

**LOCAL AUTHORITY APPROVAL**

CITY OF DETROIT  
 CITY ENGINEERING DIVISION  
 DEPARTMENT OF PUBLIC WORKS  
 COLEMAN A. YOUNG MUNICIPAL CENTER  
 2 WOODWARD AVENUE  
 DETROIT, MICHIGAN 48226

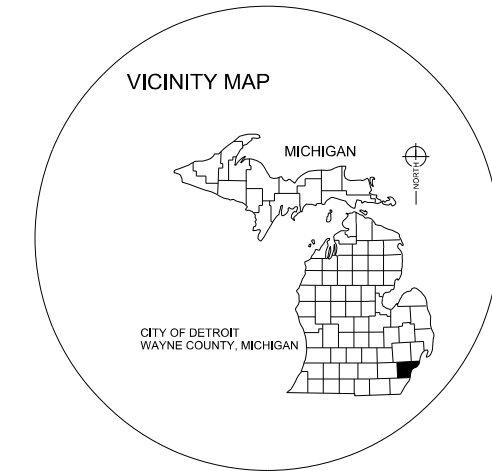
**CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 CONANT STREETScape**

CITY OF DETROIT  
 WAYNE COUNTY, MICHIGAN  
 PROJECT NUMBER: PW-7016

**Standards and Specifications Reference - Not To Be Printed**

- MDOT 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION
- 2011 MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
- 2012 AASHTO GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES
- 2012 AASHTO GUIDE FOR THE PLANNING, DESIGN, AND OPERATION OF PEDESTRIAN FACILITIES
- 2011 AASHTO GEOMETRIC DESIGN OF HIGHWAYS AND STREETS
- CITY OF DETROIT STANDARD SPECIFICATIONS FOR PAVING AND RELATED CONSTRUCTION
- CITY OF DETROIT STREET AND ALLEY PLANS

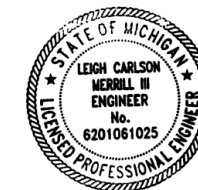
**MDOT Standard Plans: (Latest Edition) - Not To Be Printed**



LOCATION MAP  
 NORTH

ISSUED FOR BIDS AND  
 CONSTRUCTION: 4/8/2020

THESE PLANS WERE PREPARED FOR  
 CITY OF DETROIT, DEPARTMENT OF PUBLIC WORKS BY:  
 DLZ



*Leigh Merrill III*  
 LEIGH MERRILL, P.E.

4/13/2020  
 DATE

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**APPROVALS**

RECOMMENDED FOR APPROVAL BY:

RICHARD DOHERTY, P.E. - CITY ENGINEER

DATE

**CITY OF DETROIT**

MILES: N/A

CONTRACT FOR:

THE CONANT STREET STREETScape IS LOCATED BETWEEN DAVISON STREET AND CARPENTER AVENUE. THE PROJECT IMPROVEMENTS WILL INCLUDE THE FOLLOWING ELEMENTS: HARDSCAPE, SIGNAGE, PAVEMENT MARKINGS, SITE FURNISHINGS, ADA ACCESSIBILITY, IMPROVED LIGHTING, AND LANDSCAPING.



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City of Detroit

Conant Streetscape

**REVISIONS**

5/15/2020	ADD01
12/8/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By: KJS  
 Designer: KJS  
 Reviewer: JJP  
 Manager: LCM

Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO.  
 191176

SHEET NO.

**G101**

**DEMOLITION & EROSION CONTROL NOTES**

1. MAINTAIN AND REPAIR ALL SESC BEST MANAGEMENT PRACTICE BMPs DURING CONSTRUCTION UNTIL ALL VEGETATION IS ESTABLISHED (ALL DISTURBED SOIL SURFACES ARE UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR AS DEFINED BY PERMIT).
2. PERFORM ALL EARTH-DISTURBING CONSTRUCTION ACTIVITIES WITHIN THE LIMITS OF DISTURBANCE AS INDICATED ON THE DRAWINGS.
3. REVIEW THE LIMITS OF DISTURBANCE SHOWN ON THE DRAWINGS AND FIELD-STAKING THE LIMIT OF DISTURBANCE LINE PRIOR TO THE START OF CONSTRUCTION AND/OR CONTRACTORS OPERATIONS AT NO ADDITIONAL COST TO OWNER.
4. INSTALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO THE START OF ANY LAND CLEARING OR GRADING ACTIVITIES.
5. APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS SHOWN ON THE DRAWINGS AND/OR AS REQUIRED BY SESC PERMIT AND IMPLEMENT ADDITIONAL MEASURES AS DICTATED BY SITE CONDITIONS.
6. ENSURE THAT ANY SEDIMENTATION RESULTING FROM WORK ON THIS SITE IS CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS.
7. THE EXTENT OF REMOVALS AND DEMOLITION SHALL BE FIELD VERIFIED BY CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DEVIATIONS FROM INFORMATION SHOWN.

**SITE LAYOUT NOTES**

1. DIMENSIONS ARE TO BACK OF CURB, OUTSIDE FACE OF BUILDING, AND EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
2. KEEP THE APPROVED AND/OR MOST CURRENT SET OF PROJECT DRAWINGS ON SITE AT ALL TIMES. CONTRACTOR TO CONFIRM THEY ARE IN POSSESSION OF THE MOST CURRENT DRAWING FILES.

**GENERAL NOTES**

1. PRIOR TO CONSTRUCTION ALL FENCING, BARRICADES, ENCLOSURES, ETC., MUST BE INSTALLED AND APPROVED BY OWNER OR CONSTRUCTION MANAGER.
2. DISPOSE OF DEMOLITION AND EXCAVATION MATERIALS IN ACCORDANCE WITH CONTRACT DOCUMENTS AND ALL APPLICABLE LAWS/REGULATIONS.
3. UNLESS SPECIFICALLY NOTED FOR REMOVAL ON THE PLANS, ALL SIDEWALKS, DRIVES, CULVERTS, DRAINAGE STRUCTURES, AND ABOVE AS WELL AS BELOW GRADE UTILITIES SHALL BE PROTECTED. ALL SUCH ITEMS DAMAGED OR DESTROYED DURING CONSTRUCTION SHALL BE REMOVED AND REPLACED WITH NEW AT NO ADDITIONAL COST TO THE OWNER.
4. PROTECT EXISTING TREES TO REMAIN WITH TEMPORARY FENCING AT THE DRIP LINE. NO GROUND DISTURBANCE OR STORAGE OF MATERIAL/EQUIPMENT SHALL OCCUR WITHIN THE DRIP LINE LIMITS.
5. ELECTRICAL, TELEPHONE, CABLE TV, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN THE CONSTRUCTION LIMITS. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK.
6. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS DRAWING HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. VERIFY CRITICAL INVERT INFORMATION PRIOR TO BEGINNING CONSTRUCTION.
7. DAMAGE CAUSED TO SURROUNDING AREA PAVEMENT OUTSIDE THE CONSTRUCTION LIMITS SHALL BE SAWCUT AND REPLACED AT NO ADDITIONAL COST TO THE OWNER.
8. SAWCUT CURB AND GUTTER AND SIDEWALKS TO NEAREST JOINT.
9. SECURE AND COMPLY WITH ALL REQUIREMENTS OF ALL PERMITS REQUIRED FOR THIS WORK.
10. MAINTAIN ACCESS TO ADJACENT PROPERTIES AT ALL TIMES DURING CONSTRUCTION. PROVIDE TEMPORARY ACCESS PATHS, FENCING, SIGNAGE, AND ALL NECESSARY ITEMS TO ENSURE A SAFE AND CLEARLY DEFINED ACCESS PATH.
11. ALL CONSTRUCTION STAGING, MATERIALS STORAGE, CONSTRUCTION WASHING STATIONS, PROJECT MOCK-UP AREAS, AND ALL ASSOCIATED NEEDS ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL LABOR, MATERIALS AND EQUIPMENT ASSOCIATED WITH THESE ITEMS SHALL BE PROVIDED AS PART OF THE DEMOLITION PAY ITEMS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER FOR ALL CONSTRUCTION ACCESS POINTS. THE USE OF ADJACENT STREET R.O.W. WILL NOT BE PERMITTED FOR MATERIAL STAGING, STOCK PILING AND CONTRACTOR PARKING WITHOUT PRIOR WRITTEN CONSENT.
12. FOR PROTECTION OF UNDERGROUND UTILITIES AND CONFORMANCE WITH PUBLIC ACT 53, AS AMENDED, THE CONTRACTOR SHALL CALL "MISS DIG" AT 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS (72 HOURS), EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES INCLUDING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. "MISS DIG" 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.
13. EXISTING SURVEY MONUMENTS SHALL BE PROTECTED DURING CONSTRUCTION OPERATIONS. IN THE EVENT EXISTING MONUMENTS ARE DISTURBED DURING CONSTRUCTION, THE MONUMENTS SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITION AND PER CITY OF DETROIT SURVEY BUREAU REQUIREMENTS AT NO COST TO THE OWNER. NOTIFY CITY OF DETROIT SURVEY BUREAU OF ANY DISTURBED OR RESET MONUMENTS.
14. ANY MISCELLANEOUS LITTER AND DEBRIS INCLUDING SUCH ITEMS BUT NOT LIMITED TO: FOUNDATION AND ATTACHMENTS, TREE STUMPS AND ROOT STRUCTURES, PAVEMENT BASE MATERIAL, ABANDONED FENCES, ABANDONED PIPES, CONSTRUCTION DEBRIS, TRASH, ETC. IDENTIFIED ON THE PLANS AND ENCOUNTERED WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF LEGALLY OFF-SITE BY THE CONTRACTOR. ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE THIS WORK SHALL BE PAID AS PART OF THE PAY ITEM LITTER AND DEBRIS, REM.
15. SAW CUT LINES FOR NEW PAVEMENT SHALL BE CUT STRAIGHT LEAVING A CONSISTENT, SMOOTH EDGE ALONG THE EXISTING PAVEMENT TO REMAIN. NEW PAVEMENT TO DIRECTLY ABUT EXISTING PAVEMENT TO REMAIN. IF NECESSARY OR AS DIRECTED BY THE ENGINEER RE-SAW CUT THE PAVEMENT IF THE EDGE OF THE PAVEMENT IS DAMAGED BY CONSTRUCTION ACTIVITIES. ADDITIONAL SAW CUTS AND THE REQUIRED ADDITIONAL PAVEMENT REPLACEMENT IS INCLUDED AS PART OF THE ORIGINAL PAY ITEM AND SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
16. SEE MAINTENANCE OF TRAFFIC SPECIAL PROVISION FOR SEQUENCE OF WORK.

**INDEX OF SHEETS:**

CIVIL	
G101	COVER SHEET
G001	LEGEND AND NOTES SHEET
G002	NOTES SHEET
C101	TOPOGRAPHIC SURVEY AND ALIGNMENT PLAN
C102	TOPOGRAPHIC SURVEY AND ALIGNMENT PLAN
C201	MAINTENANCE OF TRAFFIC - STAGE 1
C202	MAINTENANCE OF TRAFFIC - STAGE 1
C203	MAINTENANCE OF TRAFFIC - STAGE 2
C204	MAINTENANCE OF TRAFFIC - STAGE 2
C205	MAINTENANCE OF TRAFFIC - STAGE 3
C206	MAINTENANCE OF TRAFFIC - STAGE 3
C207	MAINTENANCE OF TRAFFIC - STAGE 4
C208	MAINTENANCE OF TRAFFIC - STAGE 4
C209	MAINTENANCE OF TRAFFIC TYPICALS
C210	MAINTENANCE OF TRAFFIC TYPICALS
C301	SEMI-ANNUAL PLAN AND SOIL EROSION AND SEDIMENTATION CONTROL PLAN
C302	SEMI-ANNUAL PLAN AND SOIL EROSION AND SEDIMENTATION CONTROL PLAN
C401	CONSTRUCTION PLAN
C402	CONSTRUCTION PLAN
C403	DIMENSIONAL PLAN
C404	DIMENSIONAL PLAN
C501	DETAIL GRADES
C502	DETAIL GRADES
C503	DETAIL GRADES
C504	SIDEWALK RAMP DETAILS
C505	SIDEWALK RAMP DETAILS
C506	SIDEWALK RAMP DETAILS
C507	SIDEWALK RAMP DETAILS
C508	SIDEWALK RAMP DETAILS
C601	PERMANENT PAVEMENT MARKING PLAN
C602	PERMANENT PAVEMENT MARKING PLAN
C603	PERMANENT SIGNING PLAN
C604	PERMANENT SIGNING PLAN
C605	PERMANENT SIGNING DETAILS
C701	TYPICALS
C702	TYPICALS
C703	TYPICALS
C704	MISCELLANEOUS DETAILS
C705	TRASH RECEPTACLE AND BENCH DETAILS
C706	BIKE RACK DETAILS
C707	REFUGE ISLAND DETAILS
C708	TREE GRATE AND PIT DETAILS
C709	DETAIL OF ALLEY RETURN AND DRIVE APPROACH AND UTILITY TRENCH DETAIL
C710	SIDEWALK RAMP AND DETECTABLE WARNING DETAILS
C711	IRRIGATION DETAILS

**SYMBOL LEGEND**

SURVEY	TOPOGRAPHY - PLAN	EXISTING UTILITIES	PROPOSED UTILITIES	MISCELLANEOUS

ALL SYMBOLS MAY NOT APPEAR ON DRAWINGS.

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**CITY OF DETROIT**

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Conant Streetscape

**REVISIONS**

Date	Revision
5/5/2020	Addendum No. 1
2/8/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

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PROJECT NO.  
**191176**

SHEET NO.

**G001**



## GRADING NOTES

- FINISH GRADE OF SOIL EDGES ALONG PAVEMENT TO MATCH EDGE OF PAVEMENT.
- GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS AND PLACEMENT OF TOPSOIL.
- GRADE AREAS AT SITE PERIMETER TO MATCH GRADES OF ADJACENT PARCELS.
- REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS.
- PROVIDE DRAINAGE AWAY FROM ALL PAVED SURFACES AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER. ENSURE ALL AREAS WILL PROPERLY DRAIN TO NEAREST INLET WITHOUT STANDING OR PONDING WATER.
- NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE SURVEY GRADES AND THE ACTUAL SITE ELEVATIONS. ANY AREAS OF POOR DRAINAGE OR INADEQUATE DRAINAGE FROM PROPOSED IMPROVEMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND SHALL BE MODIFIED AS REQUIRED AND APPROVED.
- MEET EXISTING GRADE WITHIN THE ROADWAY AT THE SAW CUT LINE.
- PROVIDE MINIMUM CROSS-SLOPE OF 0.5%, MAXIMUM CROSS-SLOPE OF 2%, AND MAXIMUM LONGITUDINAL SLOPE OF 5% (EXCEPT WHERE NOTED) ON SIDEWALKS (INCLUSIVE OF ALL SPECIFIED TOLERANCES).
- GRADE ALL PAVEMENT SURFACES UNIFORMLY BETWEEN SPOT ELEVATIONS NOTED ON THE PLANS. (EXCEPT WHERE NOTED OTHERWISE)
- ALL PERMANENT IMPROVEMENTS SHALL BE LOCATED WITHIN CITY OF DETROIT PROPERTY, CITY OF HAMTRAMCK PROPERTY, WAYNE COUNTY PROPERTY, GREENWAY EASEMENTS, AND/OR PUBLIC RIGHT-OF-WAY.
- SPOT ELEVATIONS NOTED FOR ADA SIDEWALK RAMPS ARE REFERENCE POINTS ONLY. THE ADA SIDEWALK RAMPS TO BE FIELD VERIFIED AND SHALL BE IN ACCORDANCE WITH CITY SIDEWALK RAMP AND DETECTABLE WARNING DETAILS PER STANDARD PLAN R-28 (LATEST EDITION).
- GRADE LONGITUDINAL GUTTER SLOPES UNIFORMLY BETWEEN SPOT ELEVATIONS AND AS ILLUSTRATED WITH DRAINAGE ARROWS ON THE PLANS. ENSURE PROPER DRAINAGE IS MAINTAINED ACROSS AND AWAY FROM ALL SIDEWALK AND RAMPS TO ENSURE WATER DOES NOT POND AT THE BASE OF THE RAMPS. ANY AREAS OF POOR DRAINAGE OR INADEQUATE DRAINAGE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND SHALL BE MODIFIED AS REQUIRED AND APPROVED. GRADING MODIFICATIONS SHALL BE PROVIDED AT NO ADDITIONAL COST AND IS INCIDENTAL TO DEMOLITION AND GRADING PAY ITEMS.
- REFERENCE CURB TRANSITIONS NOTED ON GRADING PLANS, AT SIDEWALK, ADA RAMPS, AND ADJACENT TO DRIVEWAY/ALLEY APPROACHES. CURB TRANSITIONS SHALL BE MADE UNIFORMLY WITHOUT ABRUPT CHANGES OR IRREGULARITIES. ENSURE THAT THE TOP OF CURB ELEVATION IS THE SAME AT INTERSECTIONS WITH DIFFERENT CURB TYPES AND EXISTING CURBS.
- CONTRACTOR TO VERIFY ALL EXISTING SPOT ELEVATIONS ALONG LIMITS OF EXISTING AND NEW PAVEMENT WHERE THE GRADING PLANS NOTE MEET EXISTING (M.E.). NOTIFY THE ENGINEER OF ANY INCONSISTENCIES, DRAINAGE ISSUES, OR SLOPE DISCREPANCIES.
- TOP OF LIGHT POLE FOUNDATIONS SHALL BE 6 INCHES HIGHER THAN FINISH GRADE IN LAWN/LANDSCAPE AREAS AND 3 INCHES HIGHER THAN ADJACENT FINISH GRADE IN PAVED AREAS. REFER TO SPOT ELEVATIONS NOTED ON GRADING PLANS. COORDINATE AND ADJUST TOP OF LIGHT POLE FOUNDATION ELEVATIONS TO COORDINATE WITH ALL APPROVED GRADING MODIFICATIONS AS REFERENCED IN NOTES.
- TREE GRATES AND FRAMES SHALL BE SET WITH A UNIFORM SLOPE IN ONE DIRECTION CONSISTENT WITH THE ADJACENT PAVEMENT GRADES. DO NOT WRAP OR UNEVENLY DROP ONE OR MORE CORNERS OF THE TREE GRATES AND FRAMES. ENSURE THE TREE GRATES ARE SET FLUSH AND EVEN WITH THE FRAME AND ADJACENT CONCRETE.

## UTILITY NOTES

- EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE.
- VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES PRIOR TO EXCAVATION WHERE NECESSARY.
- PROTECT AND MAINTAIN SERVICE OF OTHER UTILITIES AT CROSSINGS.
- DO NOT CONNECT ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER SERVICES TO THE SANITARY SEWER.
- PROVIDE AND MAINTAIN INLET FILTERS AT ALL CATCH BASIN INLETS, DURING CONSTRUCTION.
- PROVIDE A MINIMUM OF EIGHTEEN (18) INCHES OF VERTICAL SEPARATION AND TEN (10) FEET OF HORIZONTAL SEPARATION BETWEEN THE WATER MAIN AND ALL SANITARY AND STORM SEWERS.
- ADJUST ALL CASTINGS TO FINISH GRADES.
- PIPE LENGTHS ARE TO CENTER OF STRUCTURES UNLESS NOTED OTHERWISE. ALL PIPE LENGTHS ARE FOR THE CONVENIENCE OF THE CONTRACTOR.
- STORM SEWER WORK INDICATED ON THESE DRAWINGS SHALL REQUIRE A DETROIT WATER AND SEWERAGE DEPARTMENT (DWS) PERMIT TO BE OBTAINED BY THE CONTRACTOR. NOTIFY AND COORDINATE WITH JUANITA SANDERS PERMIT INSPECTOR (313-959-3928) A MINIMUM OF 48 HOURS PRIOR TO THE INITIATION OF STORM SEWER CONSTRUCTION WORK.
- IN COMPLIANCE WITH PUBLIC ACT 53 OF THE STATE OF MICHIGAN (EFFECTIVE) AUGUST 1, 1974, AS AMENDED, NOTIFY IN ADVANCE OF CONSTRUCTION (72 HOURS/ 3 WORKING DAYS) ALL PUBLIC AND PRIVATE UTILITY PROVIDERS HAVING FACILITIES IN OR NEAR THE IMMEDIATE WORKING AREA. FOR CONVENIENCE THEY ARE IDENTIFIED ON THE ENCLOSED UTILITY PROVIDER LIST. THE LISTING DOES NOT, HOWEVER, RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF VERIFYING THE UTILITY LOCATIONS AND NOTIFYING ALL UTILITY OWNERS AND MISS DIG (1-800-482-7171).
- ALL WORK TO BE LAID OUT PER STATION (STA) AND OFFSET (OFF) FROM HORIZONTAL CONTROL ALIGNMENT. OFFSETS FOR DRAINAGE STRUCTURES ARE TO BE CENTER OF STRUCTURE.
- REPLACE SIDEWALKS, CURBS AND PAVEMENT DISTURBED AS PART OF UTILITY WORK OR OTHER CONSTRUCTION ACTIVITIES AND MATCH EXISTING CONDITIONS. PAVEMENT REMOVAL TRENCHING, BACKFILL, PAVEMENT REPLACEMENT AND OTHER ASSOCIATED WORK AND MATERIALS REQUIRED FOR THE ADJUSTMENT, REMOVAL, REPLACEMENT AND INSTALLATION THAT IS NOT SHOWN ON THE DEMOLITION PLANS OR MATERIAL PLANS SHALL BE INCIDENTAL TO THE UTILITY LINE AND/OR STRUCTURE PAY ITEM.
- UTILITY ADJUSTMENTS REQUIRED TO COMPLETE THE PROJECT ARE TO BE COORDINATED BY THE CONTRACTOR WITH THE INDIVIDUAL UTILITY PROVIDERS.
- REVIEW, PERMIT AND INSPECTION FEES REQUIRED TO PERFORM THE UTILITY WORK SHALL BE COORDINATED BY THE CONTRACTOR AND SHALL BE INCLUDED IN THE BID.
- ADJUST ALL SEWER, WATER AND ELECTRICAL STRUCTURES OR INFRASTRUCTURE AS INDICATED ON DRAWINGS. COORDINATE WITH APPROPRIATE CITY DEPARTMENTS AS NECESSARY.
- COORDINATE ADJUSTMENT OF ALL GAS, STEAM, FIBER AND COMMUNICATION STRUCTURES OR INFRASTRUCTURE WITH APPROPRIATE UTILITY PROVIDER. APPROPRIATE UTILITY PROVIDER TO MAKE ANY ADJUSTMENTS TO GAS, STEAM, FIBER AND COMMUNICATION STRUCTURES AS NECESSARY.
- RELOCATION OF UTILITY POLES TO BE COORDINATED WITH DETROIT PUBLIC LIGHTING AUTHORITY (DPLA) AND DTE ENERGY.
- ALL SEWER MANHOLES SHALL BE PRECAST CONCRETE IN ACCORDANCE WITH ASTM C478 WITH ECCENTRIC CONE OR FLAT-SLAB-TOP AS INDICATED.
- PIPE CONNECTORS AT MANHOLES TO BE IN ACCORDANCE WITH ASTM C923, OR PER PIPE MANUFACTURER'S AND DWS SPECIFICATIONS.
- SEWER PIPE TO BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM C76, CLASS IV, WALL B, MINIMUM INSIDE DIAMETER TO BE 8 INCHES OR PVC, ASTM D3034, SDR26 FOR SIZES 8 INCHES AND SMALLER.
- PROPOSED INVERT FOR NEW SEWER CONNECTIONS TO EXISTING PIPES NOT AT EXISTING MANHOLES ARE ESTIMATED. VERIFY INVERT ELEVATIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.
- EXISTING OUTLET SEWER INVERT ELEVATIONS TO BE FIELD VERIFIED.
- EXTENSIONS OF EXISTING SEWER PIPE TO BE PERFORMED USING PIPE MATERIALS AND DIAMETERS TO MATCH THE EXISTING SEWER.
- FOR ALL DIRECT TAPS TO EXISTING STRUCTURES, FIELD CORE DRILL EXISTING STRUCTURE TO ACCOMMODATE PROPOSED PIPE SIZE. GROUT PIPE OPENING TO BE WATERTIGHT.
- ALL MANHOLE AND CATCH BASIN COVERS SHALL BE BOLTED DOWN.
- ALL KNOWN DRAINAGE STRUCTURES, PIPES, AND INVERTS ARE SHOWN.

