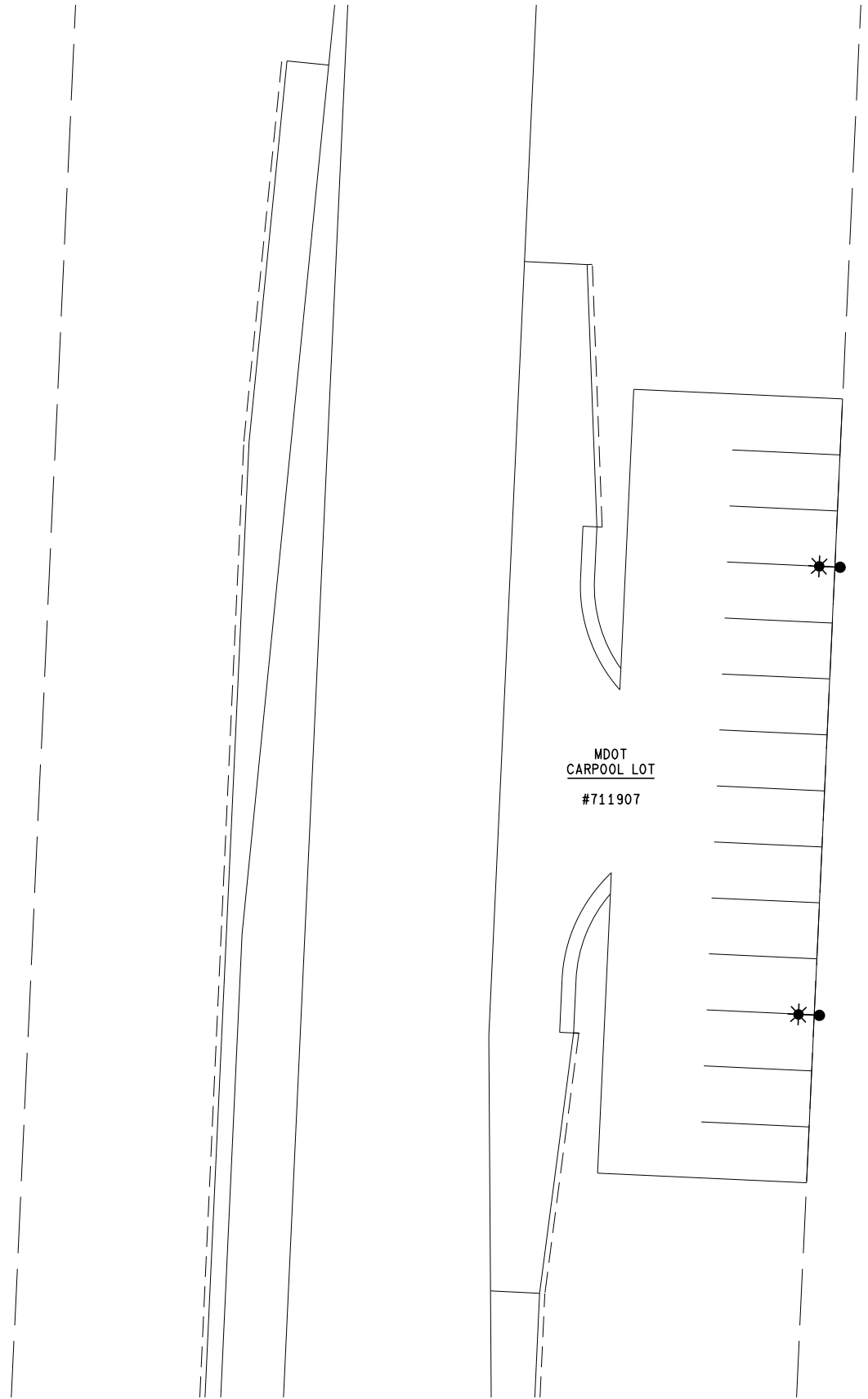


FILE: 211816 Ashton CarLot.dgn

DATE: 06/22/21
DESIGN UNIT: MILLER
TSC: CADILLAC

CS: 59051, 61012, 62031, 67017
JN: 211816A

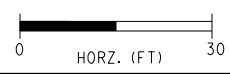
ASHTON CARPOOL LOT	DRAWING	SHEET
CARPOOL LOT LIGHTING	CP LOTS	SECT 1
MACKINAW TRAIL	LTG	09