## SIGNAGE & STRIPING NOTES

- ALL SIGNAGE AND STRIPING SHOWN ON THESE PLANS SHALL BE COORDINATED WITH THE CITY OF DETROIT TRAFFIC ENGINEERING DIVISION AND PER THE REQUIREMENTS OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) LATEST EDITION EXCEPT AS AMENDED BY SPECIAL PROVISIONS.
  - SIGN PLACEMENT SHALL BE INSTALLED TO PROVIDE A MINIMUM OF 2'-0" OF CLEARANCE FROM THE FACE OF CURB TO THE CLOSEST EDGE OF THE FACE OF THE SIGN OR AS DIRECTED BY THE DETROIT TRAFFIC ENGINEERING DIVISION.
  - PLACEMENT OF REGULATORY AND ADVANCE WARNING SIGNS TO BE COORDINATED WITH CITY OF DETROIT TRAFFIC ENGINEERING DIVISION.
  - LAYOUT OF ALL PAVEMENT MARKINGS AND SIGNAGE SHALL BE STAKED BY THE CONTRACTOR FOR CITY OF DETROIT TRAFFIC ENGINEERING DIVISION APPROVAL IN ADVANCE OF INSTALLATION.
  - EXISTING LIGHT POLES, TRAFFIC POLES, AND FREESTANDING POLES THAT ARE TO REMAIN HAVE EXISTING STREET SIGNS AND TRAFFIC SIGNS THAT SHALL BE PROTECTED AND REMAIN IN PLACE. THE CONTRACTOR SHALL REPLACE ANY SIGNAGE THAT IS TO REMAIN AT NO ADDITIONAL COST IF THE SIGN IS REMOVED OR DAMAGED DURING CONSTRUCTION.
  - ANY SIGNS REQUIRED TO BE REMOVED FOR CONSTRUCTION PURPOSES SHALL BE SALVAGED AND STORED BY THE CONTRACTOR, AND RE-INSTALLED FOLLOWING CONSTRUCTION ACTIVITIES UNLESS NOTED OTHERWISE ON THE PLANS OR AS AMENDED BY SPECIAL PROVISIONS. CONTRACTOR SHALL REPLACE AT NO ADDITIONAL COST ANY SIGN THAT IS DAMAGED BY CONSTRUCTION ACTIVITIES.
  - MODIFICATIONS AND/OR REMOVALS OF EXISTING SIGNS TO BE COORDINATED WITH AND COMPLETED UNDER THE DIRECTION OF THE CITY OF DETROIT TRAFFIC ENGINEERING DIVISION.
  - CROSSWALK STRIPING SHALL ALIGN WITH AND CENTER ON THE SIDEWALK ADA RAMPS UNLESS OTHERWISE SHOWN. FIELD VERIFY THE ALIGNMENT WITH ENGINEER PRIOR TO INSTALLATION.
  - ALL PAVEMENT MARKINGS AND SYMBOLS SHALL BE CENTERED IN EACH LANE UNLESS OTHERWISE SHOWN.
  - ALIGN ALL SIGN FACES PERPENDICULAR TO CENTERLINE OF ROAD AND SHARED USE PATH AS SHOWN ON PLANS.
  - TEMPORARY PAVEMENT MARKINGS SHALL BE USED FOR MAINTENANCE OF TRAFFIC DURING CONSTRUCTION AS SHOWN IN THE MAINTENANCE OF TRAFFIC SHEETS AND IN THE SPECIAL PROVISION OR AS DIRECTED BY THE ENGINEER.
- ## TRAFFIC SIGNAL WORK
- CALL MISS DIG AT 811 OR (800) 482-7171 THREE WORKING DAYS PRIOR TO ANY EXCAVATION FOR THE LOCATIONS OF UNDERGROUND UTILITIES.
  - A MINIMUM CLEARANCE OF 3.0' HORIZONTAL & 1.0' VERTICAL MUST BE MAINTAINED BETWEEN PROPOSED D.P.W. FACILITIES & EXISTING U.G. UTILITIES, EXCEPT WATER WHICH REQUIRES A 3.5' HORIZONTAL CLEARANCE.
  - CONTRACTOR TO NOTIFY MICHIGAN CONSOLIDATED GAS CO. AT (800) 477-4747 IF ANY PROTECTIVE COATED GAS MAIN IS EXPOSED OR DAMAGED.
  - CONTRACTOR TO NOTIFY D.T.E. CO., AT (800) 477-4747 IF THE PROTECTIVE COATING OF ANY D.T.E. CO. HIGH VOLTAGE UNDERGROUND LINE IS EXPOSED OR DAMAGED.
  - EXISTING OVERHEAD & TRAFFIC SIGNAL FACILITIES ARE NOT NECESSARILY SHOWN ON PLANS.
  - CROSSARMS SHALL BE REMOVED AFTER ALL CONTACTS ARE REMOVED (INCLUDED WITH THE REMOVAL OF OVERHEAD LINES).
  - ALL OVERHEAD WIRES & UNDERGROUND CABLES SHALL CONSIST OF COPPER CONDUCTORS AS PER SPECIFICATIONS.
  - ALL NEW ANCHOR GUYS SHALL BE INSTALLED ON A 1:1 RATIO OR AS NEARLY AS POSSIBLE (EXCEPT WHERE OTHERWISE NOTED). (STRUT GUYS ARE EXCEPTED.)
  - ARM GUYS SHALL BE SIEMENS-MARTIN GRADE. ANCHOR AND POLE GUYS SHALL BE EXTRA HIGH STRENGTH GRADE.
  - ALL SALVAGED WOOD POLES DIRECTED TO BE INSTALLED SHALL BE POLES PREVIOUSLY INSTALLED NEW ON THIS CONTRACT.
  - ALL TRAFFIC SIGNALS SHALL BE MOUNTED WITH NEW STANDARD TRAFFIC SIGNAL BRACKETS AND FITTINGS.
  - ALL TRAFFIC SIGNAL ITEMS, AS CALLED FOR ON PLANS, SHALL INCLUDE ALL CABLES FROM THE CONTROLLER TO THE TRAFFIC SIGNALS AS INDICATED.
  - EXERCISE CAUTION NOT TO DISTURB EXISTING CABLES WHEN ENTERING PROPOSED CONDUIT INTO EXISTING MANHOLES & HANDHOLES. WALLS SHALL BE CORE DRILLED FOR ENTRANCE OF CONDUITS.
  - ALL SALVAGED TRAFFIC SIGNAL EQUIPMENT DIRECTED TO BE INSTALLED SHALL BE TRAFFIC SIGNALS PREVIOUSLY INSTALLED NEW ON THIS CONTRACT (EXCEPT AS OTHERWISE INDICATED).
  - SIDEWALK RAMPS SHALL BE CONSTRUCTED OF THE TYPE & LOCATION AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
  - SEAL CABLE ENDS WHERE COILING OF CABLE IS CALLED FOR ON PLANS.(CONTRACTOR SHALL RECEIVE PAYMENT FOR COILED-UP LENGTHS OF CABLE.)

## TRAFFIC SIGNAL WORK (CONT.)

- PROPOSED TRAFFIC SIGNALS SHALL BE PUT INTO OPERATION AT TIME OF REMOVAL OF EXISTING TRAFFIC SIGNALS FACILITIES. CONTRACTOR SHALL NOTIFY THE D.P.W. INSPECTOR IF HE IS UNABLE TO MAINTAIN TRAFFIC SIGNALS IN AN OPERABLE CONDITION AT ALL TIMES.
- WHERE INSTALLATION OF NEW MANHOLES OR HANDHOLES OVER EXISTING CONDUITS (TO ACCOMMODATE NEW AND EXISTING CONDUITS) IS CALLED FOR ON PLANS, CONTRACTOR SHALL CAREFULLY & SO AS NOT TO DAMAGE EXISTING CABLES. REMOVE THE EXISTING CONDUITS & ENCASEMENT WITHIN THE HOLES. EXISTING CABLES SHALL BE EXTENDED AND PROPERLY TRAINED, RACKED & SUPPORTED.
- WHERE ABANDONING OF U.G. CABLES IS CALLED FOR ON THE PLANS OR DIAGRAMS, CONTRACTOR SHALL CUT AND REMOVE CABLES WITHIN MANHOLES, HANDHOLES AND CONDUIT. ALL UNOCCUPIED CONDUITS SHALL BE PLUGGED.
- UNDERGROUND CABLE QUANTITIES ARE ITEMIZED ON THE GENERAL PLANS. ALL CABLES SHALL BE TAGGED IN ALL M.H.'S AND H.H.'S. THIS INCLUDES EXISTING CABLES THAT ARE RECONNECTED TO OTHER CIRCUITS OR RENDERED DEAD.
- WHERE PLANS CALL FOR TRIMMING OF TREES ON CITY PROPERTY THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE CITY OF DETROIT GENERAL SERVICES DEPARTMENT, TODD MISTON, AT (313) 332-9115 AND SHALL HAVE SUCH WORK DONE BY A LICENSED TREE SERVICE CONTRACTOR.
- ALL TREE TRIMMING REQUIRED TO CLEAR NEW OR SALVAGED TRAFFIC SIGNAL STANDARDS, O.H. TRAFFIC SIGNAL UNITS OR O.H. WIRES SHALL BE INCLUDED WITH THE PAY-ITEM AND NO EXTRA PAYMENT SHALL BE MADE.
- CONTRACTOR SHALL NOTIFY THE TRAFFIC ENGINEERING DIVISION AT (313) 224-1315 AFTER COMPLETING WORK AT ANY TRAFFIC SIGNAL INTERSECTION.
- ALL CABLES SHALL BE TRAINED & PROPERLY RACKED IN ALL MANHOLES AND HANDHOLES. RACKS ARE TO BE INSTALLED WHERE NECESSARY & ARE INCLUDED IN THE INSTALLATION OF UNDERGROUND CABLE.
- ALL CONDUITS STUBBED OUT OF STRUCTURES SUCH AS MANHOLES, HANDHOLES OR FOUNDATION SHALL EXTEND 3' BEYOND THE PAVEMENT LIMIT (EXCEPT AS OTHERWISE INDICATED). ALL UNOCCUPIED CONDUITS SHALL BE PLUGGED WITH PLASTIC TAPERED PLUGS SIZED TO MATCH THE CONDUIT (CARLAN P258T OR EQUAL).
- D.S.R. STREETCAR RAILS AND FOUNDATIONS (TRACKS) ARE NOT SHOWN ON THE PLANS SINCE INFORMATION ABOUT THEIR EXACT LOCATIONS IS NOT AVAILABLE. IF FOUND, CONTACT THE TRAFFIC ENGINEERING DIVISION.
- THE "FINAL" CONDUIT MUST BE TRIMMED FLUSH WITH THE STRUCTURE WALL AND HAVE END BELLS AND SPACERS AND BE TUCK POINTED. DO NOT ENCASE FINAL CONDUIT WITHOUT INSPECTION BY THE D.P.W. TRAFFIC ENGINEERING DIVISION INSPECTOR.
- INSTALL 3/16" DIAMETER YELLOW POLYPROPYLENE ROPE IN ALL "FINAL" CONDUIT. (INCLUDED IN "CONDUIT" PAY ITEM).
- CONDUIT TRENCHES SHALL BE EXCAVATED FROM MANHOLE TO MANHOLE TO ASSURE A CLEAR PASSAGE WITH PROPER GRADING PRIOR TO BUILDING ENCASED CONDUIT RUN.

## GENERAL ABBREVIATIONS

AFF	ABOVE FINISH FLOOR	FD	FLOOR DRAIN	MEZZ.	MEZZANINE	RD	ROOF DRAIN
AHU	AIR HANDLING UNIT	FRT	FIRE RETARDANT TREATED	MIN.	MINIMUM	RO	ROUGH OPENING
AL.	ALUMINUM	FT.	FOOT/FEET	MO	MASONRY OPENING	SCH.	SCHEDULE
ALT.	ALTERNATE	GA.	GAUGE/GAGE	MTD.	MOUNTED	SF	SQUARE FOOT
BF	BARRIER FREE	Galv.	GALVANIZED	N/A	NOT APPLICABLE	SIM.	SIMILAR
Brg.	BEARING	GC	GENERAL CONTRACTOR	NC	NOISE CRITERIA	SP.	SPACE/SPACING
CJ	CONTROL JOINT	HB	HOSE BIBB	NIC	NOT IN CONTRACT	SQ.	SQUARE
CL	CENTERLINE	HP	HIGH POINT	NO.	NUMBER	SS	STAINLESS STEEL
CLG.	CEILING	HORIZ.	HORIZONTAL	NRC	NOISE REDUCTION COEFFICIENT	STD.	STANDARD
CMU	CONCRETE MASONRY UNIT	HVAC	HEATING VENTILATING AIR	NTS	NOT TO SCALE	TAN.	TANGENT
CO.	CLEANOUT	COND.	CONDITIONING	OC	ON CENTER	Typ.	TYPICAL
CONC.	CONCRETE	ID	INSIDE DIAMETER	OD	OUTSIDE DIAMETER	UL	UNDERWRITERS LABORATORY
CONST.	CONSTRUCTION	IE	INVERT ELEVATION	OH.	OVERHEAD	UNO	UNLESS NOTED OTHERWISE
CONT.	CONTINUOUS	IN.	INCH/INCHES	OPP.	OPPOSITE	VERT.	VERTICAL
DA.	DIAMETER	INSUL.	INSULATION	ORD.	OVERFLOW ROOF DRAIN	VTR	VENT THROUGH ROOF
DN.	DOWN	LAV.	LAVATORY	PERP.	PERPENDICULAR	W/	WITH
DS.	DOWNSPOUT	LAV.	LAVATORY	PL.	PLATE	WC	WATER CLOSET
EF	EXHAUST FAN	LED	LIGHT EMITTING DIODE	PSF	POUNDS PER SQUARE FOOT	WH	WATER HEATER
EL.	ELEVATION	LLH	LONG LEG HORIZONTAL	PSI	POUNDS PER SQUARE INCH	W/O	WITHOUT
EJ	EXPANSION JOINT	LP	LOW POINT	PVC	POLYVINYL CHLORIDE	WP.	WEATHERPROOF
EQ.	EQUAL	MFR.	MANUFACTURER	R	RADIUS	WT.	WEIGHT
EWC	ELECTRIC WATER COOLER	MAX.	MAXIMUM	REQD.	REQUIRED		

## MISCELLANEOUS QUANTITIES

1	LSUM	Mobilization, Max 5%
15000	Dr	Critical Path Method Schedule
1	Ea	Dr Structure, Rem
10	Ft	Sewer, Rem, Less than 24 inch
1	Ea	Reconstructing Dr Structure, Case 1, Modified
10	Cyd	Non Haz Contaminated Material Handling and Disposal, LM
10	Ft	Exploratory Excavation, Vertical
10	Cyd	Excavation, Earth, Modified
10	Cyd	Subbase, CIP
20	Ton	Hand Patching
100	Ton	Conditioning Existing Pavement, Modified
695	Syd	Pav't Repr, Nonrainf Conc, 1.0 inch, Modified
695	Syd	Concrete Repr, Rem, Modified
1	LSUM	Monitoring Vibrations
100	Syd	Seeding, Mixture, THM, Modified
100	Syd	Sodding
2	Cyd	Topsoil Surface, Furn, LM, Modified
1	Ea	Monument Box Adjust, Modified
1	Ea	Monument Preservation, Vertical, Modified
40	Cyd	Litter and Debris, Rem
1	LSUM	Audio-Visual Filming

## MOT QUANTITIES

19	Ea	Pedestrian Type II Barricade, Temp
100	Ft	Pedestrian Type II Channelizer, Temp
622	Sft	Sign, Type B, Temp, Prismatic, Furn
622	Sft	Sign, Type B, Temp, Prismatic, Oper
86	Sft	Sign, Type B, Temp, Prismatic, Special, Furn
86	Sft	Sign, Type B, Temp, Prismatic, Special, Oper
2	Ea	Lighted Arrow, Type C, Furn
2	Ea	Lighted Arrow, Type C, Oper
19	Ea	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn
19	Ea	Barricade, Type III, High Intensity, Double Sided, Lighted, Oper
222	Ea	Plastic Drum, High Intensity, Furn
222	Ea	Plastic Drum, High Intensity, Oper
2	Ea	Sign, Portable, Changeable Message, NTCIP-Compliant, Furn
2	Ea	Sign, Portable, Changeable Message, NTCIP-Compliant, Oper
5340	Ft	Pav't Mrkg, Wet Reflective, Type NR, Paint, 4 inch, White, Temp
9260	Ft	Pav't Mrkg, Wet Reflective, Type NR, Paint, 4 inch, Yellow, Temp
6385	Ft	Pav't Mrkg, Wet Reflective, Type R, Tape, 4 inch, White, Temp
11280	Ft	Pav't Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp
4430	Ft	Pav't Mrkg, Longit, 6 inch or Less Width, Rem
495	Sft	Rem Spec Mrkg
7	Ea	Bus Stop, Temp
14	Ea	8ft x 24ft Feather Flag: Single-Sided Full Color
14	Ea	Feather Flag Indoor Cross-Base Stand 8ft (Full Kit)
4	Ea	36" x 24": Sandwich Board (Cor. Plastic): Double-Sided Full Color
4	Ea	4ft x 6ft: Premium Banner: Single-Sided Full Color
2	Ea	TS Face, Bag
2	Ea	TS Face, Bag, Rem



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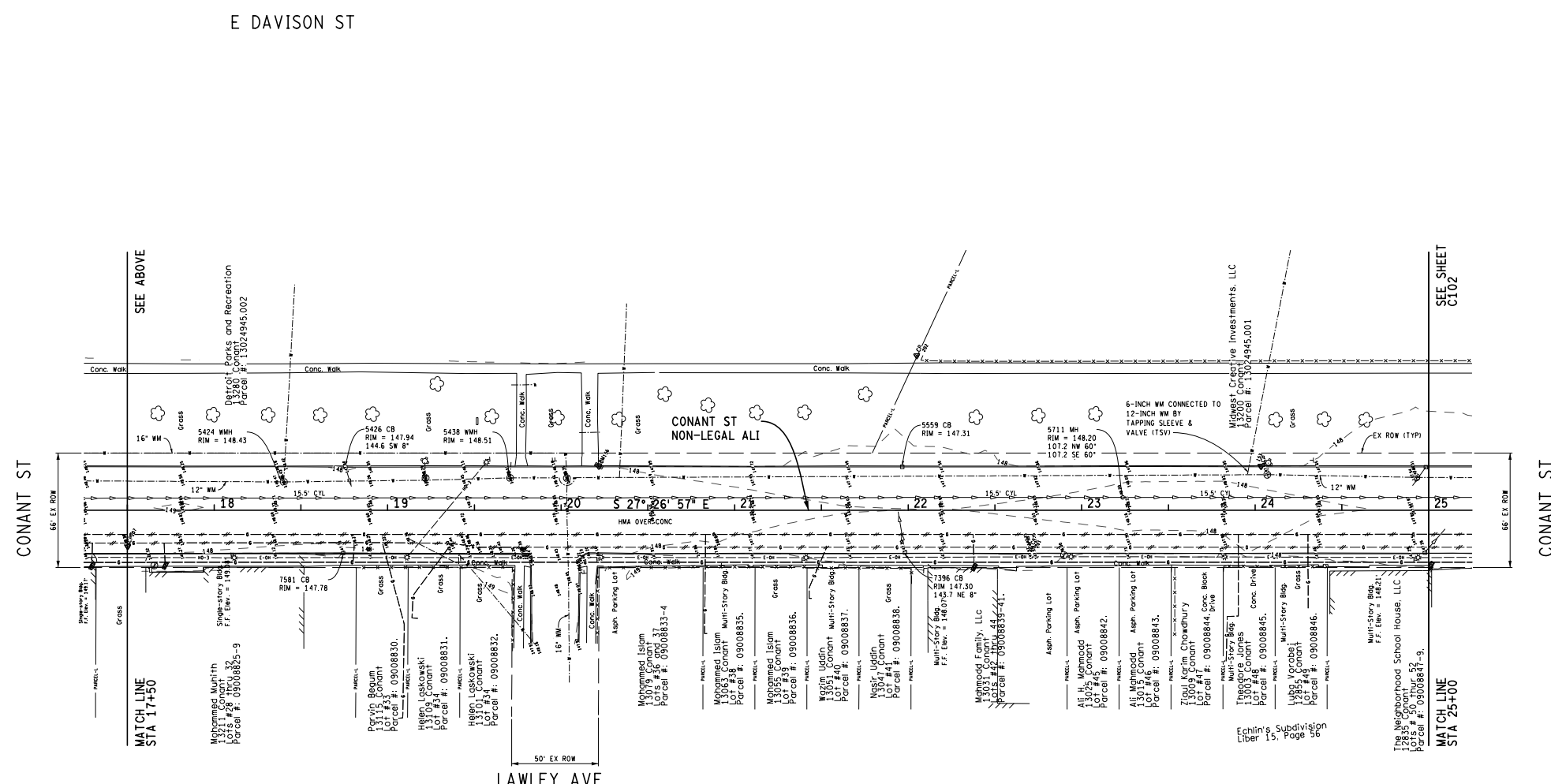
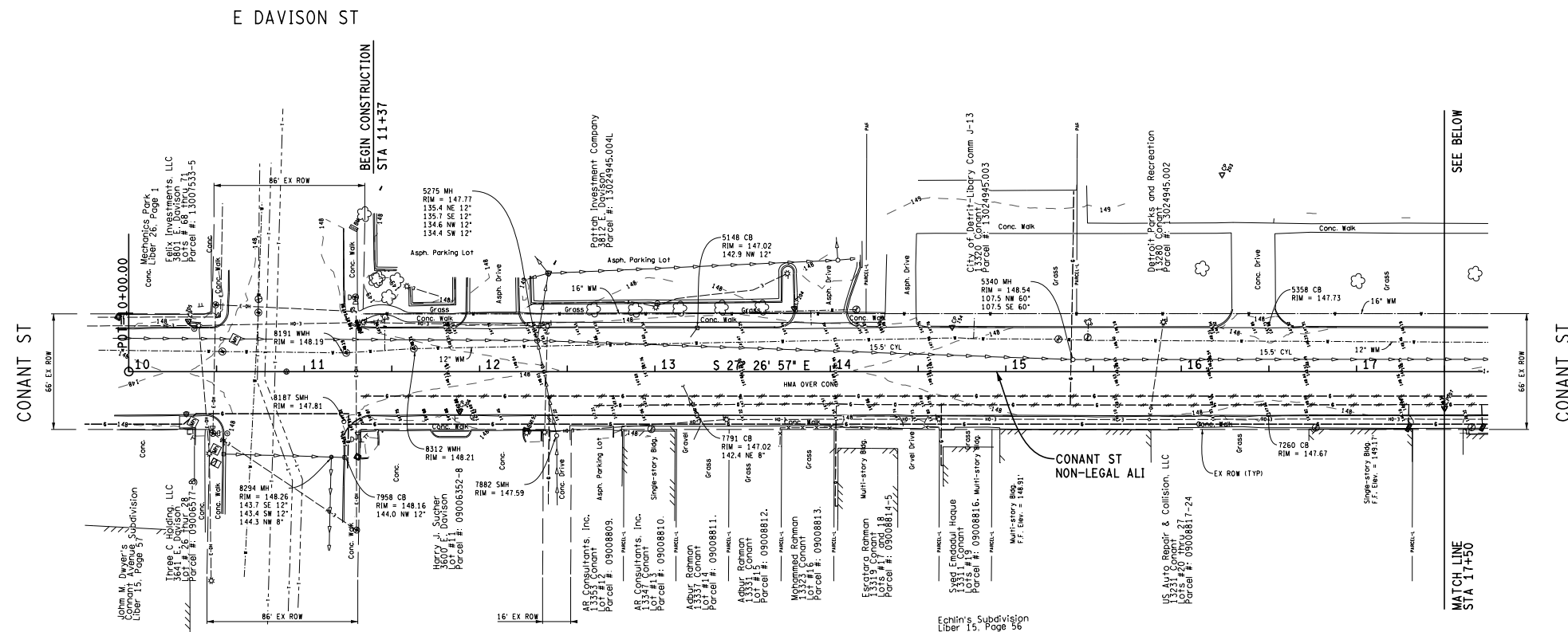
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Designer: KJS  
Reviewer: JJP  
Manager: LCM

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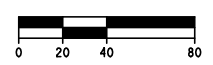
PROJECT NO.  
**191176**

SHEET NO.

**G002**



**TOPOGRAPHIC SURVEY AND ALIGNMENT PLAN**  
 SCALE: 1"=40'



**BENCH MARKS**

- BM155 EL 148.35  
CUT "SQUARE" ON CONCRETE CURB LOCATED AT THE SOUTHEAST CORNER OF 76 GAS STATION, APPROXIMATELY 19' NORTHWEST OF THE INTERSECTION OF PUBLIC ALLEY AND CONANT ST.
- BM156 EL 148.49  
CUT "SQUARE" ON CONCRETE CURB LOCATED ON THE EAST SIDE OF CONANT ST, APPROXIMATELY 25' SOUTHEAST OF THE INTERSECTION OF LAWLEY AVE AND CONANT ST ON THE SOUTH SIDE OF THE CONCRETE SIDEWALK.
- BM157 EL 147.66  
CUT "SQUARE" ON CONCRETE CURB LOCATED ON THE WEST SIDE OF CONANT ST, APPROXIMATELY 91' SOUTH OF THE INTERSECTION OF HALLECK AVE AND CONANT ST ON THE SOUTH SIDE OF THE CONCRETE SIDEWALK.
- BM158 EL 148.32  
CUT "SQUARE" ON CONCRETE CURB LOCATED ON THE EAST SIDE OF CONANT ST, APPROXIMATELY 40' SOUTH OF THE INTERSECTION OF BRISTOW ST AND CONANT AVE.
- BM159 EL 145.58  
LOCATED IN THE NORTHWEST QUADRANT OF THE INTERSECTION OF CARPENTER AVE AND CONANT ST.
- BM160 EL 147.74  
LOCATED IN THE NORTHEAST QUADRANT OF THE INTERSECTION OF CHARLES ST AND CONANT ST.

**COORDINATES**

STA	NORTHING	EASTING
10+00.00	336453.54	13475744.56
POB 11+20.00	336347.05	13475799.87

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1/10/2020	60% CD	
12/10/2019	30% CD	

**SURVEYED BY:**

SURVEY PROVIDED BY: DLZ ON 9/24/2019 AND REFLECT CONDITIONS AT THAT TIME

UTILITY LOCATIONS ARE APPROXIMATE, CONTACT MISS DIG AND EXERCISE CAUTION WHEN EXCAVATING.

PLAN ELEVATIONS REFER TO DETROIT CITY DATUM. TO CONVERT TO NAVD88, ADD 479.75 FT.

ALL KNOWN DRAINAGE STRUCTURE INVERTS ARE SHOWN.

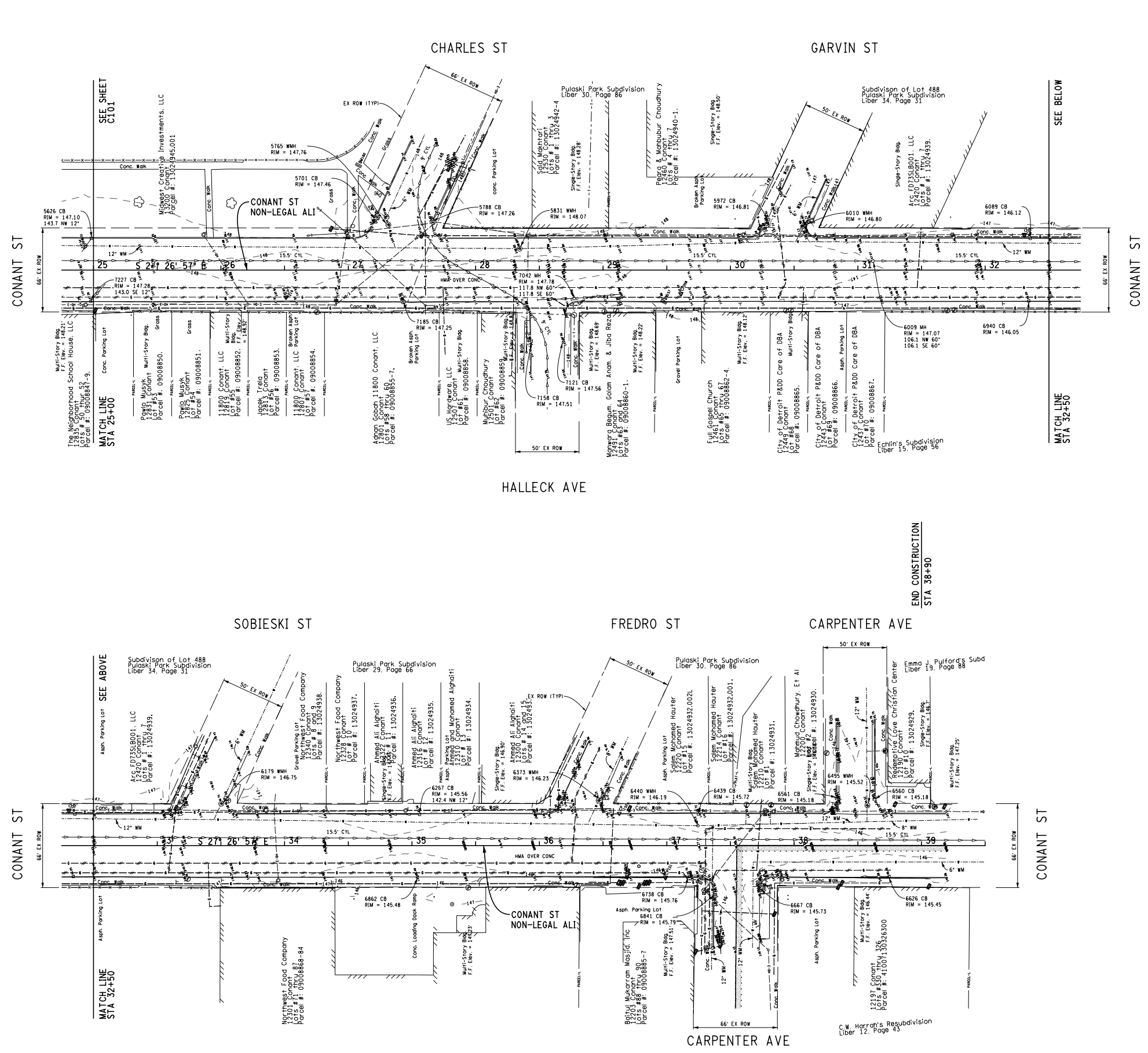
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 Designer: KJS  
 Reviewer: JJP  
 Manager: LCM

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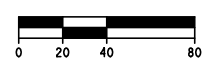
PROJECT NO.  
**191176**

SHEET NO.

**C101**



**TOPOGRAPHIC SURVEY AND ALIGNMENT PLAN**  
SCALE: 1"=40'



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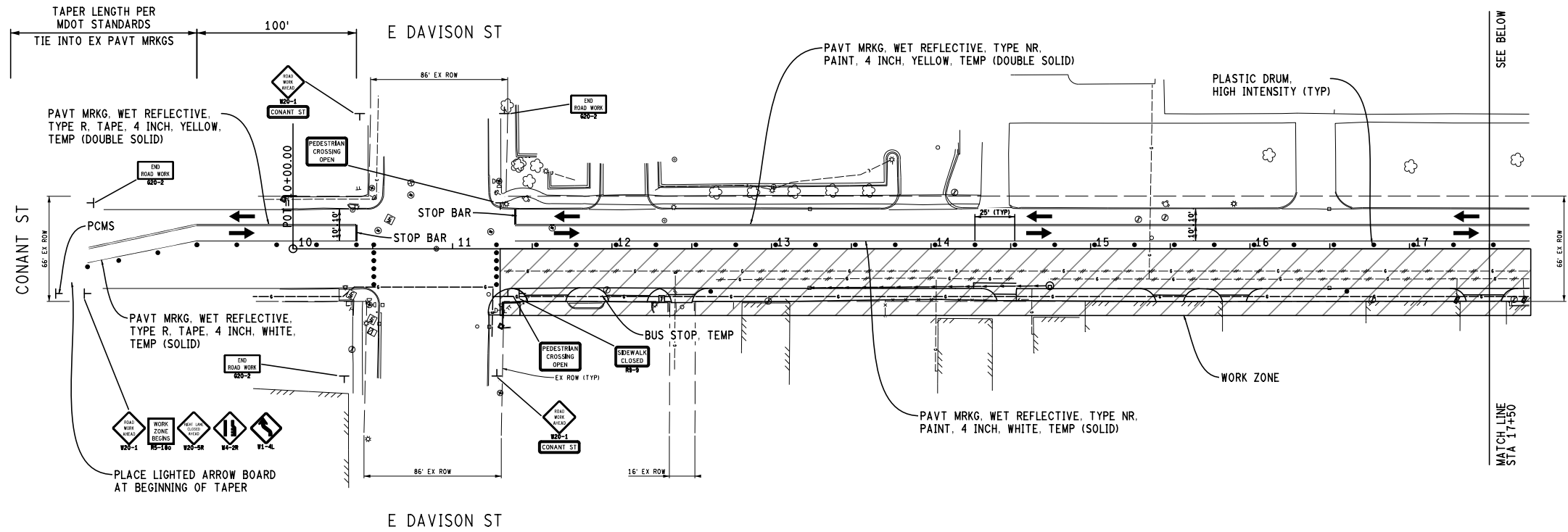
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**191176**

SHEET NO.  
**C102**



**NOTES**

REMOVE ALL EXISTING PAVEMENT MARKINGS IN THE MAINTAINED TRAFFIC LANES UNLESS NOTED OTHERWISE.

SEE SHEET C209 FOR SIDE STREET CLOSURE SIGNING.

SEE SHEETS C210-C211 FOR MOT TYPICAL SECTIONS.

MAINTAIN ACCESS TO BUSINESSES AT ALL TIMES.

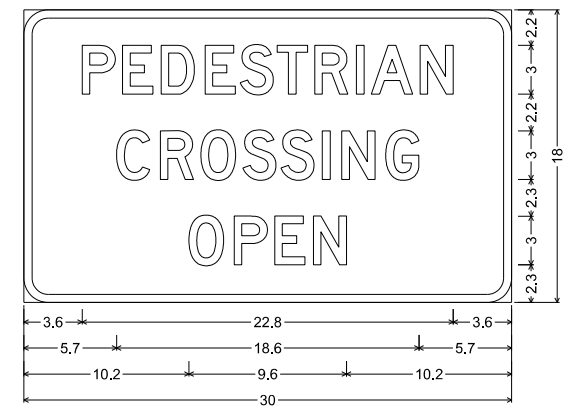
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FOR MOT QUANTITIES, SEE GENERAL NOTES SHEET.

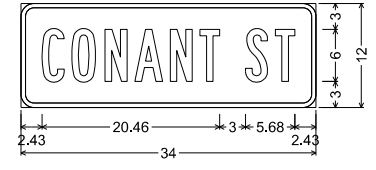
SEE MAINTENANCE OF TRAFFIC SPECIAL PROVISION FOR SEQUENCE OF WORK.

MAINTAIN PEDESTRIAN CROSSINGS INDICATED ON THE PLANS WITH PEDESTRIAN CROSSING OPEN SIGNS.

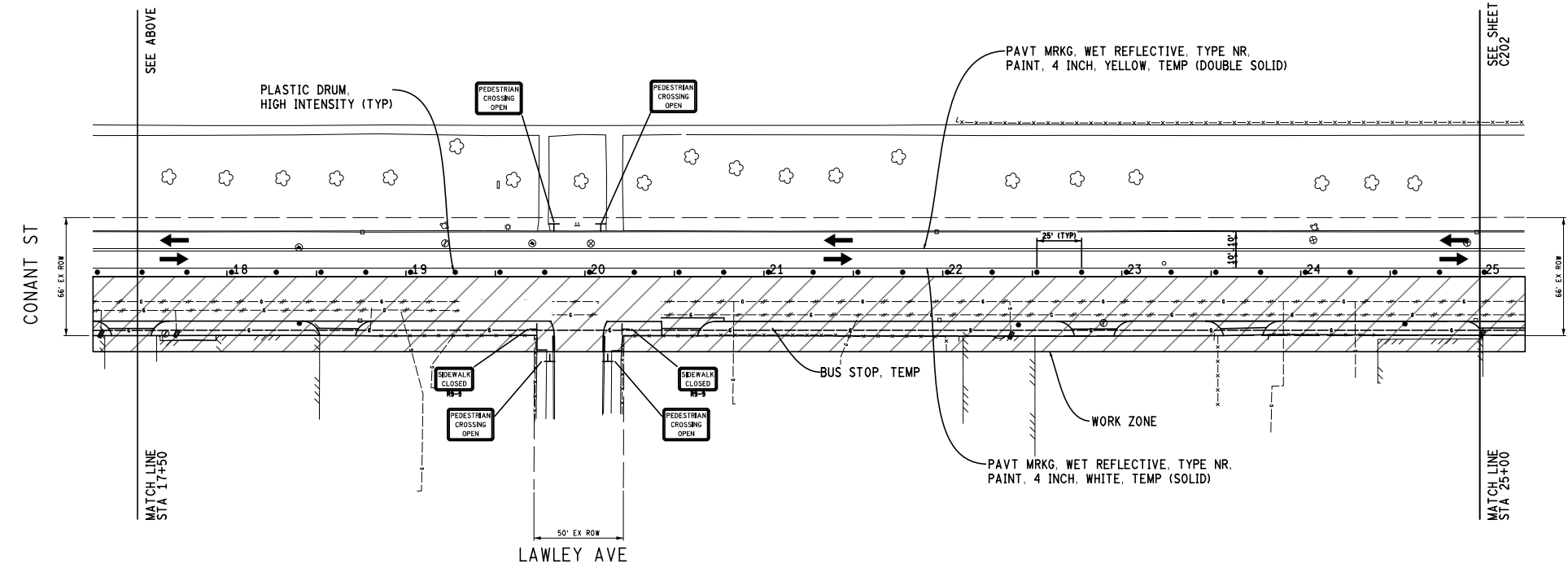
MAINTAIN ACCESS TO ALL BUS STOPS IN ACCORDANCE WITH THE "CITY OF DETROIT TEMPORARY BUS STOP" SPECIAL PROVISION. IF BUS STOP CLOSURES ARE NEEDED AT ANY TIME DURING CONSTRUCTION, COORDINATE WITH THE ENGINEER AT LEAST 10 BUSINESS DAYS IN ADVANCE OF THE CLOSURE DATE.



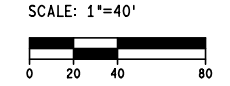
1.5" Radius, 0.5" Border, Black on, Orange;  
 "PEDESTRIAN", D 2K; "CROSSING", D 2K; "OPEN", D 2K;



1.5" Radius, 0.5" Border, Black on, Orange;  
 "CONANT", B; "ST", B;



**MAINTENANCE OF TRAFFIC PLAN - STAGE 1**



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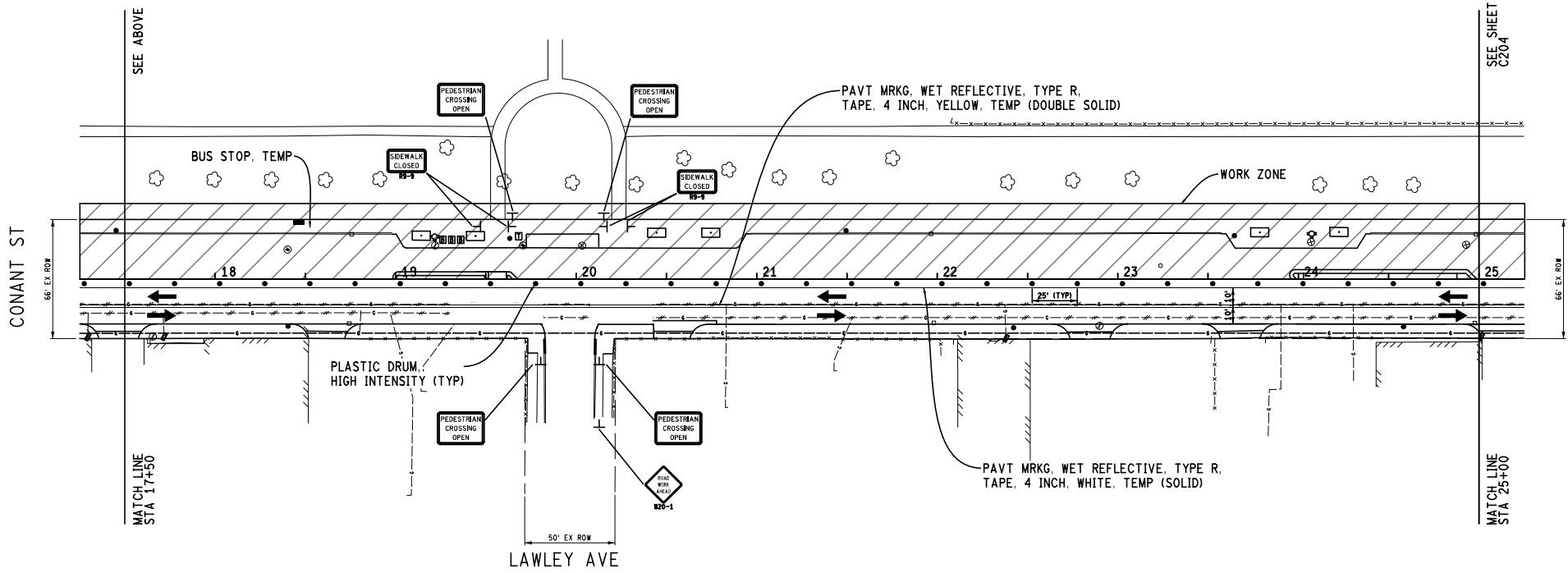
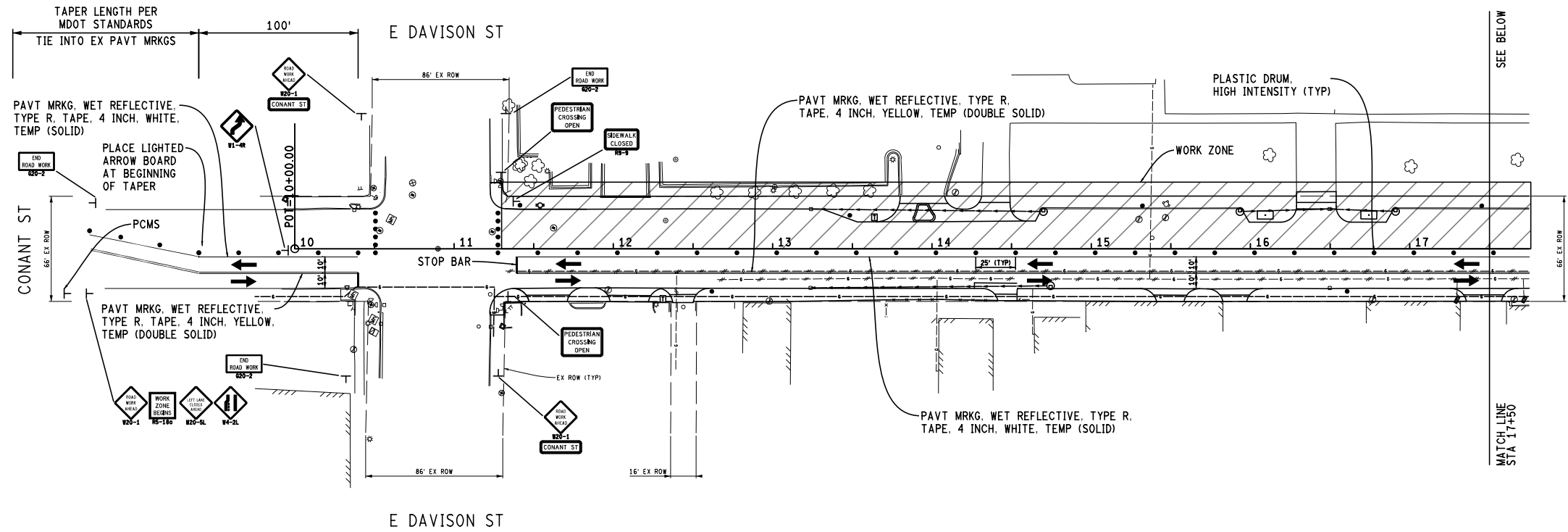
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**MAINTENANCE OF TRAFFIC PLAN - STAGE 2**

SCALE: 1"=40'



- NOTES**
- REMOVE ALL EXISTING PAVEMENT MARKINGS IN THE MAINTAINED TRAFFIC LANES UNLESS NOTED OTHERWISE.
  - SEE SHEET C209 FOR SIDE STREET CLOSURE SIGNING.
  - SEE SHEETS C210-C211 FOR MOT TYPICAL SECTIONS.
  - MAINTAIN ACCESS TO BUSINESSES AT ALL TIMES.
  - STOP BARS PAID FOR AS "PAVT MRKG, WET REFLECTIVE, TYPE R, TAPE, 4 INCH, WHITE, TEMP.
  - FOR MOT QUANTITIES, SEE GENERAL NOTES SHEET.
  - SEE MAINTENANCE OF TRAFFIC SPECIAL PROVISION FOR SEQUENCE OF WORK.
  - MAINTAIN PEDESTRIAN CROSSINGS INDICATED ON THE PLANS WITH PEDESTRIAN CROSSING OPEN SIGNS.
  - MAINTAIN ACCESS TO ALL BUS STOPS IN ACCORDANCE WITH THE "CITY OF DETROIT TEMPORARY BUS STOP" SPECIAL PROVISION. IF BUS STOP CLOSURES ARE NEEDED AT ANY TIME DURING CONSTRUCTION, COORDINATE WITH THE ENGINEER AT LEAST 10 BUSINESS DAYS IN ADVANCE OF THE CLOSURE DATE.

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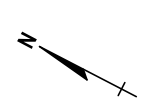
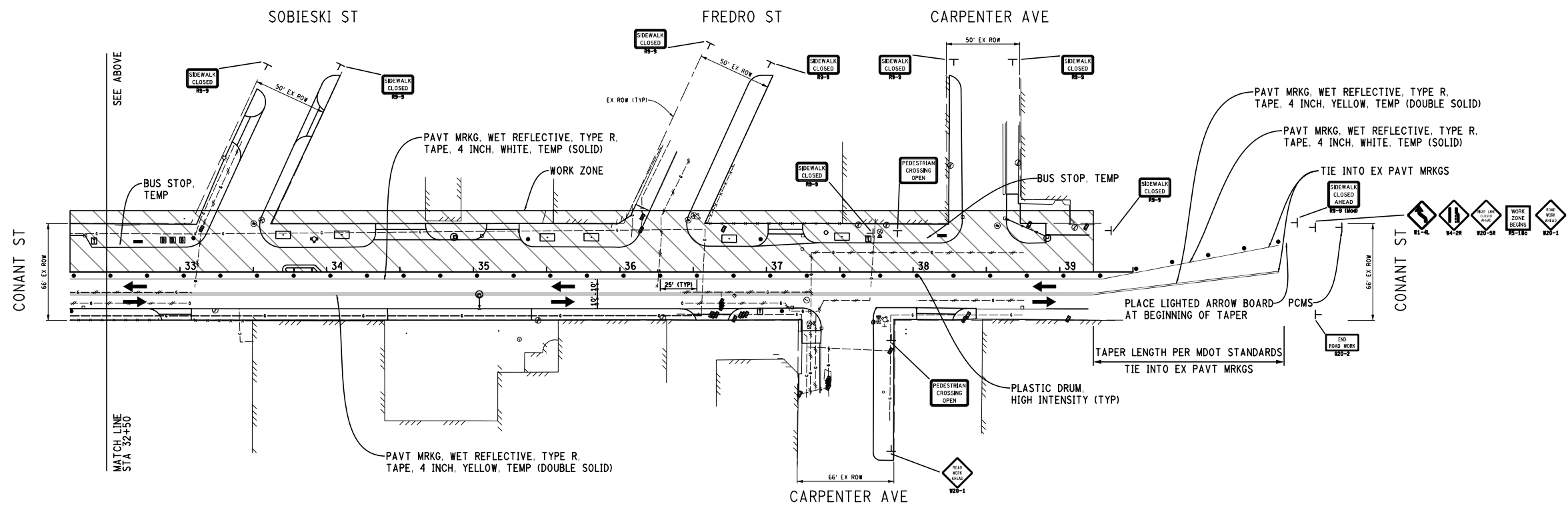
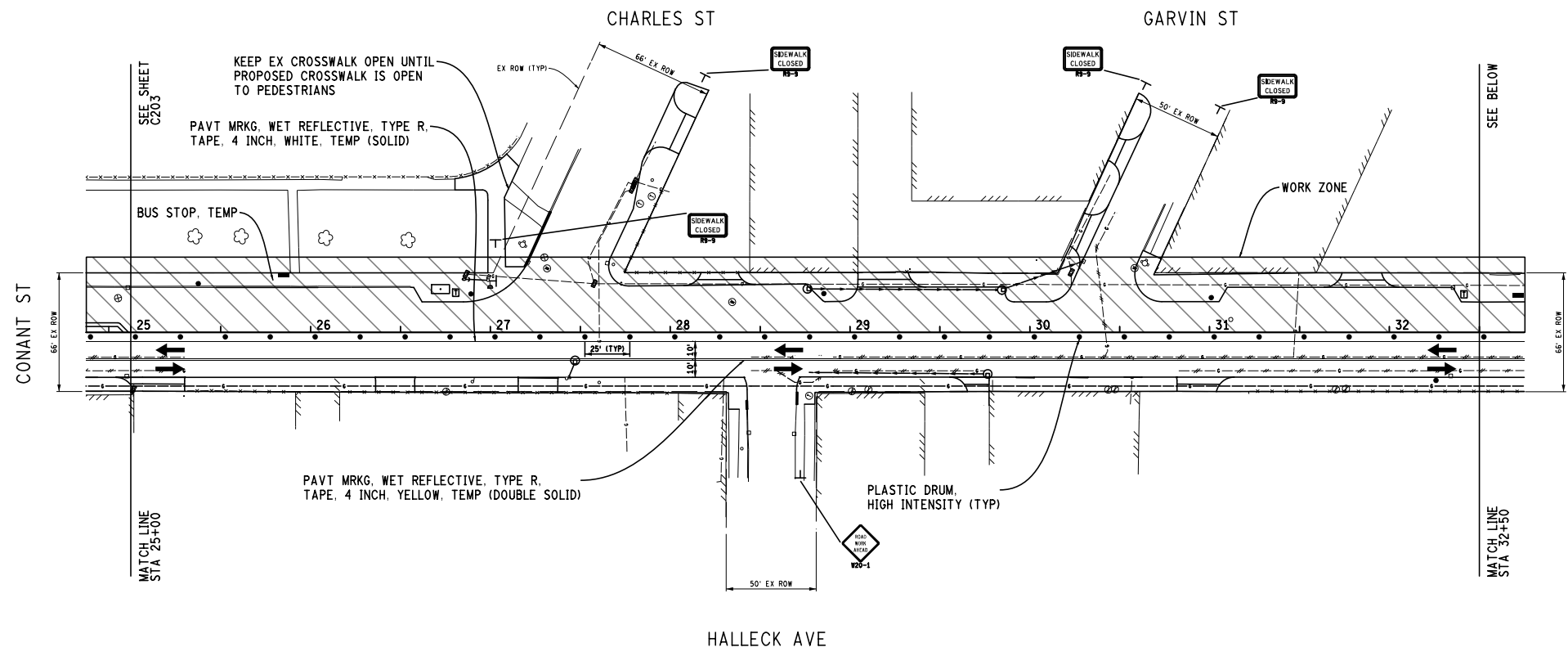
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Designer: KJS  
Reviewer: JJP  
Manager: LCM

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**NOTES**

REMOVE ALL EXISTING PAVEMENT MARKINGS IN THE MAINTAINED TRAFFIC LANES UNLESS NOTED OTHERWISE.

SEE SHEET C209 FOR SIDE STREET CLOSURE SIGNING.

SEE SHEETS C210-C211 FOR MOT TYPICAL SECTIONS.

MAINTAIN ACCESS TO BUSINESSES AT ALL TIMES.

STOP BARS PAID FOR AS "PAVT MRKG. WET REFLECTIVE, TYPE R, TAPE, 4 INCH. WHITE, TEMP.

FOR MOT QUANTITIES, SEE GENERAL NOTES SHEET.

SEE MAINTENANCE OF TRAFFIC SPECIAL PROVISION FOR SEQUENCE OF WORK.

MAINTAIN PEDESTRIAN CROSSINGS INDICATED ON THE PLANS WITH PEDESTRIAN CROSSING OPEN SIGNS.