MDOT
CARPOOL LOT
#711907

JN 211816
CAT 0001 PROPOSED QUANTITIES - THIS SHEET
2 Ea Light Std Fdn
2 Ea Solar Lighting System

FINAL ROW PLAN REVISIONS				(SUBMITTAL DATE:)			
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

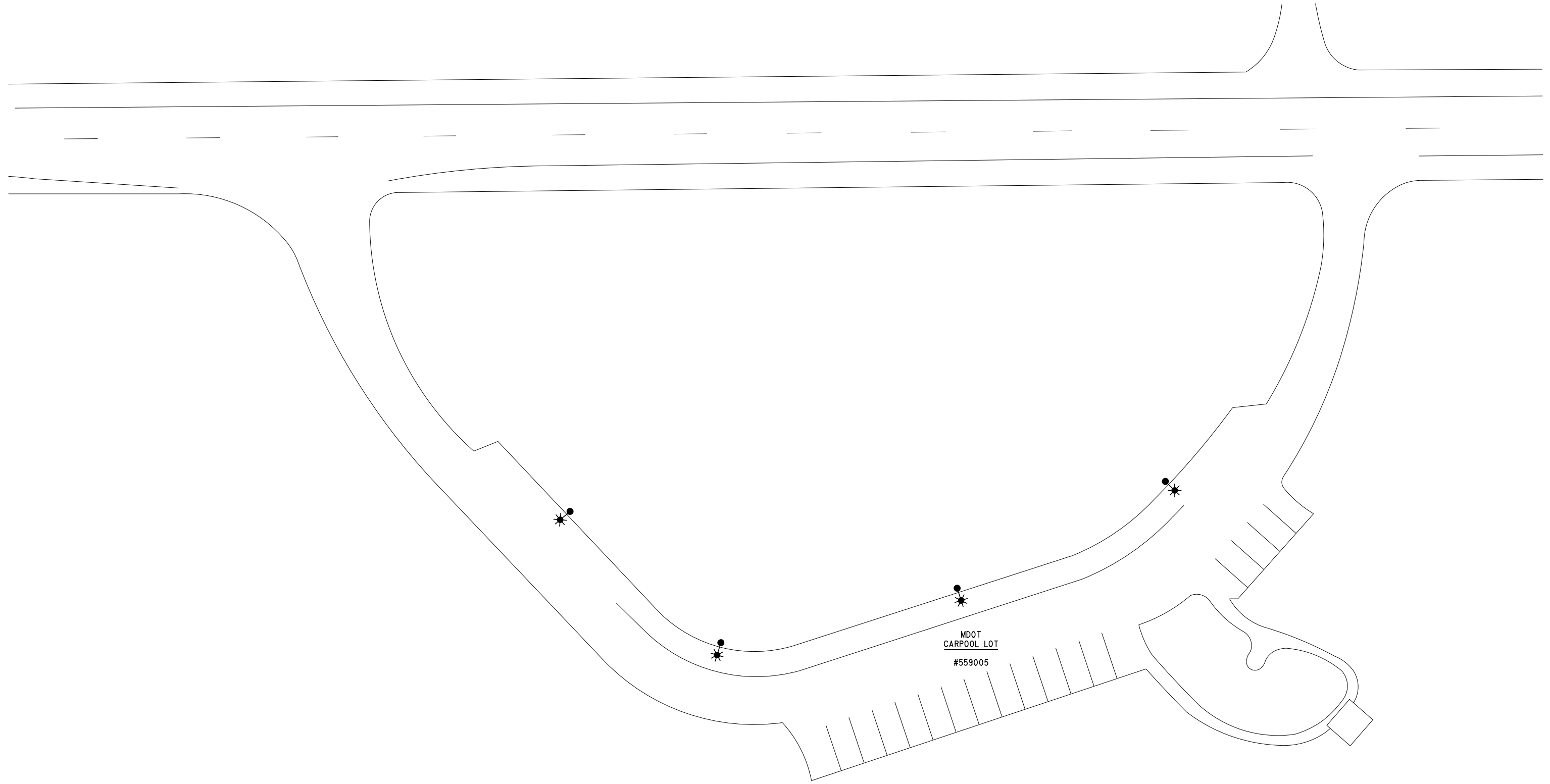


DATE: 06/22/21	CS: 59051, 61012, 62031, 67017	NEWAYGO / WHITE CLOUD CARPOOL LOT	DRAWING	SHEET
DESIGN UNIT: MILLER	JN: 211816A	CARPOOL LOT LIGHTING	CP LOTS	SECT 1
TSC: CADILLAC		M-37 / EVERGREEN DR, NORTH OF 40TH ST	LTG	10