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**MAINTENANCE OF TRAFFIC PLAN - STAGE 2**  
SCALE: 1"=40'



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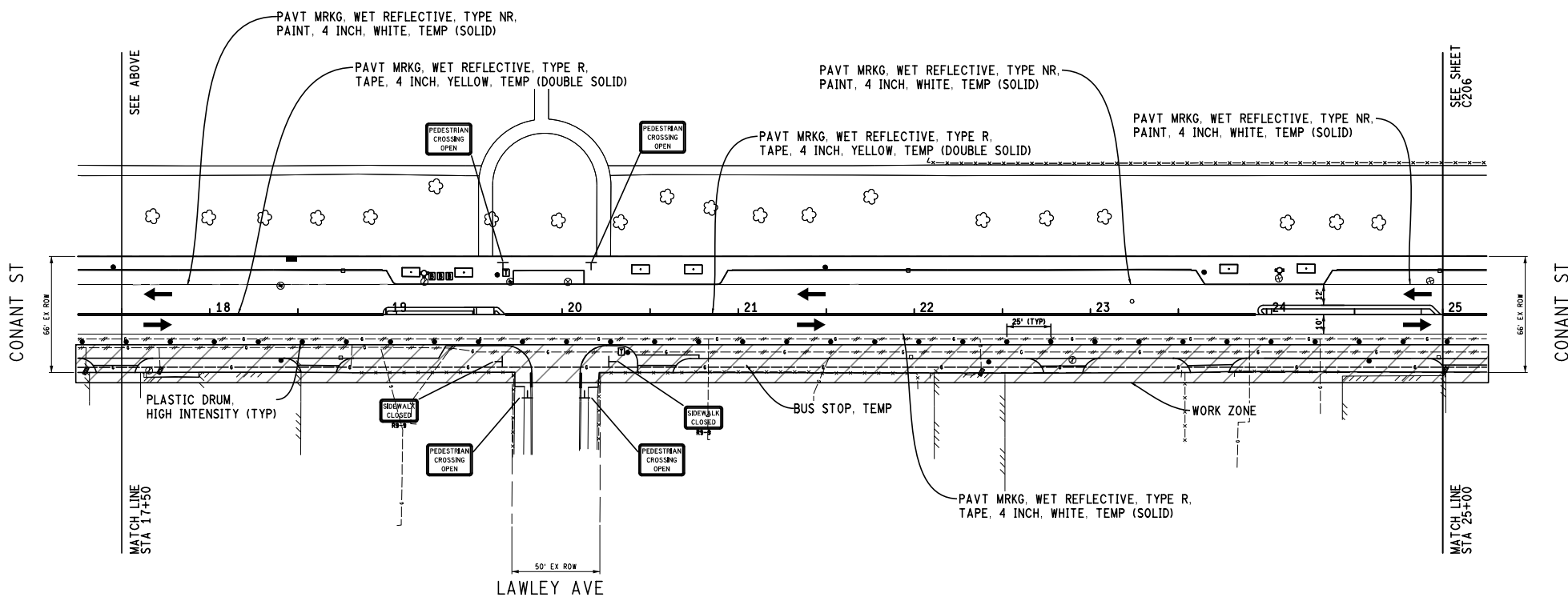
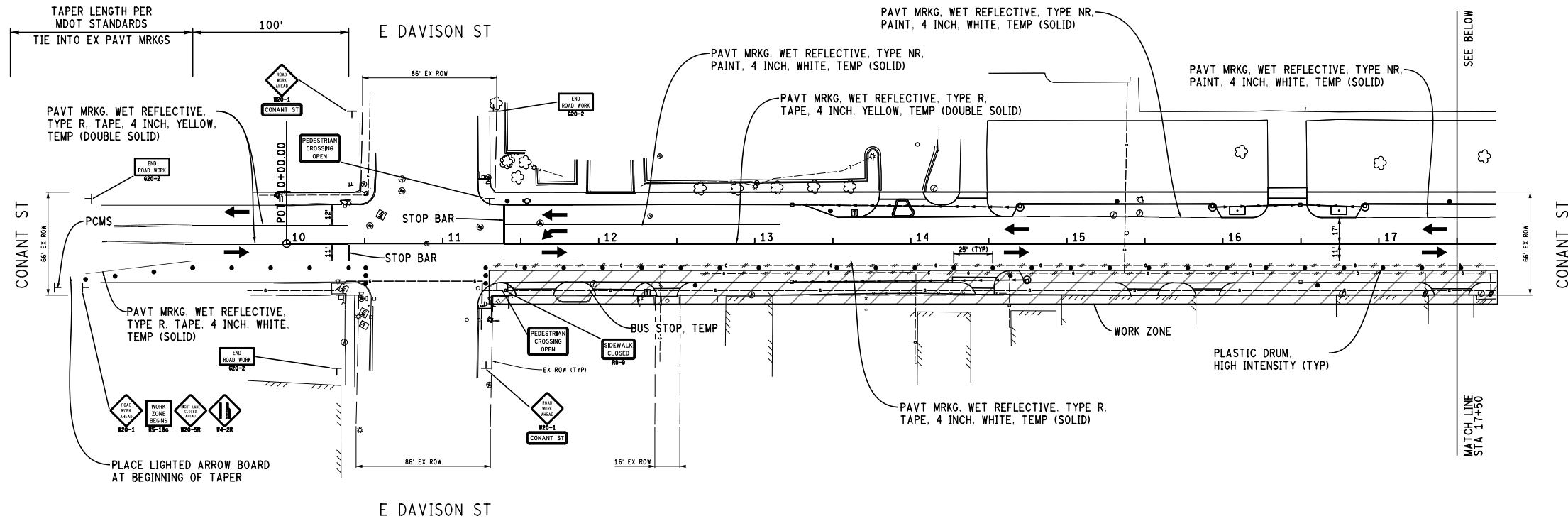
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Reviewer: JJP  
Manager: LCM

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**MAINTENANCE OF TRAFFIC PLAN - STAGE 3**

SCALE: 1"=40'



- NOTES**
- REMOVE ALL EXISTING PAVEMENT MARKINGS IN THE MAINTAINED TRAFFIC LANES UNLESS NOTED OTHERWISE.
  - SEE SHEET C209 FOR SIDE STREET CLOSURE SIGNING.
  - SEE SHEETS C210-C211 FOR MOT TYPICAL SECTIONS.
  - MAINTAIN ACCESS TO BUSINESSES AT ALL TIMES.
  - STOP BARS PAID FOR AS "PAVT MRKG. WET REFLECTIVE, TYPE R, TAPE, 4 INCH, WHITE, TEMP.
  - FOR MOT QUANTITIES, SEE GENERAL NOTES SHEET.
  - SEE MAINTENANCE OF TRAFFIC SPECIAL PROVISION FOR SEQUENCE OF WORK.
  - MAINTAIN PEDESTRIAN CROSSINGS INDICATED ON THE PLANS WITH PEDESTRIAN CROSSING OPEN SIGNS.
  - MAINTAIN ACCESS TO ALL BUS STOPS IN ACCORDANCE WITH THE "CITY OF DETROIT TEMPORARY BUS STOP" SPECIAL PROVISION. IF BUS STOP CLOSURES ARE NEEDED AT ANY TIME DURING CONSTRUCTION, COORDINATE WITH THE ENGINEER AT LEAST 10 BUSINESS DAYS IN ADVANCE OF THE CLOSURE DATE.

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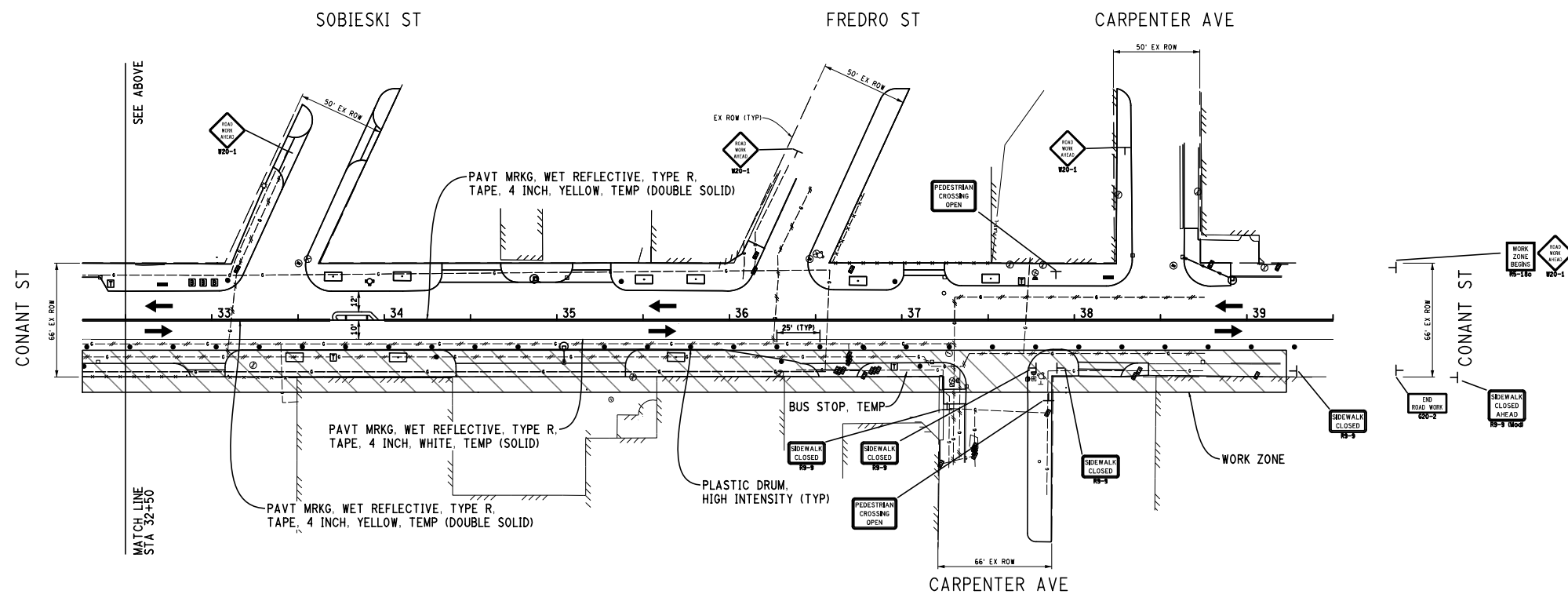
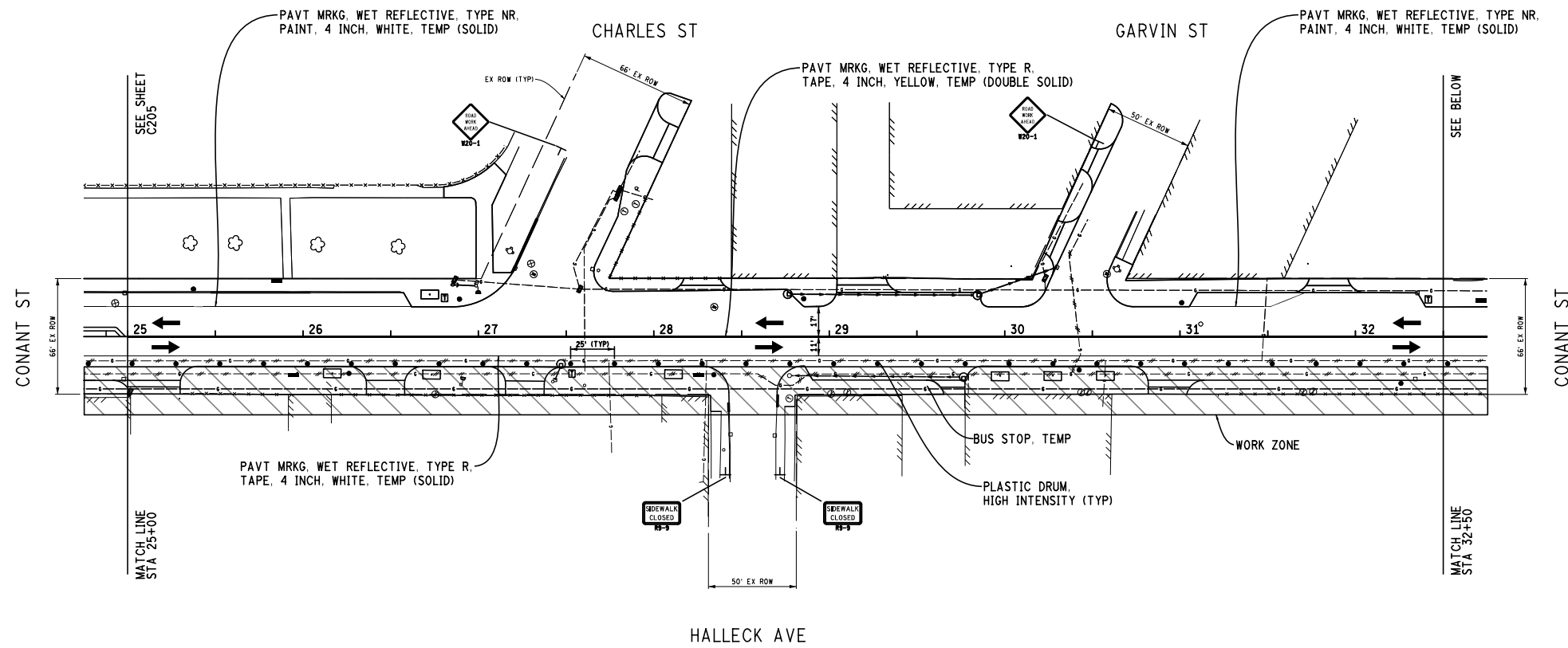
Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

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PROJECT NO.  
**191176**

SHEET NO.  
**C205**

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**MAINTENANCE OF TRAFFIC PLAN - STAGE 3**

SCALE: 1"=40'



**NOTES**

- REMOVE ALL EXISTING PAVEMENT MARKINGS IN THE MAINTAINED TRAFFIC LANES UNLESS NOTED OTHERWISE.
- SEE SHEET C209 FOR SIDE STREET CLOSURE SIGNING.
- SEE SHEETS C210-C211 FOR MOT TYPICAL SECTIONS.
- MAINTAIN ACCESS TO BUSINESSES AT ALL TIMES.
- STOP BARS PAID FOR AS "PAVT MRKG. WET REFLECTIVE, TYPE R, TAPE, 4 INCH, WHITE, TEMP.
- FOR MOT QUANTITIES, SEE GENERAL NOTES SHEET.
- SEE MAINTENANCE OF TRAFFIC SPECIAL PROVISION FOR SEQUENCE OF WORK.
- MAINTAIN PEDESTRIAN CROSSINGS INDICATED ON THE PLANS WITH PEDESTRIAN CROSSING OPEN SIGNS.
- MAINTAIN ACCESS TO ALL BUS STOPS IN ACCORDANCE WITH THE "CITY OF DETROIT TEMPORARY BUS STOP" SPECIAL PROVISION. IF BUS STOP CLOSURES ARE NEEDED AT ANY TIME DURING CONSTRUCTION, COORDINATE WITH THE ENGINEER AT LEAST 10 BUSINESS DAYS IN ADVANCE OF THE CLOSURE DATE.

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**REVISIONS**

3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

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**191176**

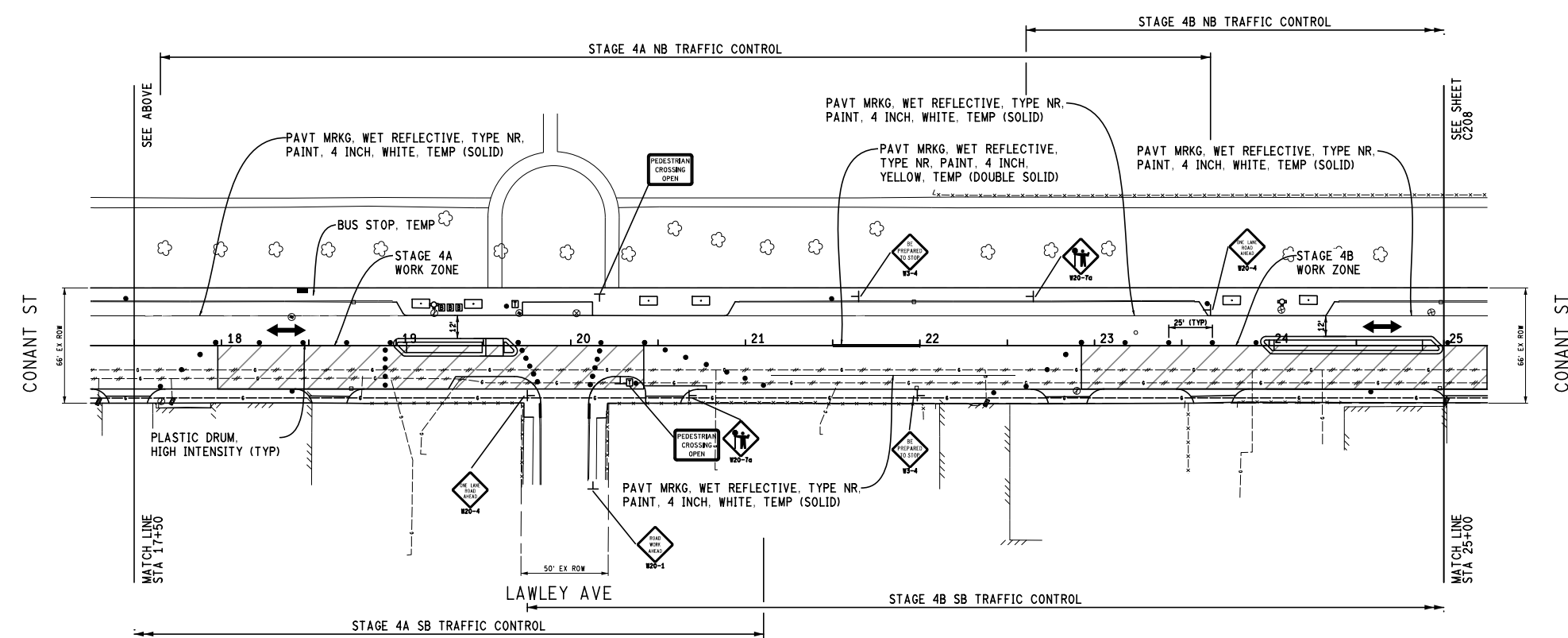
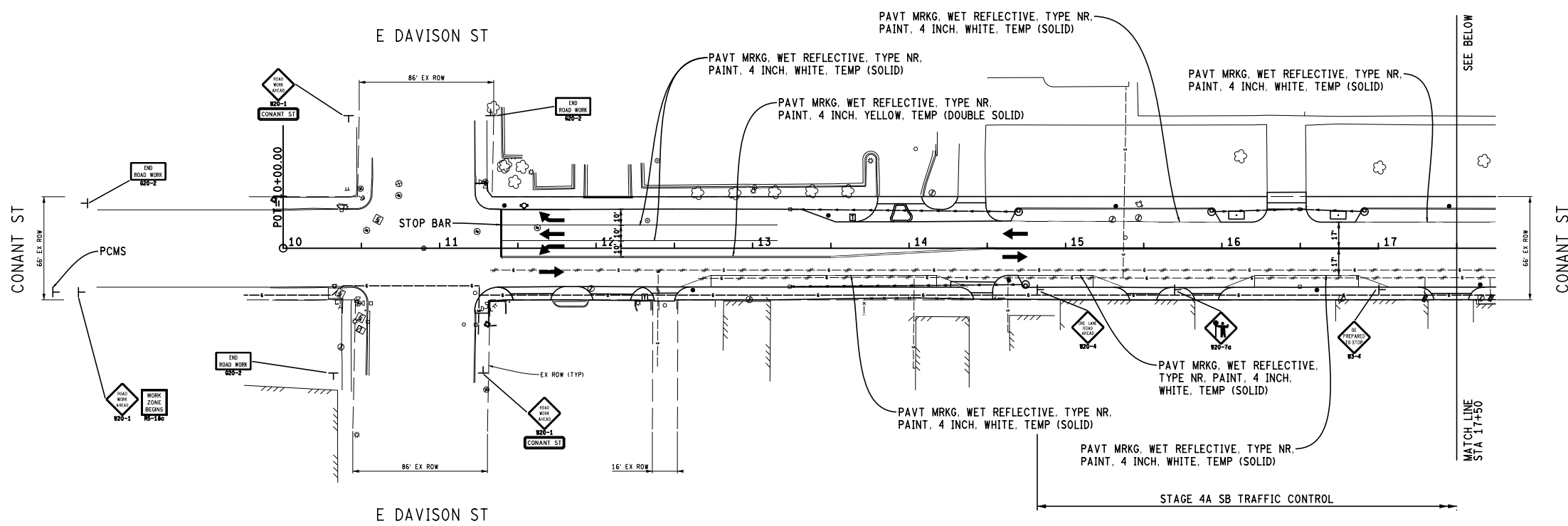
SHEET NO.

**C206**



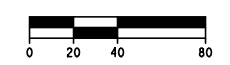
**NOTES**

- REMOVE ALL EXISTING PAVEMENT MARKINGS IN THE MAINTAINED TRAFFIC LANES UNLESS NOTED OTHERWISE.
- SEE SHEET C209 FOR SIDE STREET CLOSURE SIGNING.
- SEE SHEETS C210-C211 FOR MOT TYPICAL SECTIONS.
- MAINTAIN ACCESS TO BUSINESSES AT ALL TIMES.
- STOP BARS PAID FOR AS "PAVT MRKG. WET REFLECTIVE, TYPE R, TAPE, 4 INCH, WHITE, TEMP.
- FOR MOT QUANTITIES, SEE GENERAL NOTES SHEET.
- SEE MAINTENANCE OF TRAFFIC SPECIAL PROVISION FOR SEQUENCE OF WORK.
- MAINTAIN PEDESTRIAN CROSSINGS INDICATED ON THE PLANS WITH PEDESTRIAN CROSSING OPEN SIGNS.
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**MAINTENANCE OF TRAFFIC PLAN - STAGE 4**

SCALE: 1"=40'



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**REVISIONS**

3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

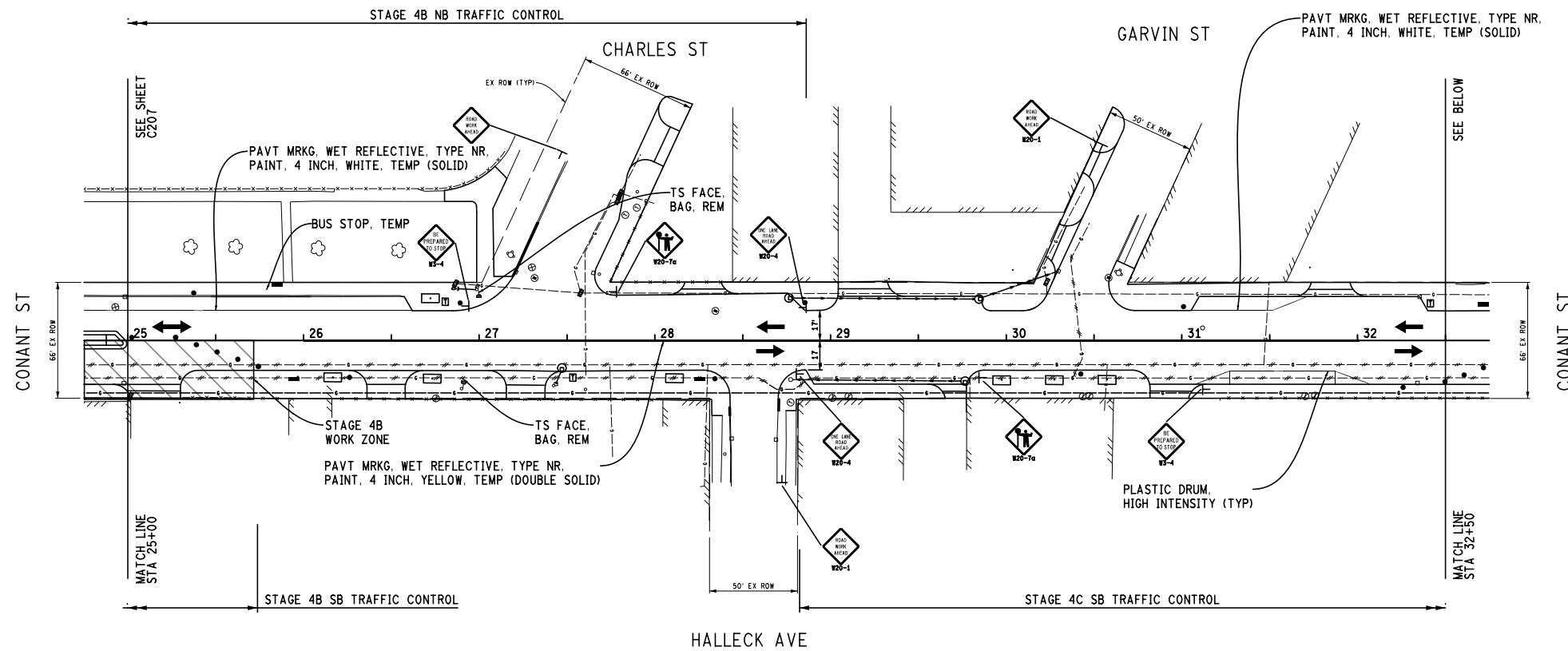
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**191176**

SHEET NO.

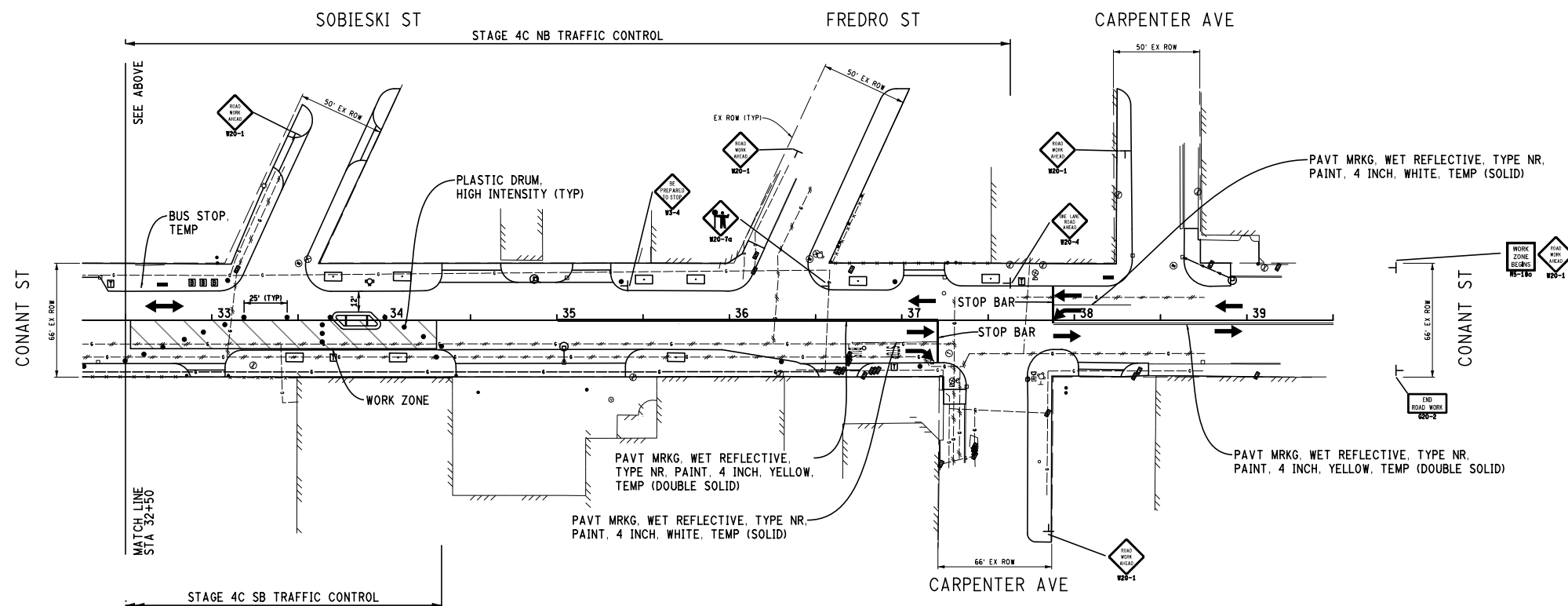
**C207**





**NOTES**

- REMOVE ALL EXISTING PAVEMENT MARKINGS IN THE MAINTAINED TRAFFIC LANES UNLESS NOTED OTHERWISE.
- SEE SHEET C209 FOR SIDE STREET CLOSURE SIGNING.
- SEE SHEETS C210-C211 FOR MOT TYPICAL SECTIONS.
- MAINTAIN ACCESS TO BUSINESSES AT ALL TIMES.
- STOP BARS AND BUS STOP PAID FOR AS "PAVT MRKG. WET REFLECTIVE, TYPE R, TAPE, 4 INCH. WHITE, TEMP."
- FOR MOT QUANTITIES, SEE GENERAL NOTES SHEET.
- SEE MAINTENANCE OF TRAFFIC SPECIAL PROVISION FOR SEQUENCE OF WORK.
- MAINTAIN PEDESTRIAN CROSSINGS INDICATED ON THE PLANS WITH PEDESTRIAN CROSSING OPEN SIGNS.
- MAINTAIN ACCESS TO ALL BUS STOPS IN ACCORDANCE WITH THE CITY OF DETROIT TEMPORARY BUS STOP SPECIAL PROVISION. IF BUS STOP CLOSURES ARE NEEDED AT ANY TIME DURING CONSTRUCTION, COORDINATE WITH THE ENGINEER AT LEAST 10 BUSINESS DAYS IN ADVANCE OF THE CLOSURE DATE.



**MAINTENANCE OF TRAFFIC PLAN - STAGE 4**

SCALE: 1"=40'



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**REVISIONS**

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2/4/2020	90% CD
1/10/2020	80% CD
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Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

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SHEET NO.

**C208**

SYMBOL LEGEND



REVISIONS

3/20/2020	100% CD
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2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

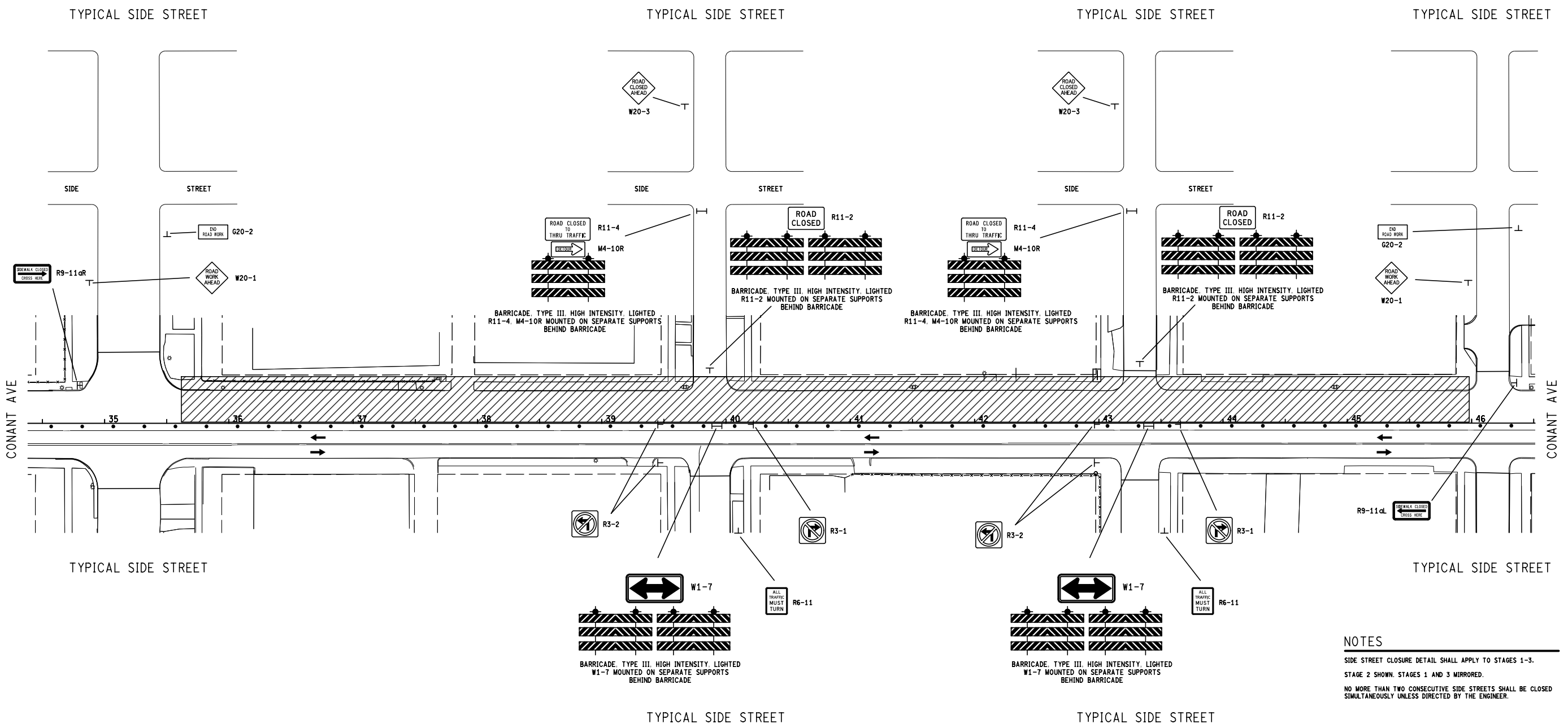
Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

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PROJECT NO.  
**191176**

SHEET NO.

**C209**



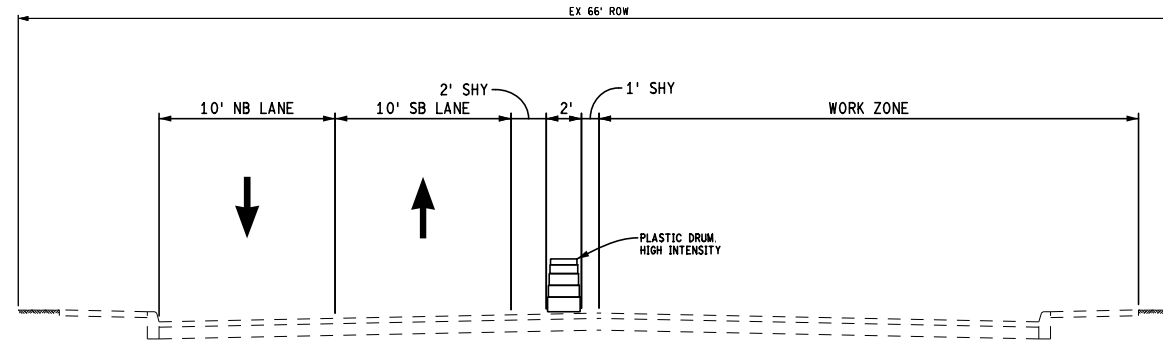
NOTES

SIDE STREET CLOSURE DETAIL SHALL APPLY TO STAGES 1-3.  
STAGE 2 SHOWN, STAGES 1 AND 3 MIRRORED.  
NO MORE THAN TWO CONSECUTIVE SIDE STREETS SHALL BE CLOSED SIMULTANEOUSLY UNLESS DIRECTED BY THE ENGINEER.

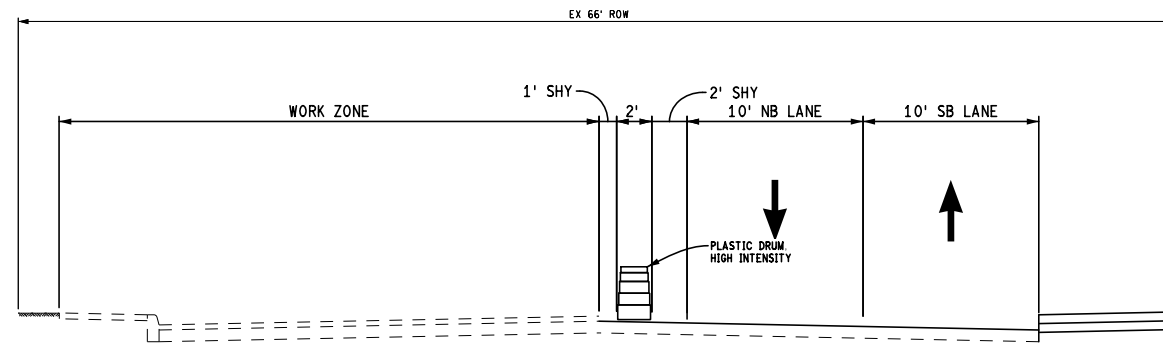
MAINTENANCE OF TRAFFIC PLAN - TYPICAL SIDE STREET CLOSURE SIGNING

SCALE: 1"=40'

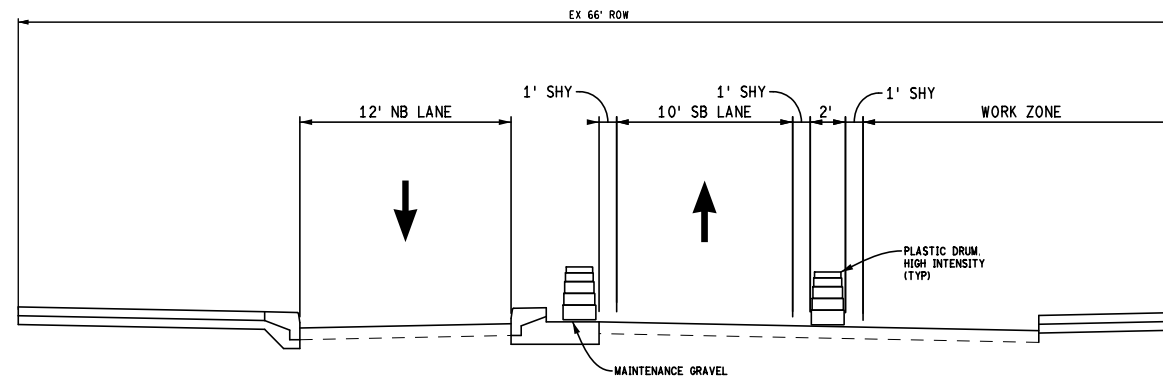




MOT STAGE 1 TYPICAL



MOT STAGE 2 TYPICAL  
(PARTIALLY CONSTRUCTED BUMPOUT SHOWN)



MOT STAGE 3 TYPICAL  
(ISLAND SHOWN)

MOT TYPICAL SECTIONS

SCALE: 1"=5'



REVISIONS

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3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

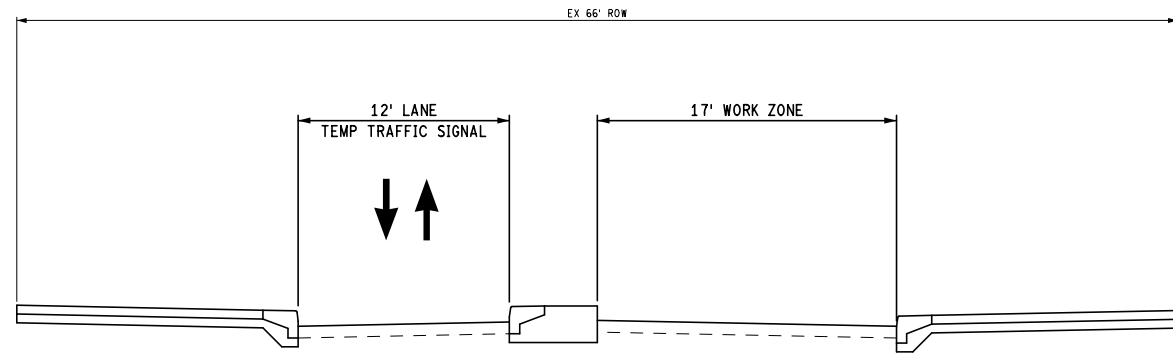
Drawn By KJS  
Designer KJS  
Reviewer JJP  
Manager LCM

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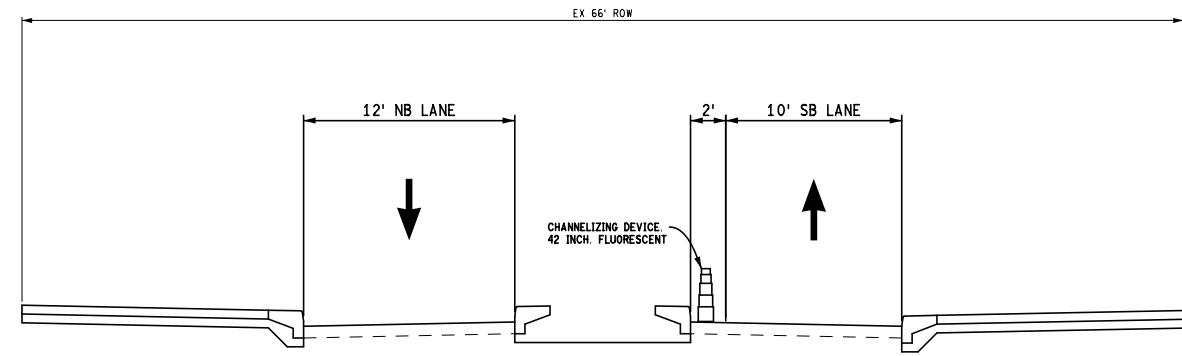
PROJECT NO.  
191176

SHEET NO.

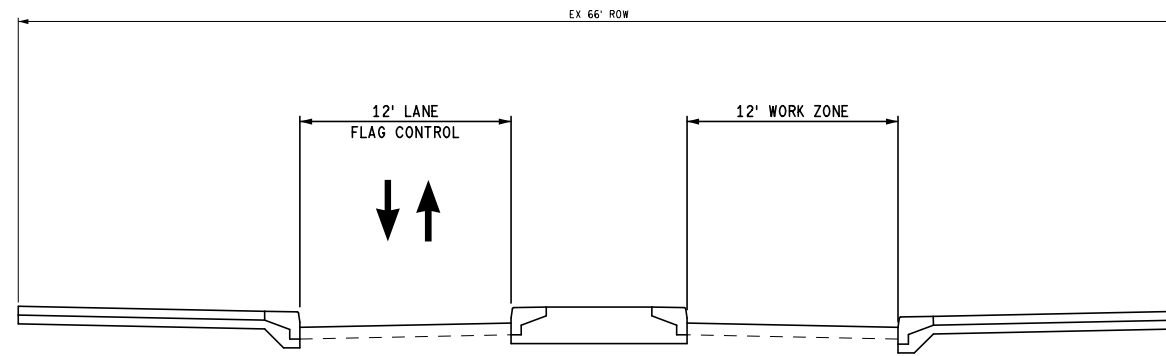
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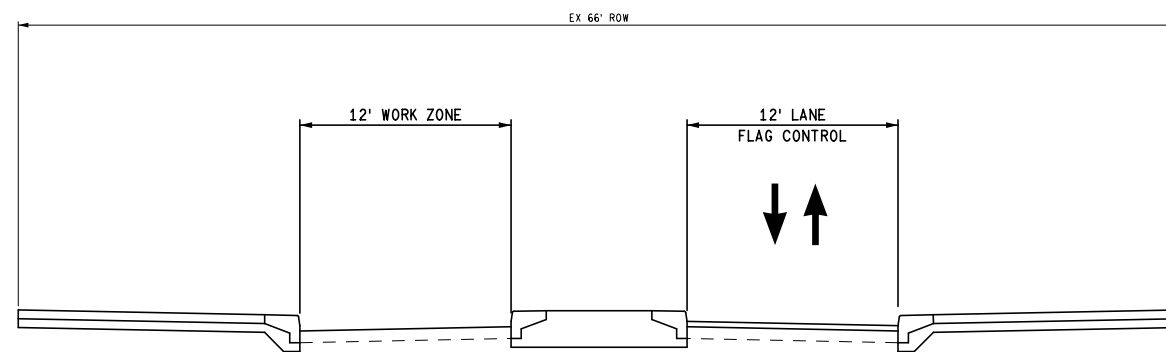
MOT STAGE 4 TYPICAL  
(WORKING HOURS)



MOT STAGE 4 TYPICAL  
(NON-WORKING HOURS)



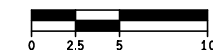
MOT STAGE 5A TYPICAL  
(ISLAND SHOWN)



MOT STAGE 5B TYPICAL  
(ISLAND SHOWN)

MOT TYPICAL SECTIONS

SCALE: 1"=5'



REVISIONS

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1/10/2020	80% CD
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Drawn By KJS  
Designer KJS  
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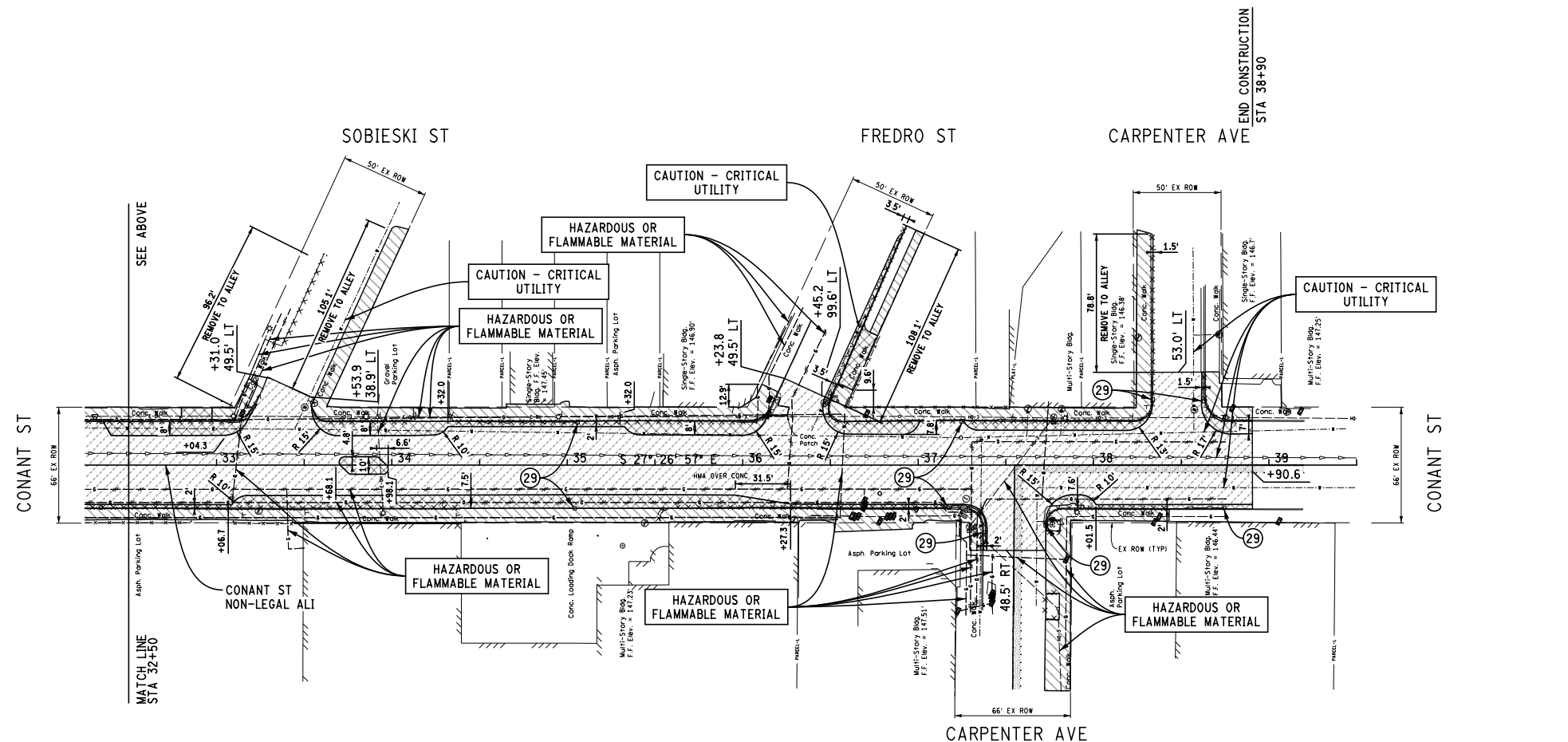
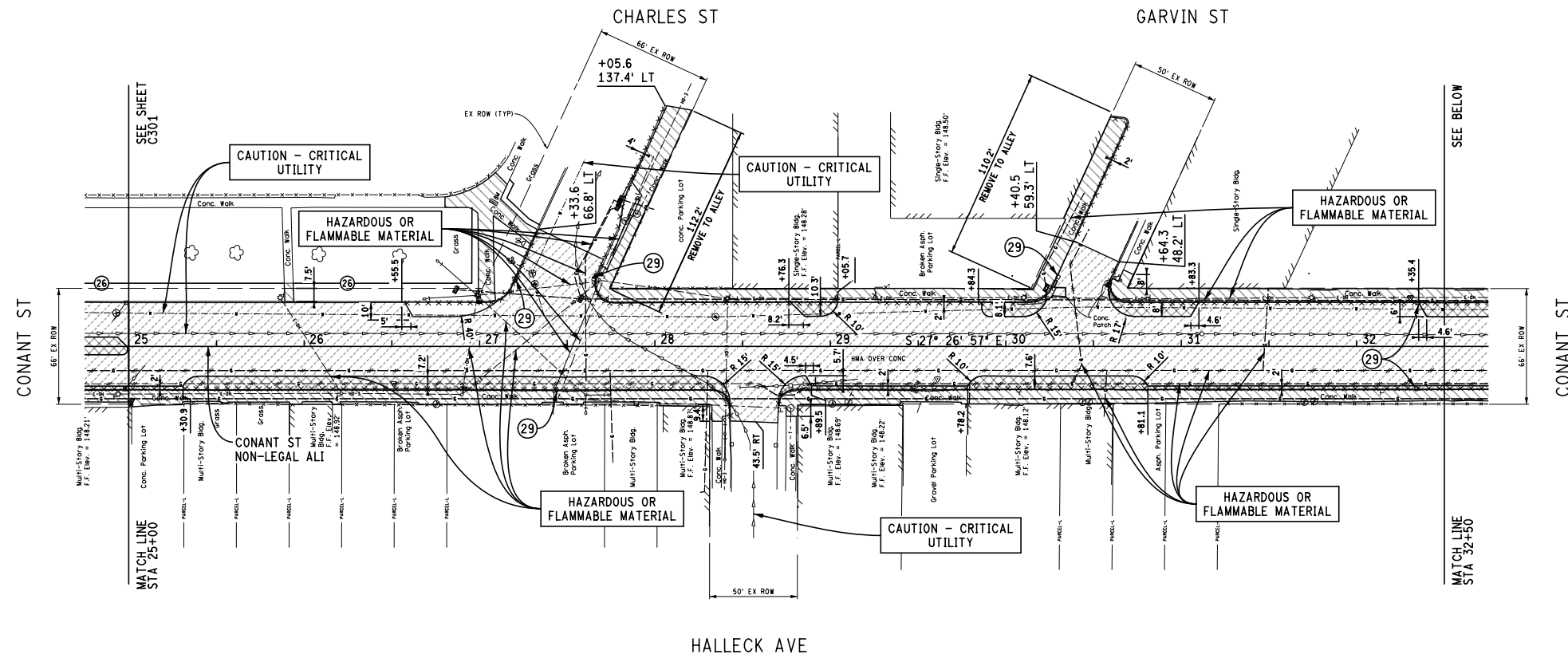
PROJECT NO.  
191176

SHEET NO.

**C211**







**REMOVAL PLAN**  
SCALE: 1"=40'

**SYMBOL LEGEND**

- \*\*\* CURB REMOVAL
- (26) EROSION CONTROL, SILT FENCE
- (29) EROSION CONTROL, INLET PROTECTION, FABRIC DROP
- [Hatched Box] COLD MILLING HMA SURFACE, MODIFIED
- [Cross-hatched Box] PAVT. REM
- [Diagonal Hatched Box] SIDEWALK, REM

**NOTES**

SEE LIGHTING SHEETS FOR LIGHTING REMOVALS.  
SEE PERMANENT SIGNING SHEETS FOR SIGN REMOVALS.  
ALL SIGNS REMOVED SHALL BE PROVIDED TO THE CITY.

**QUANTITIES**

1450	F+	Curb, Rem, Modified
1620	F+	Integral Curb and Sidewalk, 2 Foot, Rem, Modified
1310	Syd	Pavt, Rem
2730	Syd	Sidewalk, Rem
15	Fa	Erosion Control, Inlet Protection, Fabric Drop
280	F+	Erosion Control, Silt Fence
7070	Syd	Cold Milling HMA Surface, Modified

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**REVISIONS**

3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

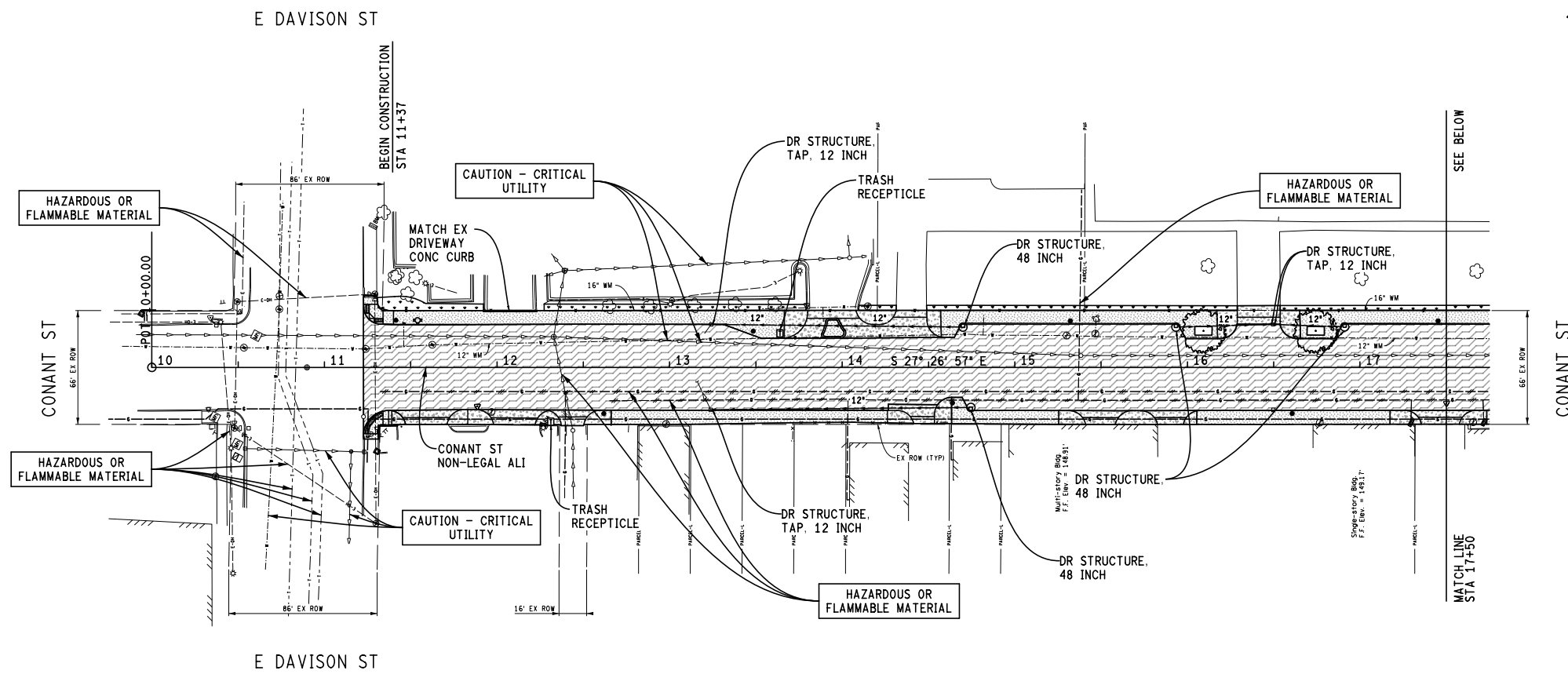
Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO.  
**191176**

SHEET NO.