FILE: 211816 NewaygoWC CarLot.dgn				



M-66 / SHERIDAN RD

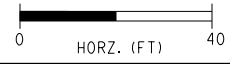
M-66 / SHERIDAN RD



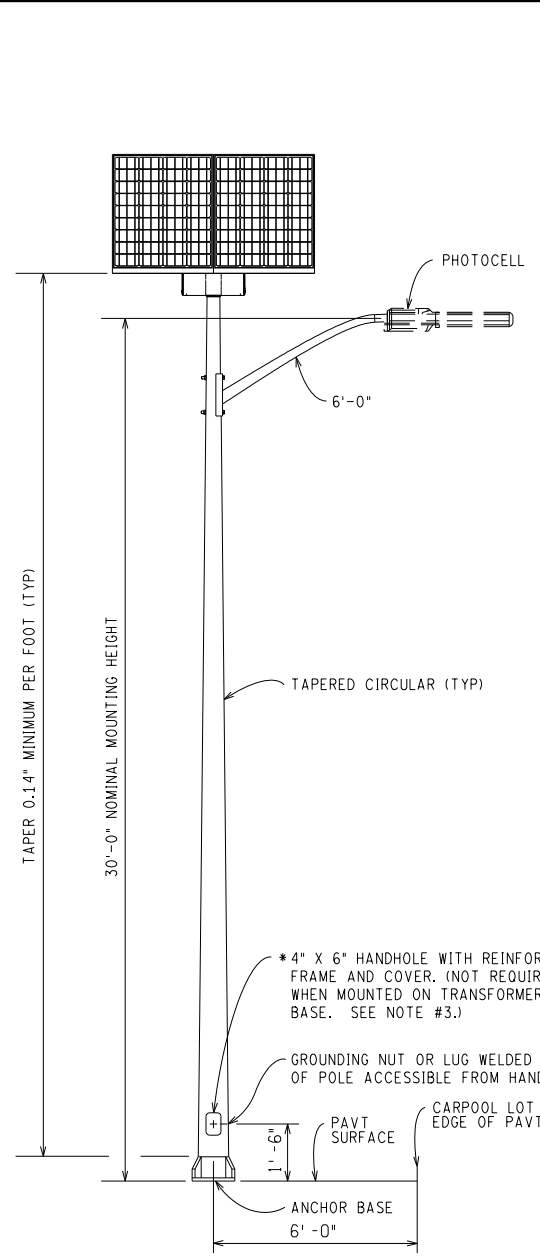
MDOT
CARPOOL LOT
#559005

JN 211816 CAT 0001		PROPOSED QUANTITIES - THIS SHEET	
4	Ea	Light Std Fdn	
4	Ea	Solar Lighting System	

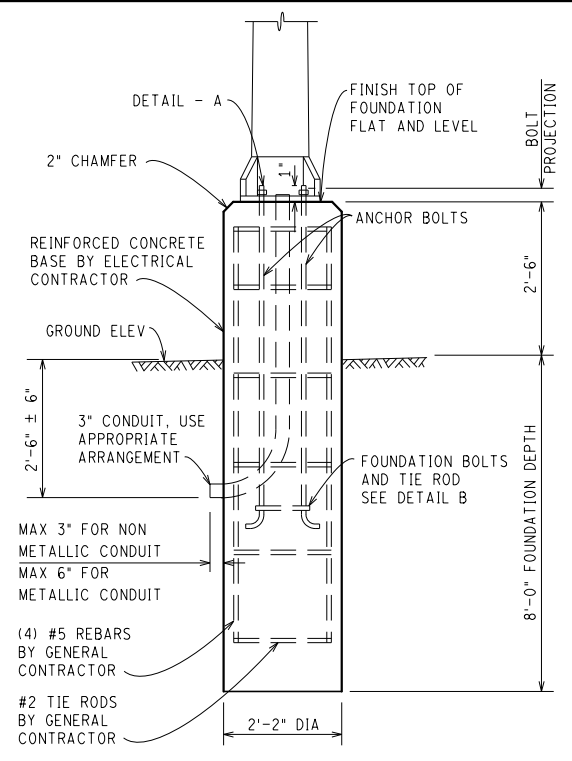
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NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