**C302**



**SYMBOL LEGEND**

- CONCRETE SIDEWALK
- CONCRETE DRIVEWAY
- ASPHALT PAVEMENT
- LANDSCAPING
- SLOPE RESTORATION
- STREET TREE
- EX CURB INLET
- PROP CB
- TRASH RECEPTICLE
- BIKE RACK
- PROPOSED STORM

**NOTES**

ADJUST STRUCTURES AS NECESSARY.

LIMITED SEWER INFORMATION IS AVAILABLE. VERIFY EXISTING INVERTS AND SIZE OF DRAINAGE STRUCTURES WITH PROPOSED SEWER TAPS PRIOR TO ORDERING PROPOSED DRAINAGE STRUCTURES. PROPOSED SEWERS SHALL BE 12" PIPE WITH A MINIMUM SLOPE OF 0.48%. THE ENGINEER SHALL VERIFY ALL PROPOSED INVERTS AND RIM ELEVATIONS.

SEE CITY OF DETROIT STREET AND ALLEY STANDARDS FOR SIDEWALK RAMP DETAILS.

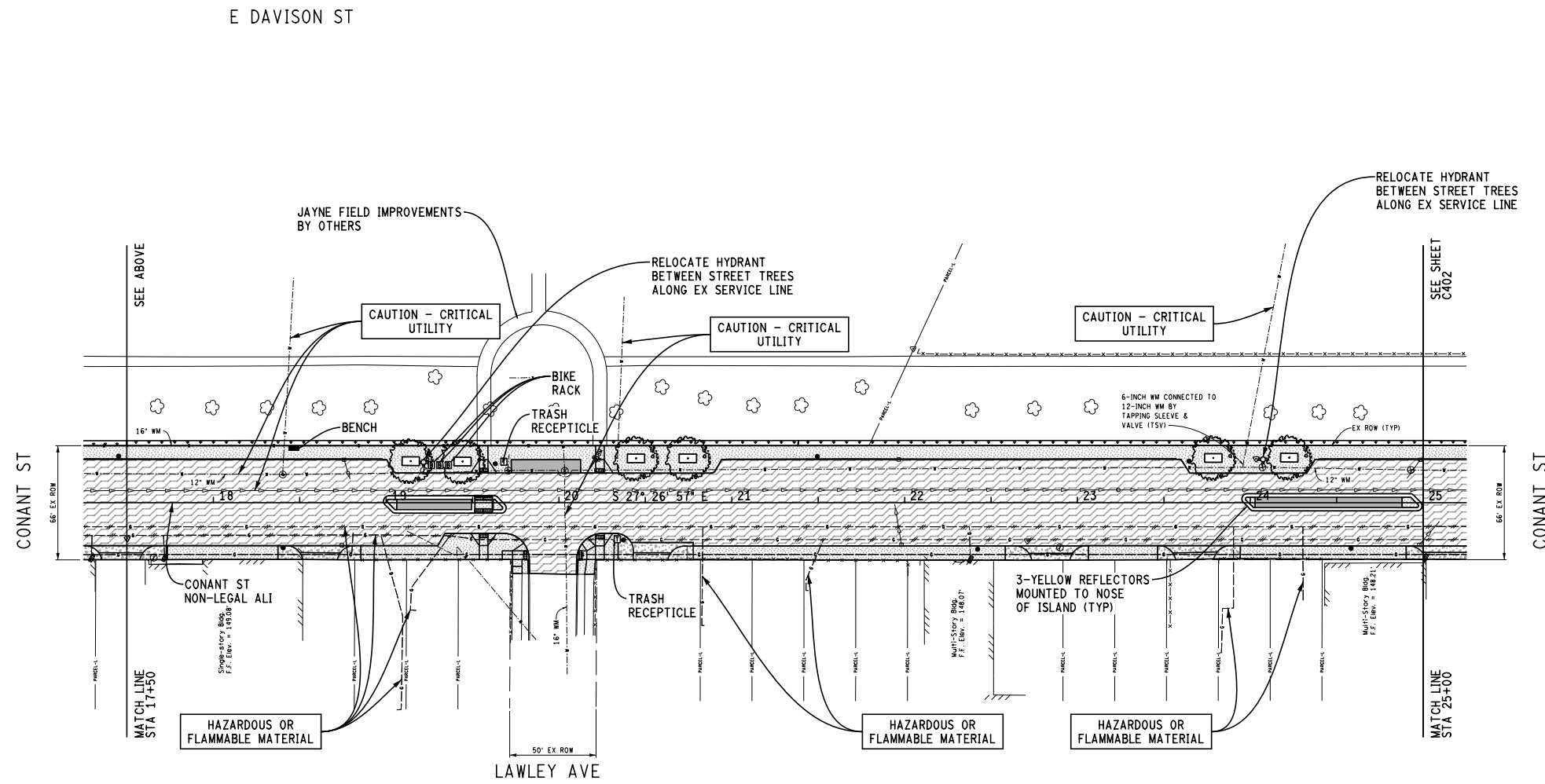
CONTRACTOR SHALL NOTIFY DWSO IF PROPOSED DETECTABLE WARNING SURFACE CONFLICTS WITH AND MANHOLE COVERS OR VALVES.

ALL PROPOSED DRAINAGE STRUCTURES SHALL BE 24" DIAMETER UNLESS NOTED OTHERWISE.

VERIFY LOCATIONS OF EXISTING WATER MAIN BEFORE PLACING STREET TREES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN PROPOSED STREET TREE LOCATIONS ARE WITHIN 5' OF THE EXISTING WATER MAIN.

**QUANTITIES**

4	Ea	Erosion Control, Inlet Protection, Fabric Drop
3130	Syd	Aggregate Base, 6 inch
394	Ft	Sewer, CI IV, 12 inch, Tr Det B
4	Ea	Dr Structure, Tap, 12 inch
14	Ea	Dr Structure Cover, Adj, Case 1, Modified
4	Ea	Dr Structure, 48 inch dia
4	Ea	Dr Structure Cleaning, Modified
4	Ea	Dr Structure Cover, Modified
1660	Ft	Dr Structure Lead, Cleaning, Modified
1	Ft	Dr Structure, Adj, Add Depth, Modified
760	Ton	HMA, 4E3
570	Ton	HMA, 5E3
30	Ton	HMA, Approach, Modified
315	Syd	Conc Base Cse
1	Ea	Bench
4	Ea	Trash Receptacle
3	Ea	Bike Racks
665	Syd	Driveway, Nonrein, Conc 8 inch Modified
40	Ft	Concrete Curb, Detail CD, Modified
3055	Ft	Integral Curb and Sidewalk, 2 Foot, Modified
70	Ft	Detectable Warning Surface
95	Ft	Curb Ramp Opening, Conc
735	Sft	Sidewalk Ramp, ADA, Modified
12380	Sft	Sidewalk, Conc, 4 inch, Modified
8	Ea	Tree Grate, 4x12
420	Syd	Slope Restoration, Type B
2	Ea	Hydrant Relocate, Case 1
1	Ea	Hydrant Relocate, Case 2
12	Ea	Water Shutoff, Adj, Case 1, Modified
12	Ea	Delineator Reflector, Yellow



**CONSTRUCTION PLAN**

SCALE: 1"=40'



**REVISIONS**

12/8/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

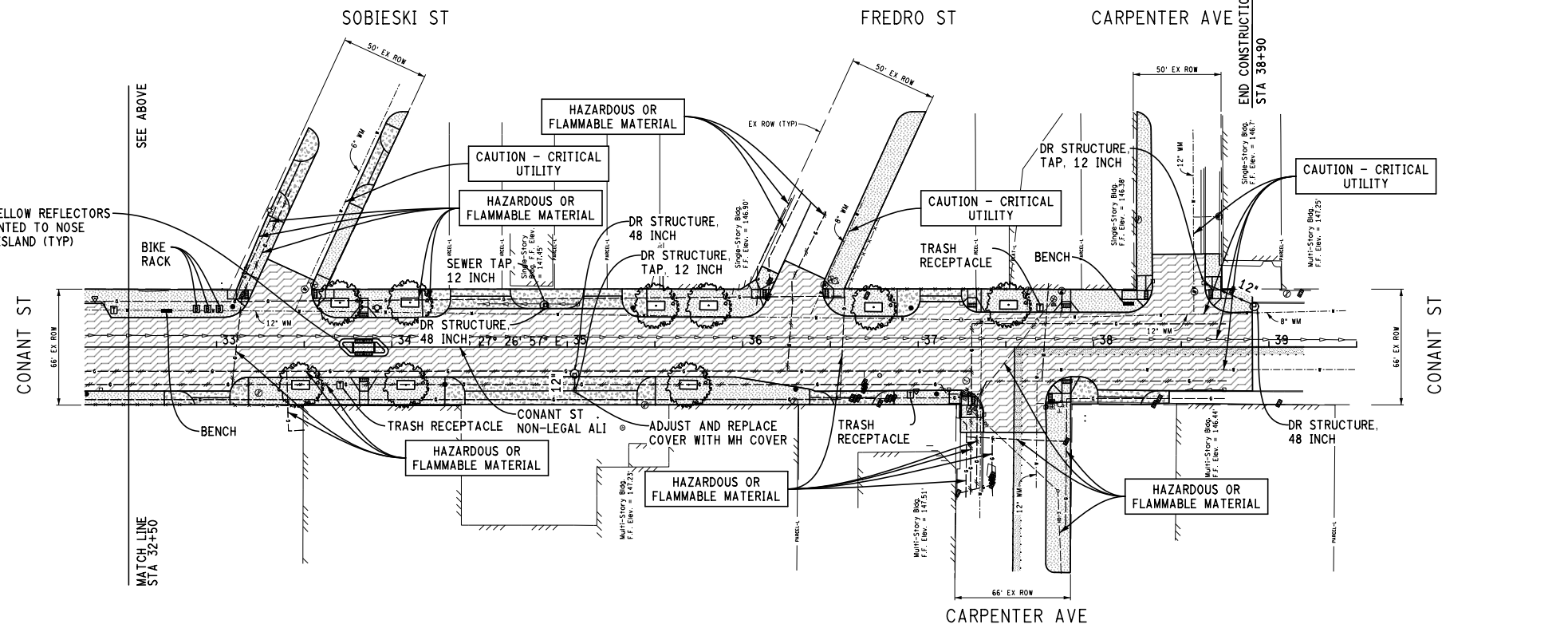
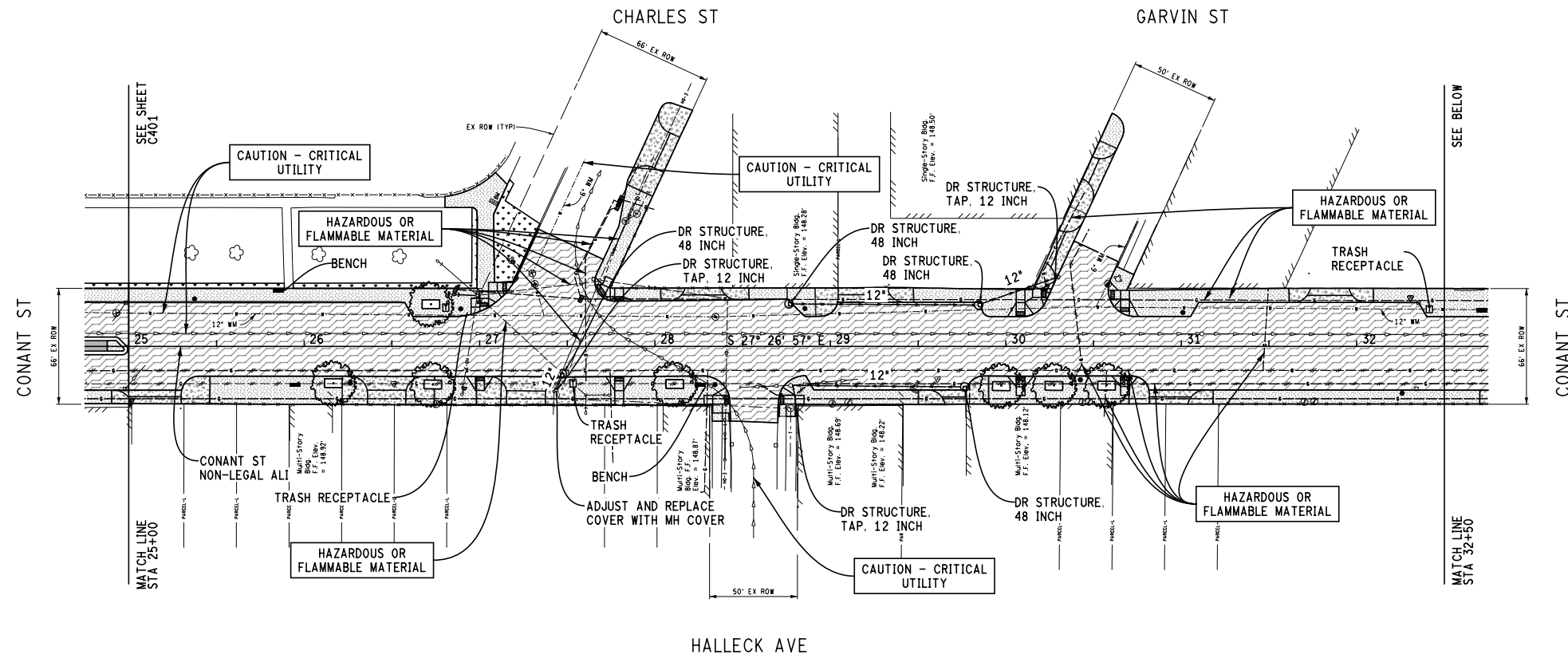
Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

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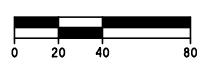
PROJECT NO.  
**191176**

SHEET NO.

**C401**



**CONSTRUCTION PLAN**  
SCALE: 1"=40'



**SYMBOL LEGEND**

- CONCRETE SIDEWALK
- CONCRETE DRIVEWAY
- ASPHALT PAVEMENT
- LANDSCAPING
- SLOPE RESTORATION
- STREET TREE
- EX CURB INLET
- PROP CB
- TRASH RECEPTACLE
- BIKE RACK
- PROPOSED STORM

**NOTES**

ADJUST STRUCTURES AS NECESSARY.

LIMITED SEWER INFORMATION IS AVAILABLE. VERIFY EXISTING INVERTS AND SIZE OF DRAINAGE STRUCTURES WITH PROPOSED SEWER TAPS PRIOR TO ORDERING PROPOSED DRAINAGE STRUCTURES. PROPOSED SEWERS SHALL BE 12" PIPE WITH A MINIMUM SLOPE OF 0.48%. THE ENGINEER SHALL VERIFY ALL PROPOSED INVERTS AND RIM ELEVATIONS.

SEE CITY OF DETROIT STREET AND ALLEY STANDARDS FOR SIDEWALK RAMP DETAILS.

CONTRACTOR SHALL NOTIFY DWSO IF PROPOSED DETECTABLE WARNING SURFACE CONFLICTS WITH AND MANHOLE COVERS OR VALVES.

ALL PROPOSED DRAINAGE STRUCTURES SHALL BE 24" DIAMETER UNLESS NOTED OTHERWISE.

VERIFY LOCATIONS OF EXISTING WATER MAIN BEFORE PLACING STREET TREES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN PROPOSED STREET TREE LOCATIONS ARE WITHIN 5' OF THE EXISTING WATER MAIN.

**QUANTITIES**

7	Ea	Erosion Control, Inlet Protection, Fabric Drop
4495	Syd	Aggregate Base, 6 inch
304	Tr	Sewer, CI IV, 12 inch, Tr Det B
1	Ea	Sewer Tap, 12 inch
5	Ea	Dr Structure, Tap, 12 inch
16	Ea	Dr Structure Cover, Adj, Case 1, Modified
16	Ea	Dr Structure, 48 inch dia
9	Ea	Dr Structure Cleaning, Modified
1670	Tr	Dr Structure Cover, Modified
1	Tr	Dr Structure Lead, Cleaning, Modified
700	Tr	Dr Structure, Adj, Add Depth, Modified
530	Ton	HMA, 4E5
180	Ton	HMA, 5E3
175	Ton	HMA, Approach, Modified
4	Syd	Conc Base Cse
6	Ea	Bench
3	Ea	Trash Receptacle
1380	Syd	Bike Racks
45	Syd	Driveway, Nonreinf, Conc, 8 inch, Modified
3325	Tr	Concrete Curb, Detail CD, Modified
150	Tr	Integral Curb and Sidewalk, 2 Foot, Modified
439	Tr	Detectable Warning Surface
3205	Tr	Curb Ramp Opening, Conc
16480	Sft	Sidewalk Ramp, ADA, Modified
17	Ea	Sidewalk, Conc, 4 inch, Modified
180	Ea	Tree Grate, 4x12
1	Syd	Slope Restoration, Type B
21	Ea	Hydrant, Relocate, Case 2
6	Ea	Water Shutoff, Adj, Case 1, Modified
1	Ea	Delineator Reflector, Yellow
1	Ea	Acer x freemanii 'Celebration', 4 inch, B&B
1	Ea	Gymnocladus dioica, 4 inch, B&B
9	Ea	Ulmus 'Frontier', 4 inch, B&B



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**REVISIONS**

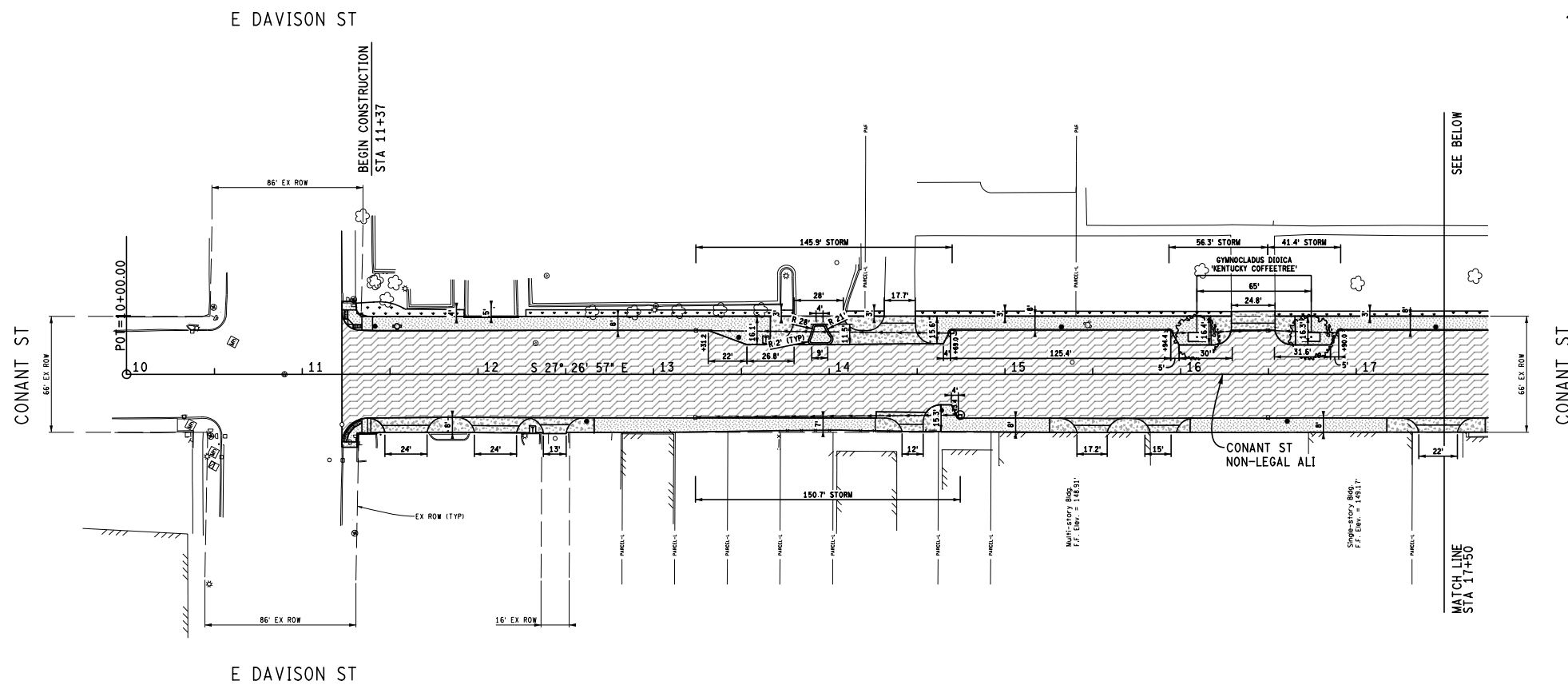
12/8/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

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PROJECT NO.  
**191176**

SHEET NO.  
**C402**

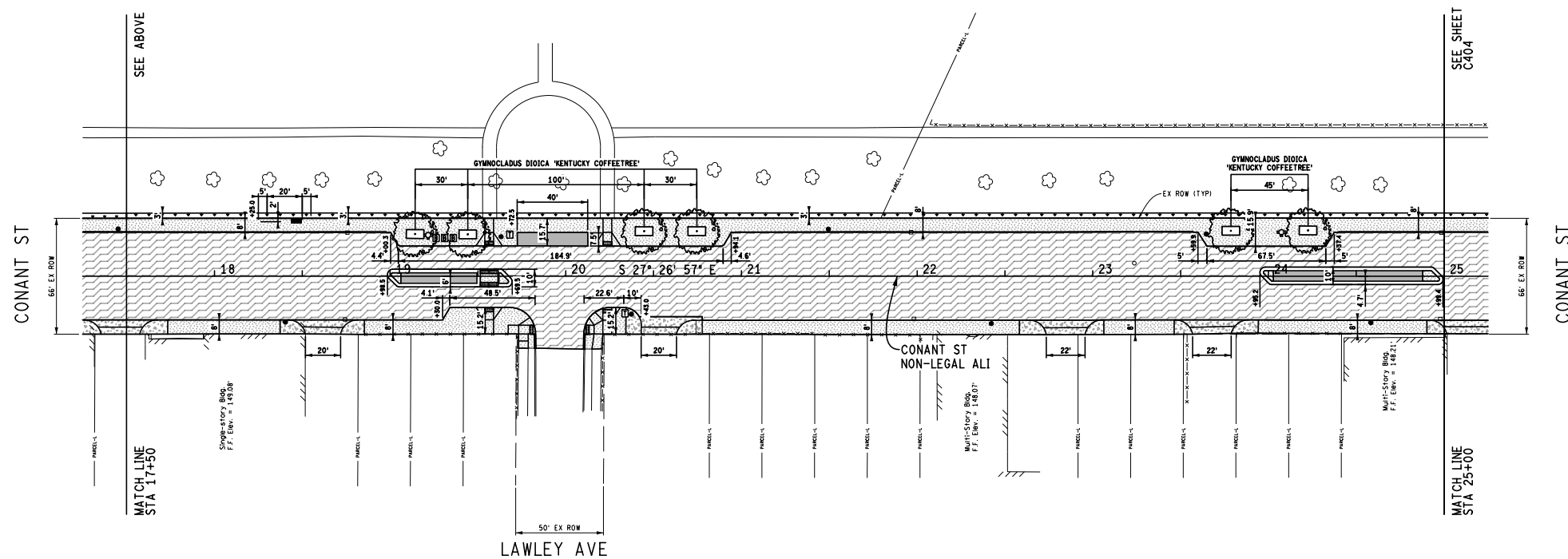


**SYMBOL LEGEND**

- CONCRETE SIDEWALK
- CONCRETE DRIVEWAY
- ASPHALT PAVEMENT
- LANDSCAPING
- SLOPE RESTORATION
- STREET TREE
- EX CURB INLET
- PROP CB
- TRASH RECEPTACLE
- BIKE RACK
- PROPOSED STORM

**QUANTITIES**

1590	Sft	Geotextile Separator
180	Syd	Mulch, Hardwood Bark, 2 inch Depth
80	Syd	Planting Mixture, 18 Inch Depth
8	Each	Gymnocladus dioica 'Espresso', 4 inch. B&B
48	Each	Aster 'Wood's Light Blue', #2 cont
74	Each	Allium 'Millenium', #2 cont
44	Each	Spiraea japonica 'Gold Mound', #3 cont
51	Each	Festuca glauca 'Boulder Blue', #2 cont
74	Each	Nepeta x faassenii 'limelight', #2 cont
42	Each	Panicum virgatum 'Shenandoah', #2 cont
28	Each	Rosa 'Horcooglu At Last', 24' Hgt
1	LSUM	Watering and Cultivating, 2 Season, Min. ... Modified
1	LSUM	Mowing, Modified
1	LSUM	Irrigation



**DIMENSIONAL PLAN**

SCALE: 1"=40'



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**REVISIONS**

5/5/2020	Addendum No. 1	Δ
2/8/2020	100% CD	
3/8/2020	95% CD	
2/4/2020	90% CD	
1/10/2020	80% CD	
12/10/2019	30% CD	

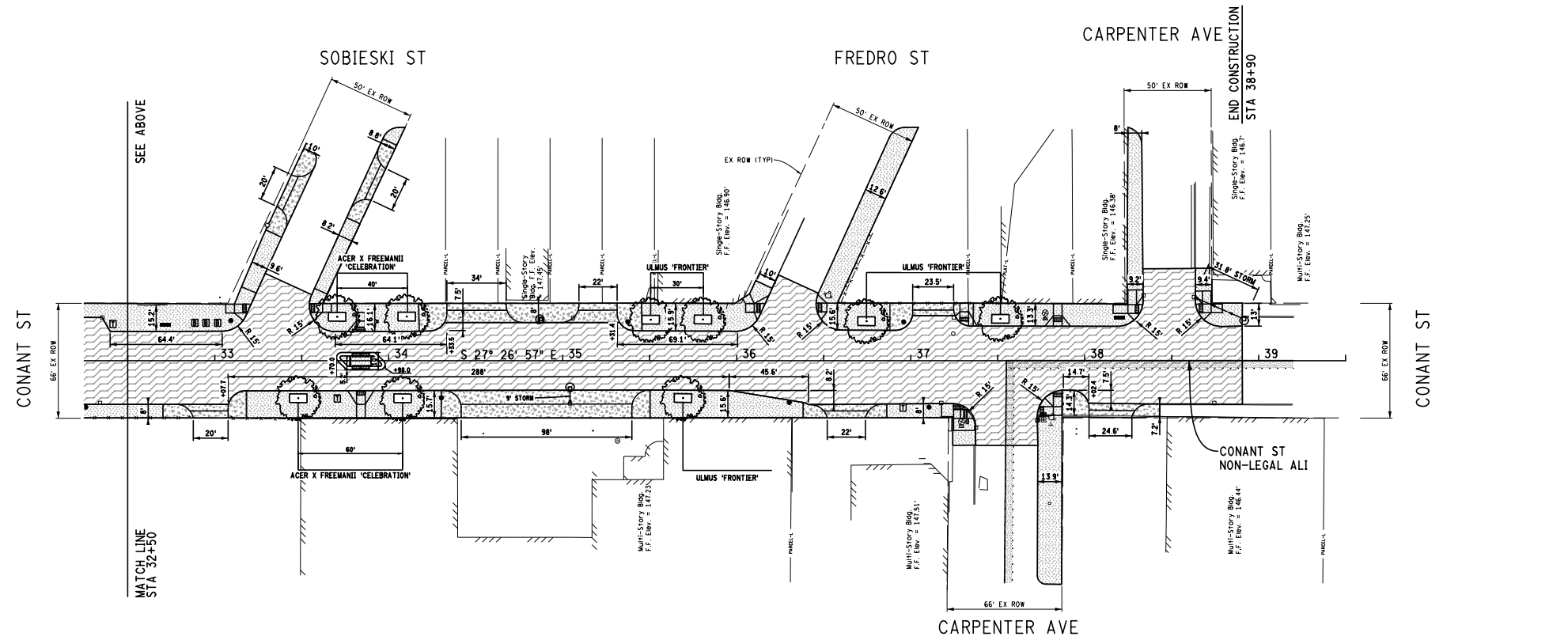
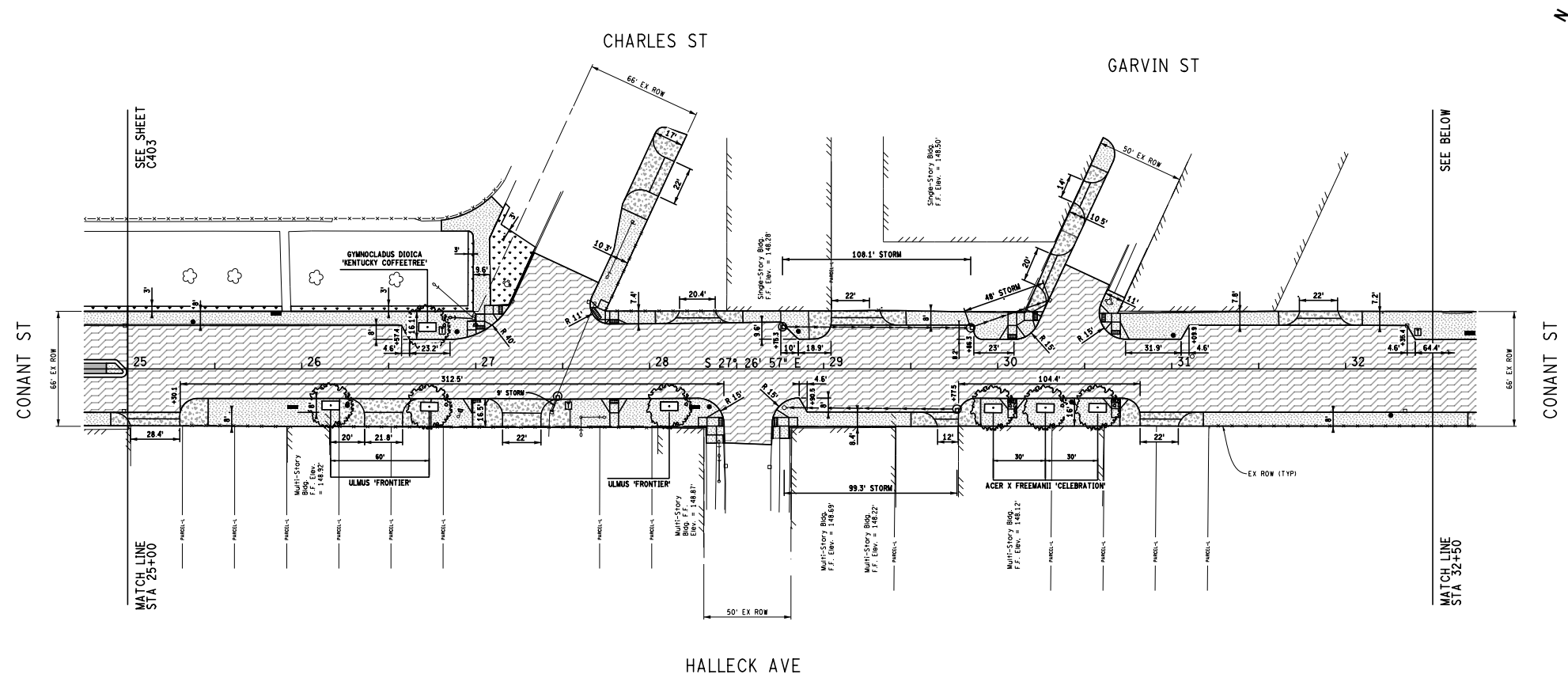
Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

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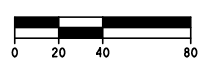
PROJECT NO.  
**191176**

SHEET NO.

**C403**



**DIMENSIONAL PLAN**  
SCALE: 1"=40'



**SYMBOL LEGEND**

-  CONCRETE SIDEWALK
-  CONCRETE DRIVEWAY
-  ASPHALT PAVEMENT
-  LANDSCAPING
-  SLOPE RESTORATION
-  STREET TREE
-  EX CURB INLET
-  PROP CB
-  TRASH RECEPTACLE
-  BIKE RACK
-  PROPOSED STORM

**QUANTITIES**

7	Ea	Acer x freemanii 'Celebration', 4 inch, B&B
1	Ea	Gymnocladus dioica, 4 inch, B&B
9	Ea	Ulmus 'Frontier', 4 inch, B&B

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**REVISIONS**

12/8/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

Hard copy is intended to be 24"x36" when plotted. Scales(s) indicated and graphic quality may not be accurate for any other size.

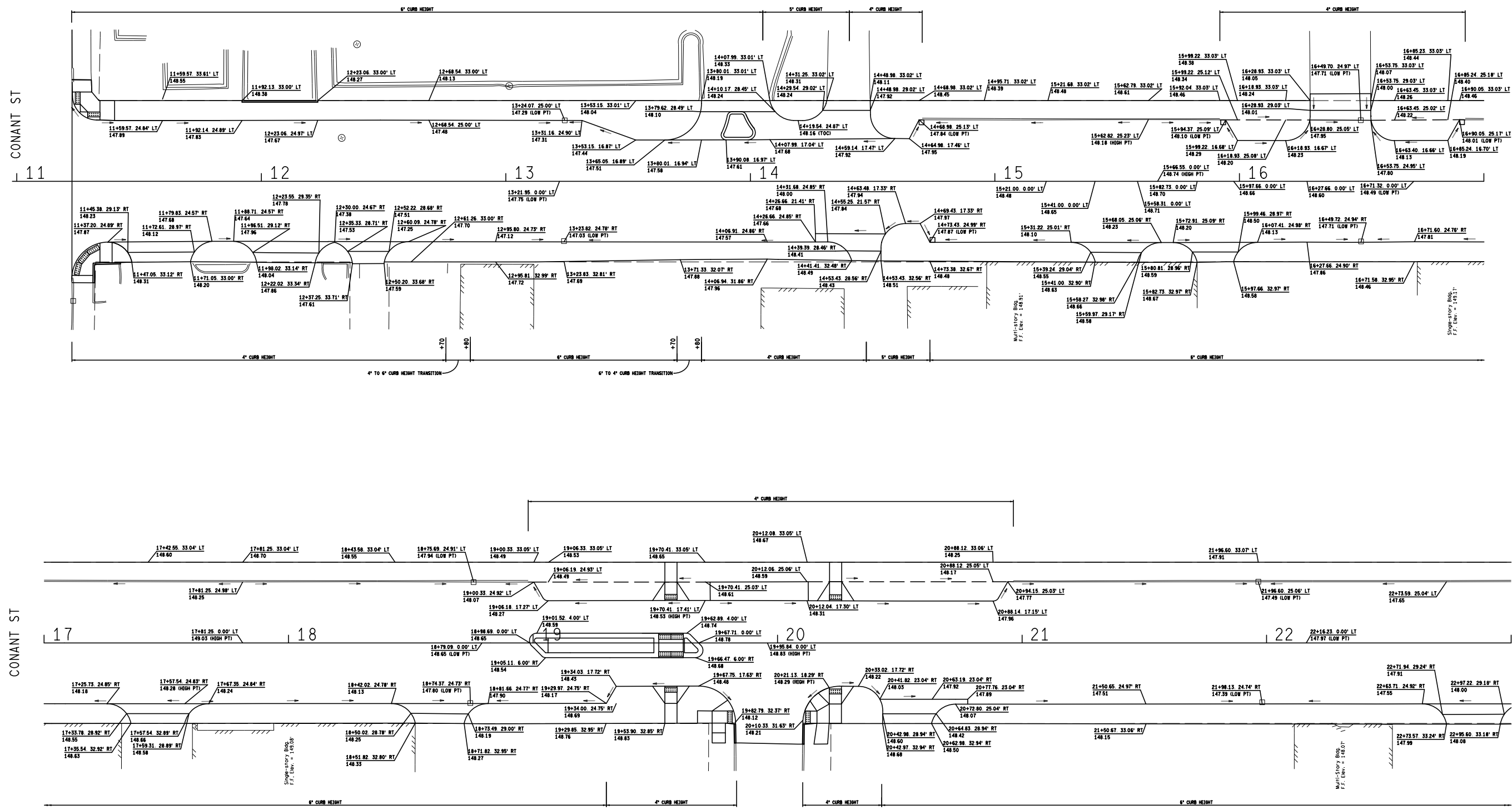
PROJECT NO.  
**191176**

SHEET NO.

**C404**



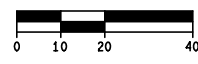
E DAVISON ST



LAWLEY AVE

**GRADING PLAN**

SCALE: 1"=20'



**NOTES**

1. PROPOSED ELEVATIONS AT THE CURB ARE FOR THE FLOWLINE OF THE CURB UNLESS OTHERWISE NOTED
2. FIELD VERIFY ELEVATIONS



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CONANT ST

**REVISIONS**

3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	60% CD
12/10/2019	30% CD

Drawn By: KJS  
 Designer: KJS  
 Reviewer: JJP  
 Manager: LCM

Hard copy is intended to be 24"x36" when plotted. Scales, Indicated and graphic quality may not be accurate for any other size.

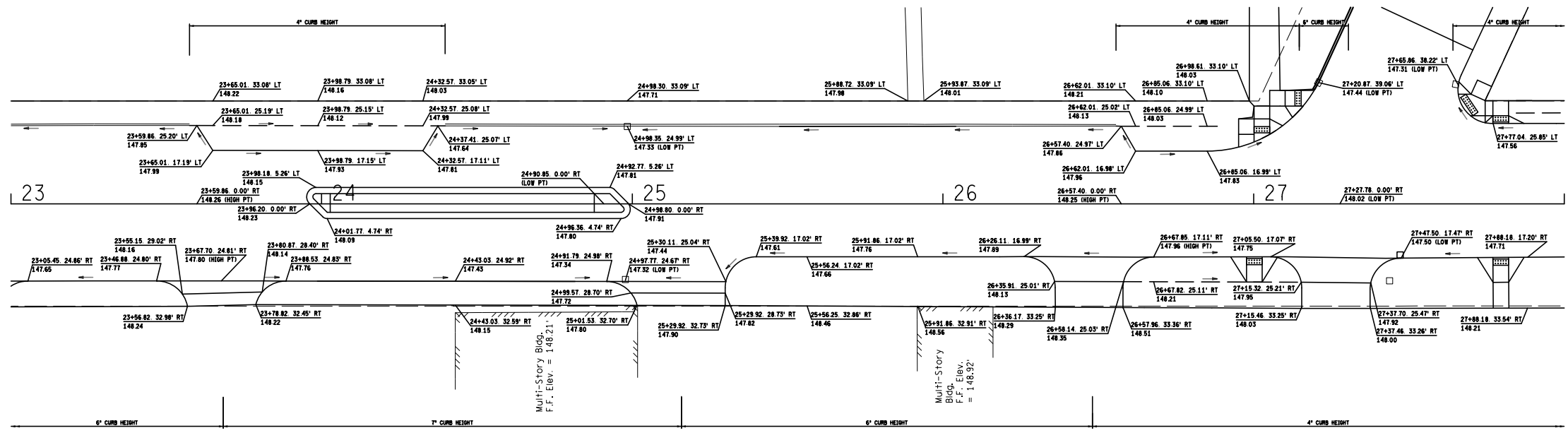
PROJECT NO.  
**191176**

SHEET NO.

**C501**

CONANT ST

CHARLES ST

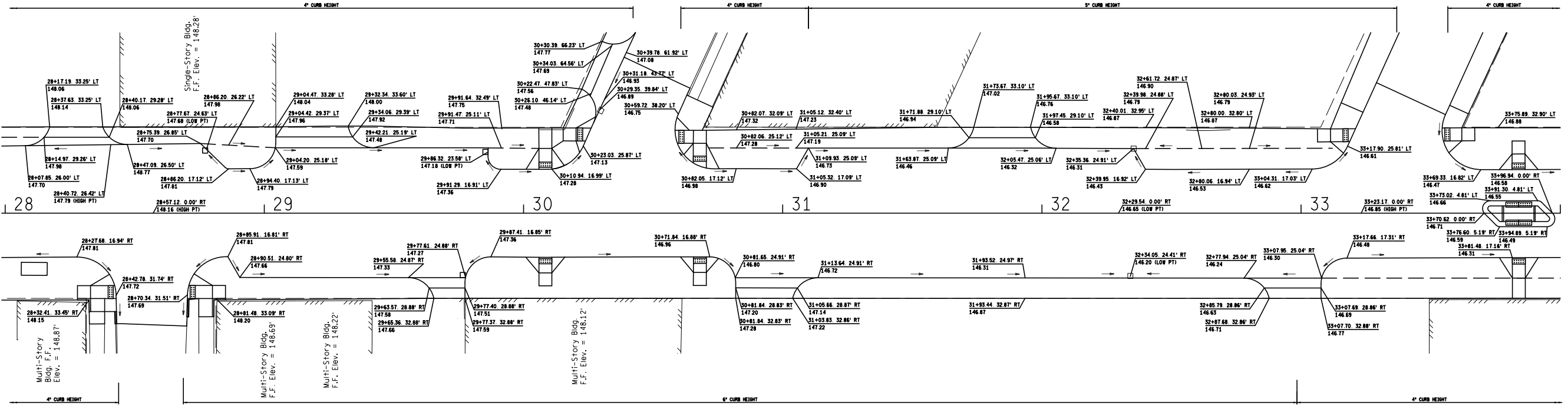


CONANT ST

CONANT ST

GARVIN ST

SOBIESKI ST



CONANT ST

HALLECK AVE

### GRADING PLAN

SCALE: 1"=20'



### NOTES

1. PROPOSED ELEVATIONS AT THE CURB ARE FOR THE FLOWLINE OF THE CURB UNLESS OTHERWISE NOTED
2. FIELD VERIFY ELEVATIONS



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3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By: KJS  
 Designer: KJS  
 Reviewer: JJP  
 Manager: LCM

Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO.  
**191176**  
 SHEET NO.

**C502**

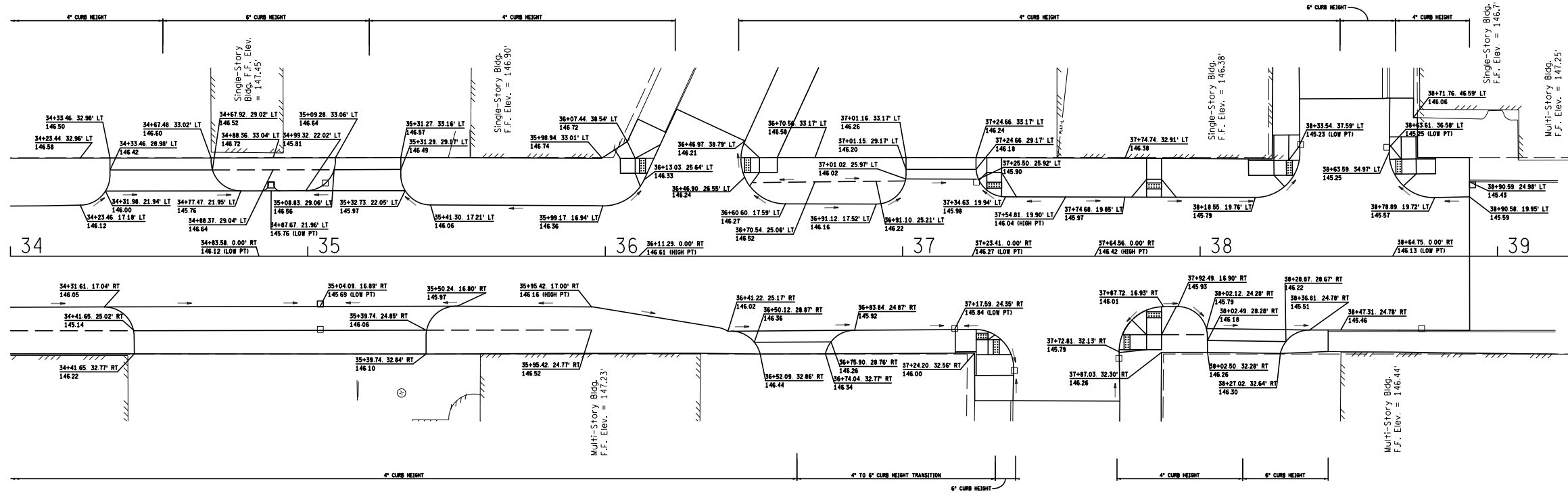
FREDRO ST

CARPENTER AVE



CONANT ST

CONANT ST



CARPENTER AVE

### GRADING PLAN

SCALE: 1"=20'



### NOTES

1. PROPOSED ELEVATIONS AT THE CURB ARE FOR THE FLOWLINE OF THE CURB UNLESS OTHERWISE NOTED
2. FIELD VERIFY ELEVATIONS

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### REVISIONS

3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By KJS  
 Designer KJS  
 Reviewer JJP  
 Manager LCM

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PROJECT NO.  
191176

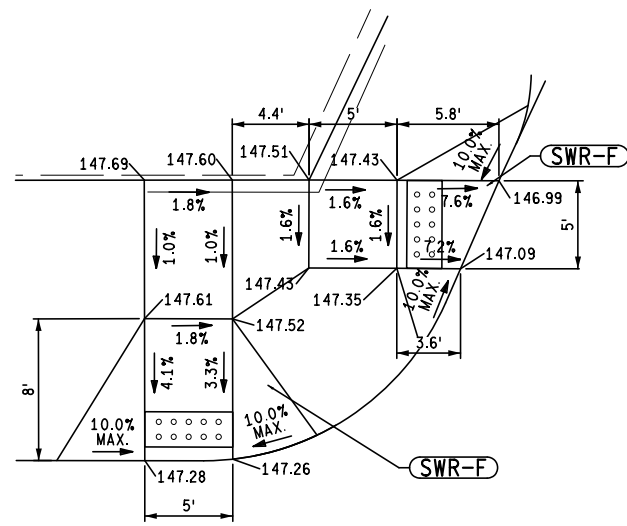
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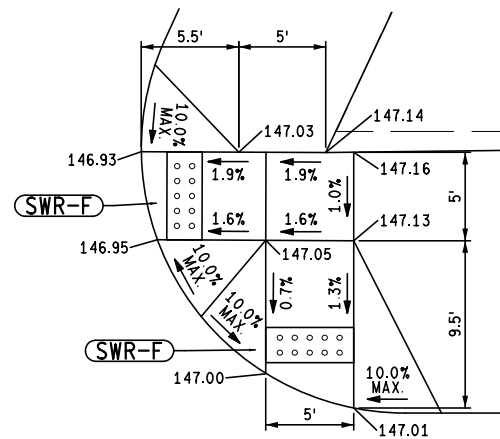
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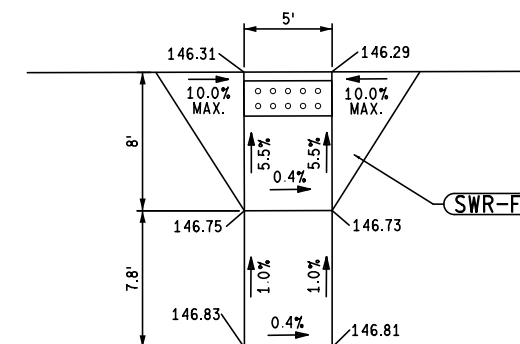
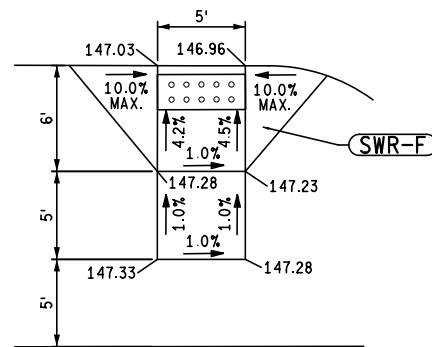
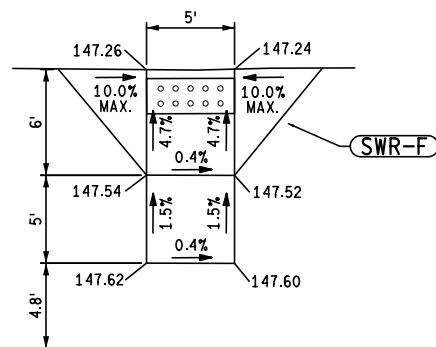
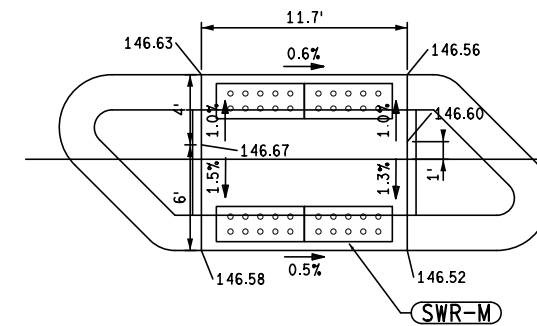
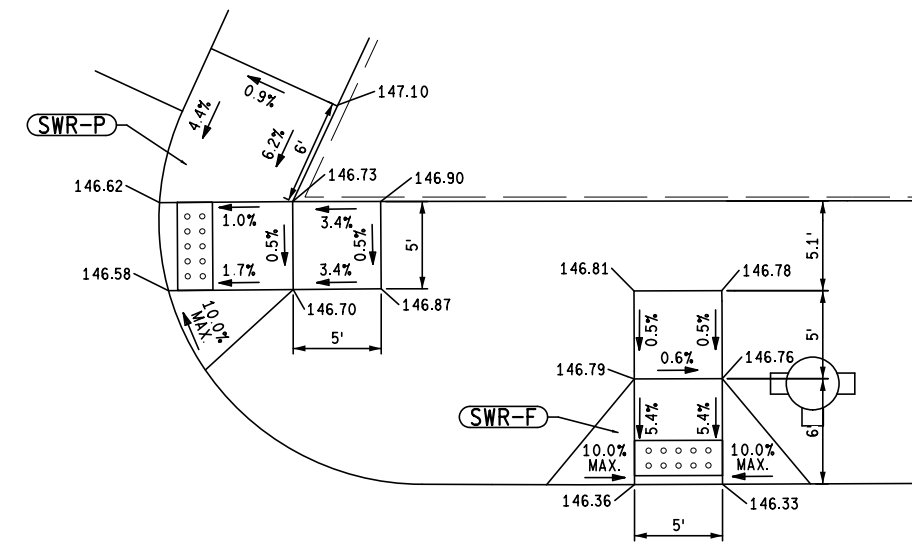
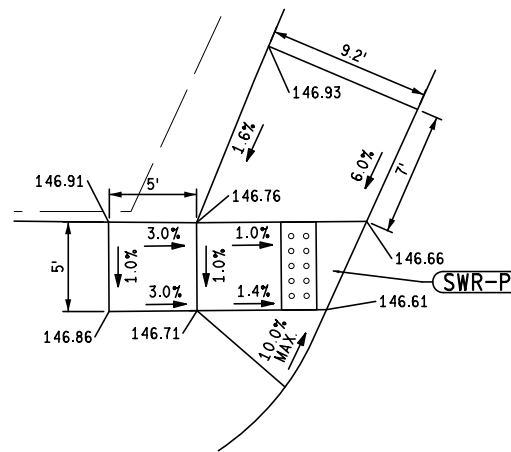




CONANT ST/GARVIN ST

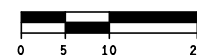


CONANT ST/SOBIESKI ST



SIDEWALK RAMP DETAILS

SCALE: 1"=10'



SYMBOL LEGEND

SWR- SIDEWALK RAMP, TYPE \_

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REVISIONS

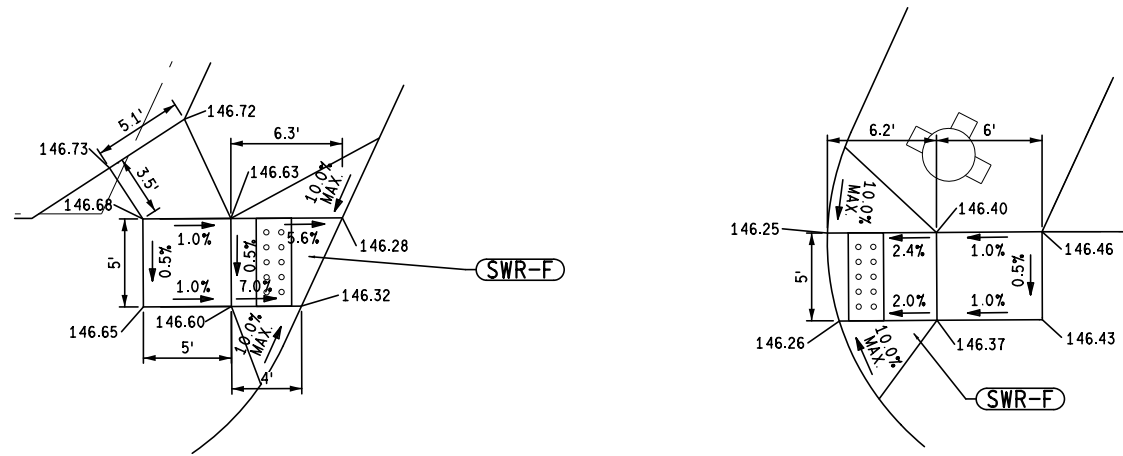
3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By KJS  
Designer KJS  
Reviewer JJP  
Manager LCM

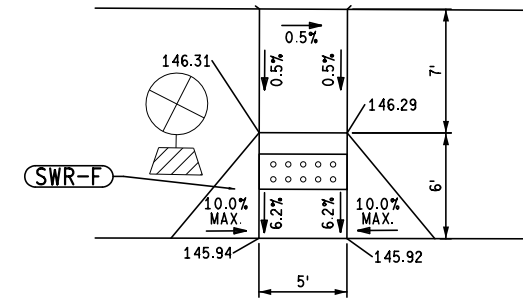
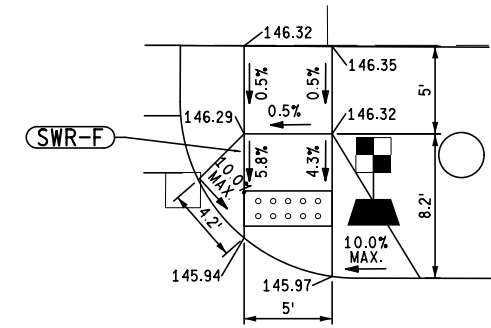
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191176  
SHEET NO.