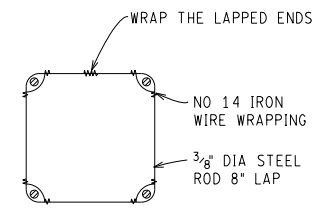
DATE: 06/22/21	CS: 59051, 61012, 62031, 67017	SHERIDAN ROADSIDE PARK	DRAWING	SHEET
DESIGN UNIT: MILLER	JN: 211816	CARPOOL LOT LIGHTING	CP LOTS	SECT 1
TSC: CADILLAC	FILE: 211816 Sheridan CarLot.dgn	M-66 / SHERIDAN RD	LTG	11



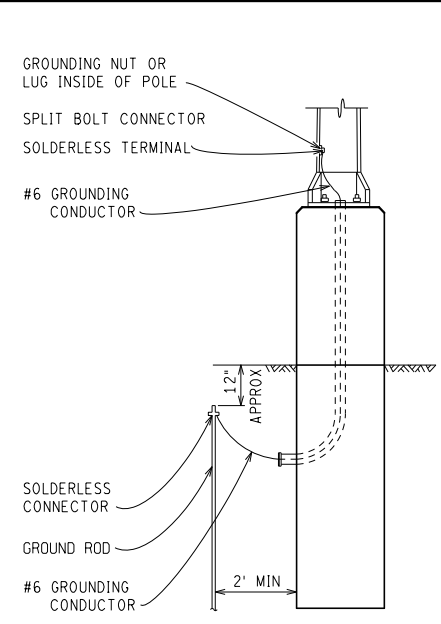
LUMINAIRE LIGHT STANDARD DETAIL



LIGHT STANDARD FOUNDATION DETAIL



DETAIL - B ANCHOR BOLTS AND TIE ROD



NOTE: IF CONDUIT EXTENDS TO HANDHOLE, DRIVE GROUND ROD IN OR NEAR HANDHOLE.

LIGHT STANDARD GROUNDING DETAIL

MATERIALS TABLE

MATERIAL	SPECIFICATION	DIMENSIONS	QUANTITY (PER FDN)
ANCHOR BOLTS	MDOT 908.14	DETERMINED BY LIGHT STANDARD CHART	4
ANCHOR NUTS	MDOT 908.14	DETERMINED BY ANCHOR BOLT DIAMETER	8
FLAT WASHER ¹ (1\"/>			

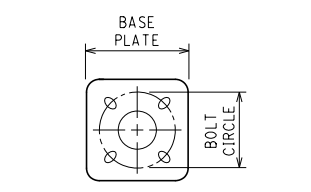
- IF LIGHT STANDARD BASE PLATE HAS SLOTTED HOLES, PLATE WASHERS ARE REQUIRED IN LIEU OF CIRCULAR WASHERS AND MUST COVER THE ENTIRE SLOT.
- ALL ANCHOR BOLTS, NUTS, WASHERS AND PLATE WASHERS MUST BE HOT DIP GALVANIZED ACCORDING TO AASHTO M232.

BRACKET ARM TABLE

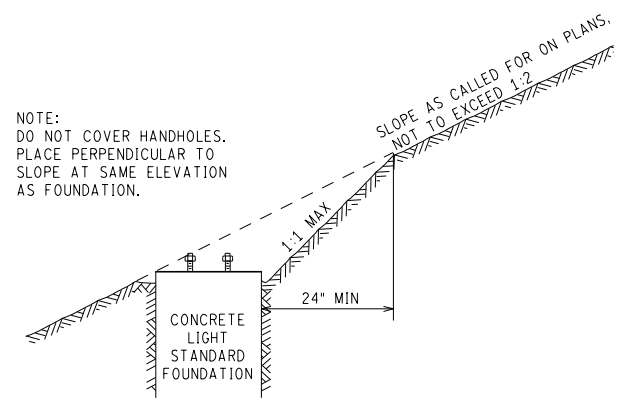
BRACKET LENGTH	8'-0"	10'-0"	12'-0"	15'-0"	17'-0"
TOP MEMBER	2" DIA	2" DIA	2" DIA	2" DIA	2 1/2" DIA
BOTTOM MEMBER	1 1/2" DIA	1 1/2" DIA	1 1/2" DIA	2" DIA	2" DIA

NOTES:

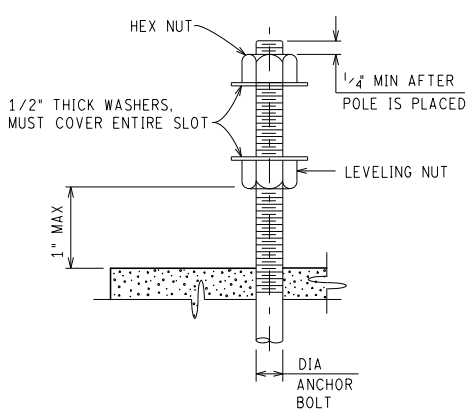
- ALL MATERIALS AND WORKMANSHIP MUST BE IN ACCORDANCE WITH THE CURRENT MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- EACH BRACKET ARM MUST BE SUPPLIED WITH ITS OWN POLE CONNECTION WITH STAINLESS STEEL HARDWARE. HARDWARE MUST INCLUDE LOCK WASHERS, MEETING ANSI B18.21.1.
- HANDHOLE TO FACE AWAY FROM TRAFFIC EXCEPT IT MUST FACE ROADWAY WHEN MOUNTED ON BRIDGE OR MEDIAN WALL. USE STAINLESS STEEL HEX HEAD MACHINE SCREWS. THE HANDHOLES MUST BE PLACED SO THEY DO NOT INTERSECT THE LONGITUDINAL SEAM WELD ON THE POLE.
- BOLT CIRCLE DIMENSION MUST BE EXACT. ANCHOR BOLTS MUST BE SET BY A TEMPLATE AND CENTERED ON THE FOUNDATION.
- NUT COVERS ARE NOT ALLOWED.



ANCHOR BASE DETAIL
ROUND OR SLOTTED HOLES CENTERED ON BOLT CIRCLE. (SLOT DIMENSION - 2 X BOLT DIA + 1/4")



FOUNDATION DETAIL
(ON FILL OR CUT SLOPE)



DETAIL - A ANCHOR BOLT LEVELING DETAIL
(THIS DETAIL DOES NOT APPLY WHEN USING FRANGIBLE TRANSFORMER BASE. SEE FRANGIBLE TRANSFORMER BASE DETAIL SHEET.)

LIGHT STANDARD FOR	SO (MAX)	A	B	C	D	E	STEEL POLES GAGE (MIN)	** F	*** MINIMUM ANCHOR BASE THICKNESS	ALUMINUM POLES GAGE (MIN)	POLE DIAMETER AT BASE
30 FT MOUNTING HEIGHT WITH 4 OR 6 FT SINGLE OR DOUBLE BRACKET ARM	11 1/2	11	7 3/4	5'-0"	8 3/4	5 1/2	11	1"Ø X 3'-4"	1"	0.188"	8 1/4" ± 1/4"

** LENGTH GIVEN IS LENGTH PRIOR TO BENDING.
*** MINIMUM ANCHOR BASE THICKNESS MAY BE ADJUSTED BASED ON CALCULATIONS PROVIDED BY THE FABRICATOR.

FINAL ROW PLAN REVISIONS		(SUBMITTAL DATE:)	
NO.	DATE	AUTH	DESCRIPTION



NO SCALE

FILE: 211816 LightStd Sht.dgn

DATE: 06/22/21
DESIGN UNIT: MILLER
TSC: CADILLAC

CS: 59051, 61012, 62031, 67017
JN: 211816A

LIGHT STANDARD DETAILS (SHORT ARM)
CARPOOL LOT LIGHTING

DRAWING SHEET
CP LOTS LG 12 SECT 1