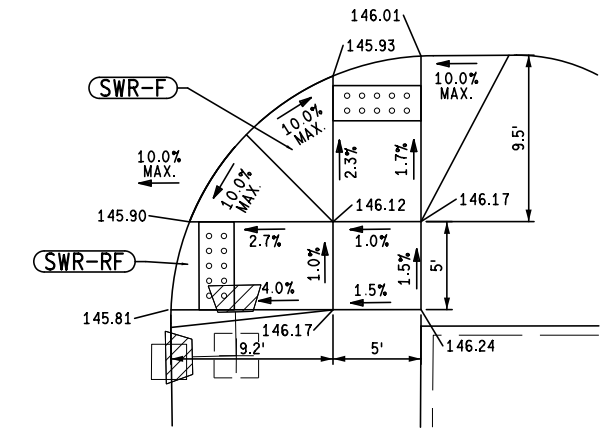
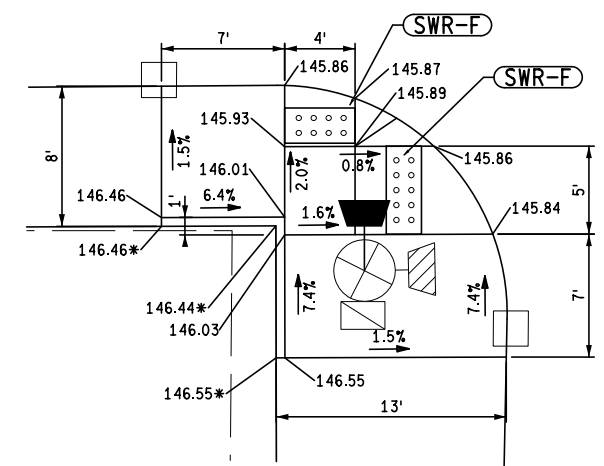
**C506**



CONANT ST/FREDRO ST

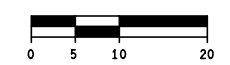


CONANT ST/CARPENTER ST (WEST APPROACH)



SIDEWALK RAMP DETAILS

SCALE: 1"=10'



SYMBOL LEGEND

- (SWR-\_) SIDEWALK RAMP, TYPE \_
- \* ELEVATION = TOP OF CURB

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REVISIONS

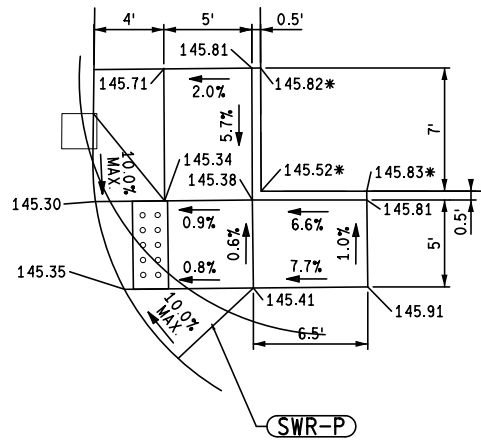
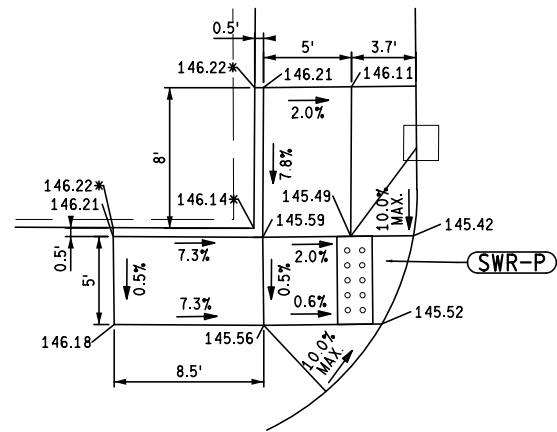
3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By KJS  
Designer KJS  
Reviewer JJP  
Manager LCM

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**191176**

SHEET NO.  
**C507**



CONANT ST/CARPENTER ST (EAST APPROACH)

SIDEWALK RAMP DETAILS

SCALE: 1"=10'



SYMBOL LEGEND

- SWR-- SIDEWALK RAMP, TYPE --
- \* ELEVATION = TOP OF CURB



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REVISIONS

3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By KJS  
Designer KJS  
Reviewer JJP  
Manager LCM

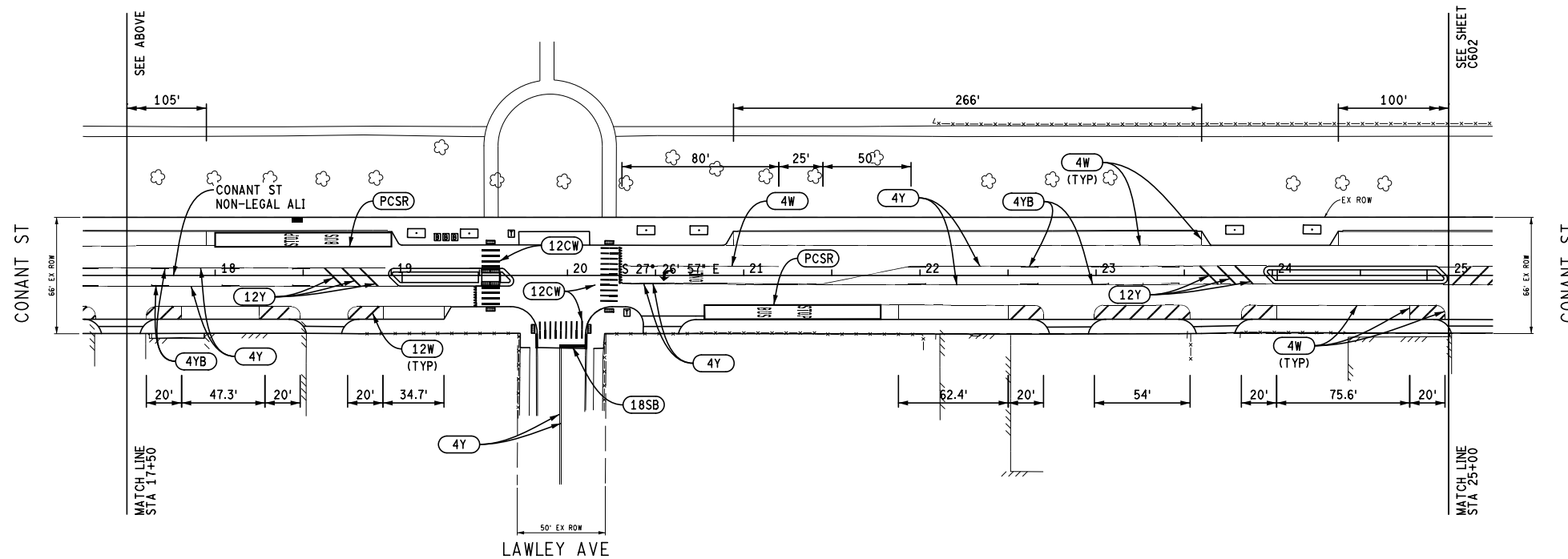
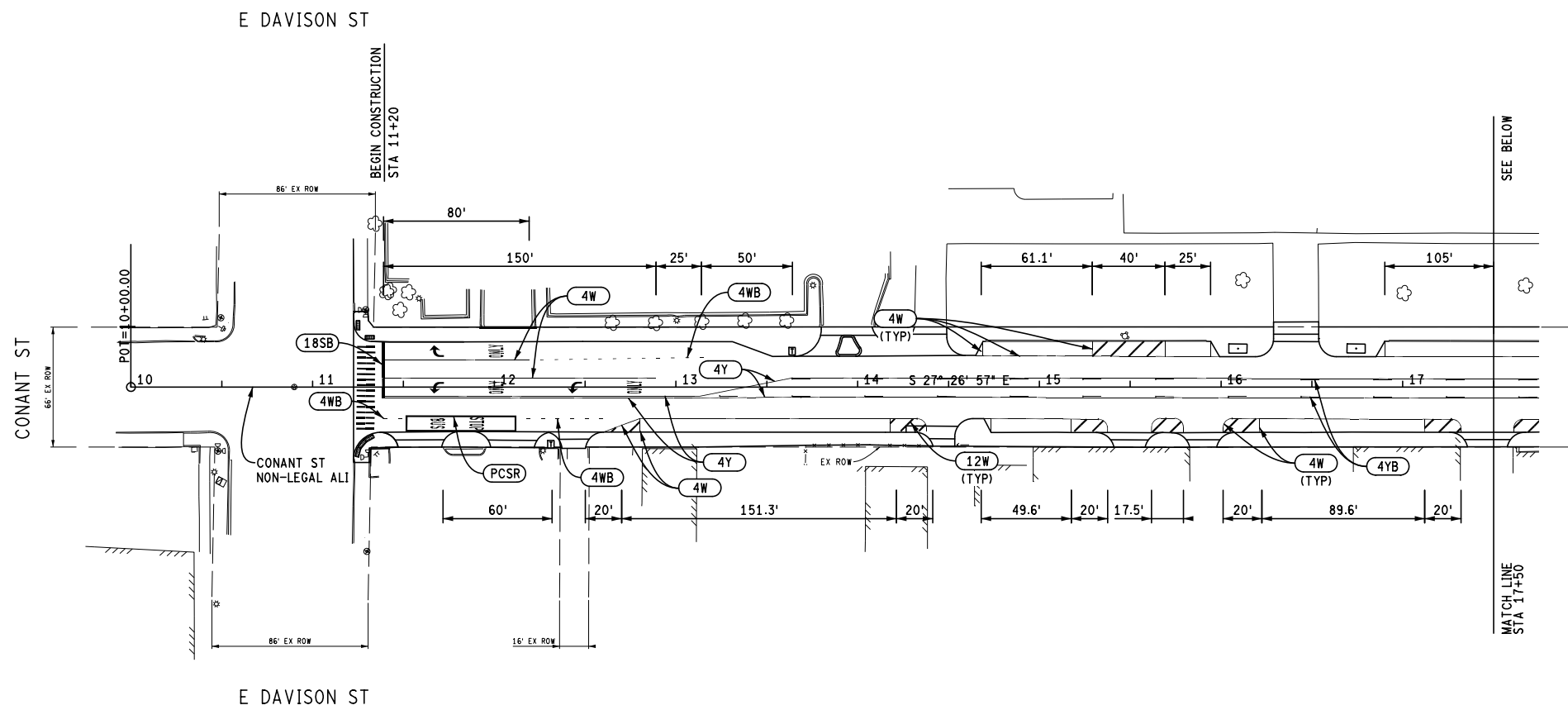
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PROJECT NO.  
191176

SHEET NO.

C508





**PERMANENT PAVEMENT MARKING PLAN**

SCALE: 1"=40'



**SYMBOL LEGEND**

- (4W) PAVT MRKG. SPRAYABLE THERMOPL. 4 INCH. WHITE
- (4WB) PAVT MRKG. SPRAYABLE THERMOPL. 4 INCH. WHITE (BROKEN. 2' MARK. 6' GAP)
- (4Y) PAVT MRKG. SPRAYABLE THERMOPL. 4 INCH. YELLOW
- (4YB) PAVT MRKG. SPRAYABLE THERMOPL. 4 INCH. YELLOW (BROKEN. 10' MARK. 30' GAP)
- (12W) PAVT MRKG. SPRAYABLE THERMOPL. 12 INCH. CROSS HATCHING. WHITE (10' SPACING LONGITUDINALLY. 45°)
- (12Y) PAVT MRKG. SPRAYABLE THERMOPL. 12 INCH. CROSS HATCHING. YELLOW (10' SPACING LONGITUDINALLY. 45°)
- (12CW) PAVT MRKG. SPRAYABLE THERMOPL. 12 INCH. CROSSWALK
- (18SB) PAVT MRKG. SPRAYABLE THERMOPL. 18 INCH. STOP BAR
- (PCSR) PAVT MRKG. POLYMER CEMENT SURFACING. RED
- BUS PAVT MRKG. POLYMER CEMENT SURFACING. BUS
- STOP PAVT MRKG. POLYMER CEMENT SURFACING. STOP
- ONLY PAVT MRKG. MODIFIED URETHANE. ONLY
- ← PAVT MRKG. POLYUREA. LT TURN ARROW SYM
- PAVT MRKG. POLYUREA. RT TURN ARROW SYM
- ▼▼▼ PAVT MRKG. POLYUREA. YIELD SYM

**NOTES**

- ALL BUFFER RADII SHALL BE 10' UNLESS NOTED OTHERWISE.
- SEE CITY OF DETROIT FIELD MARKING STANDARDS NO. STD-01 TO STD-09 FOR DETAILS NOT SHOWN ON THE PLANS.

**QUANTITIES**

2110	Ft	PAVT Mrkg. Sprayable Thermopl. 4 inch. White
2530	Ft	PAVT Mrkg. Sprayable Thermopl. 4 inch. Yellow
330	Ft	PAVT Mrkg. Sprayable Thermopl. 12 inch. Cross Hatching. White
90	Ft	PAVT Mrkg. Sprayable Thermopl. 12 inch. Cross Hatching. Yellow
280	Ft	PAVT Mrkg. Sprayable Thermopl. 12 inch. Crosswalk
46	Ft	PAVT Mrkg. Sprayable Thermopl. 18 inch. Stop Bar
35	Ft	PAVT Mrkg. Polyurea. 18 inch. Yield Sym
59	Sft	PAVT Mrkg. Polymer Cement Surfacing. Red
68	Ea	PAVT Mrkg. Polymer Cement Surfacing. Bus
1	Ea	PAVT Mrkg. Polymer Cement Surfacing. Stop
1	Ea	PAVT Mrkg. Polyurea. Lt Turn Arrow Sym
1	Ea	PAVT Mrkg. Polyurea. Rt Turn Arrow Sym
4	Ea	PAVT Mrkg. Polyurea. Only

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**REVISIONS**

3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

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PROJECT NO.  
**191176**

SHEET NO.  
**C601**

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**SYMBOL LEGEND**

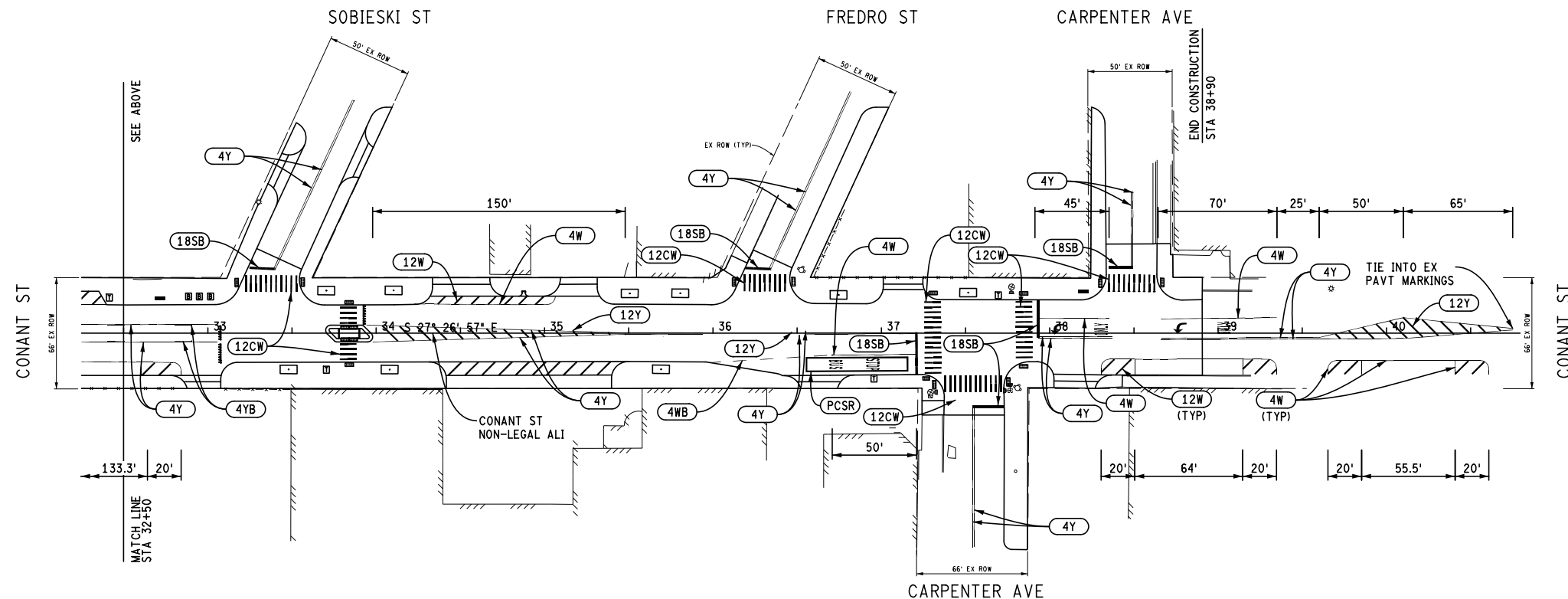
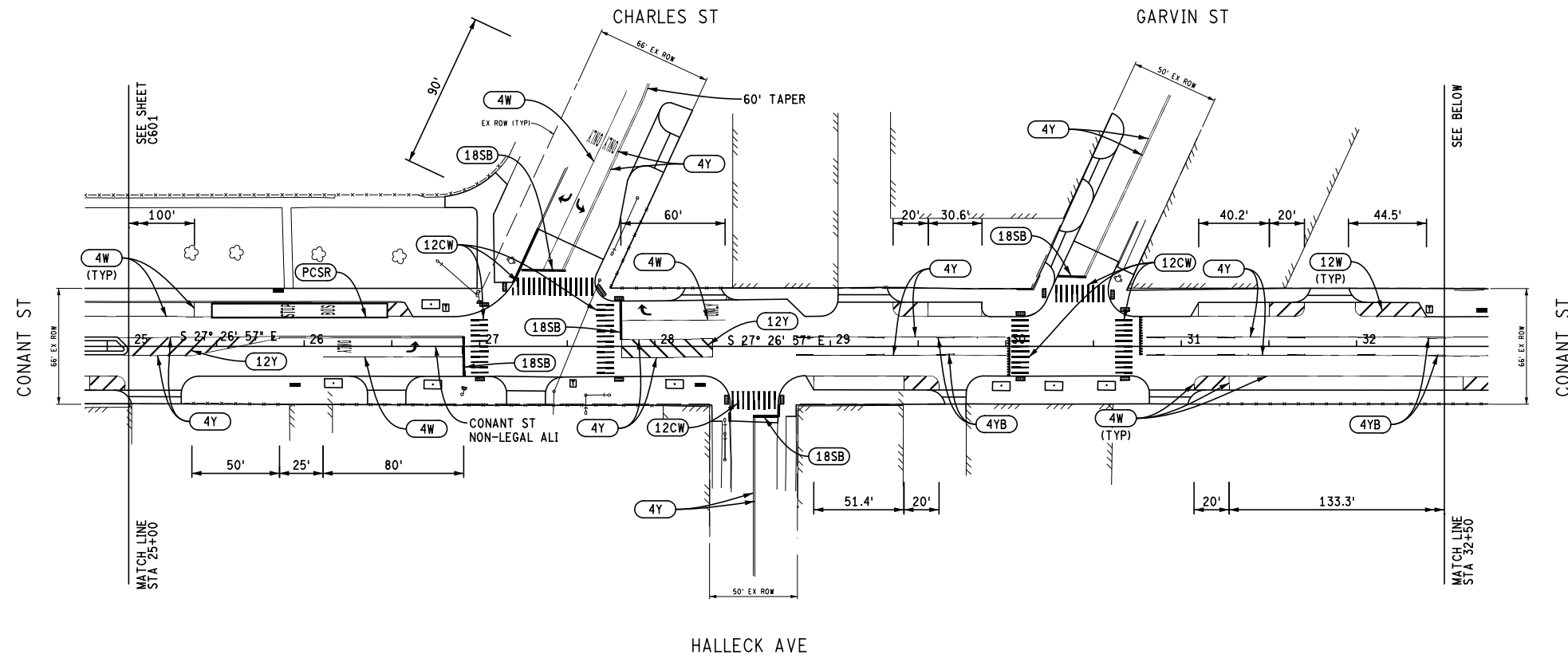
- (4W) PAVT MRKG. SPRAYABLE THERMOPL. 4 INCH. WHITE
- (4WB) PAVT MRKG. SPRAYABLE THERMOPL. 4 INCH. WHITE (BROKEN. 2' MARK. 6' GAP)
- (4Y) PAVT MRKG. SPRAYABLE THERMOPL. 4 INCH. YELLOW
- (4YB) PAVT MRKG. SPRAYABLE THERMOPL. 4 INCH. YELLOW (BROKEN. 10' MARK. 30' GAP)
- (12W) PAVT MRKG. SPRAYABLE THERMOPL. 12 INCH. CROSS HATCHING. WHITE (10' SPACING LONGITUDINALLY. 45°)
- (12Y) PAVT MRKG. SPRAYABLE THERMOPL. 12 INCH. CROSS HATCHING. YELLOW (10' SPACING LONGITUDINALLY. 45°)
- (12CW) PAVT MRKG. SPRAYABLE THERMOPL. 12 INCH. CROSSWALK
- (18SB) PAVT MRKG. SPRAYABLE THERMOPL. 18 INCH. STOP BAR
- (PCSR) PAVT MRKG. POLYMER CEMENT SURFACING. RED
- BUS PAVT MRKG. POLYMER CEMENT SURFACING. BUS
- STOP PAVT MRKG. POLYMER CEMENT SURFACING. STOP
- ONLY PAVT MRKG. MODIFIED URETHANE. ONLY
- ↩ PAVT MRKG. POLYUREA. LT TURN ARROW SYM
- ↪ PAVT MRKG. POLYUREA. RT TURN ARROW SYM
- ▼▼▼ PAVT MRKG. POLYUREA. YIELD SYM

**NOTES**

ALL BUFFER RADII SHALL BE 10' UNLESS NOTED OTHERWISE.  
 SEE CITY OF DETROIT FIELD MARKING STANDARDS NO. STD-01 TO STD-09 FOR DETAILS NOT SHOWN ON THE PLANS.

**QUANTITIES**

1000	Ft	PAVT Mrkg. Sprayable Thermopl. 4 inch. White
4080	Ft	PAVT Mrkg. Sprayable Thermopl. 4 inch. Yellow
630	Ft	PAVT Mrkg. Sprayable Thermopl. 12 inch. Cross Hatching. White
380	Ft	PAVT Mrkg. Sprayable Thermopl. 12 inch. Cross Hatching. Yellow
1400	Ft	PAVT Mrkg. Sprayable Thermopl. 12 inch. Crosswalk
210	Ft	PAVT Mrkg. Sprayable Thermopl. 18 inch. Stop Bar
80	Ft	PAVT Mrkg. Polyurea. 18 inch. Yield Sym
352	Sft	PAVT Mrkg. Polymer Cement Surfacing. Red
25	Ea	PAVT Mrkg. Polymer Cement Surfacing. Bus
4	Ea	PAVT Mrkg. Polymer Cement Surfacing. Stop
4	Ea	PAVT Mrkg. Polyurea. Lt Turn Arrow Sym
6	Ea	PAVT Mrkg. Polyurea. Rt Turn Arrow Sym
6	Ea	PAVT Mrkg. Polyurea. Only



**PERMANENT PAVEMENT MARKING PLAN**

SCALE: 1"=40'



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**City of Detroit**

Conant Streetscape

**REVISIONS**

3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

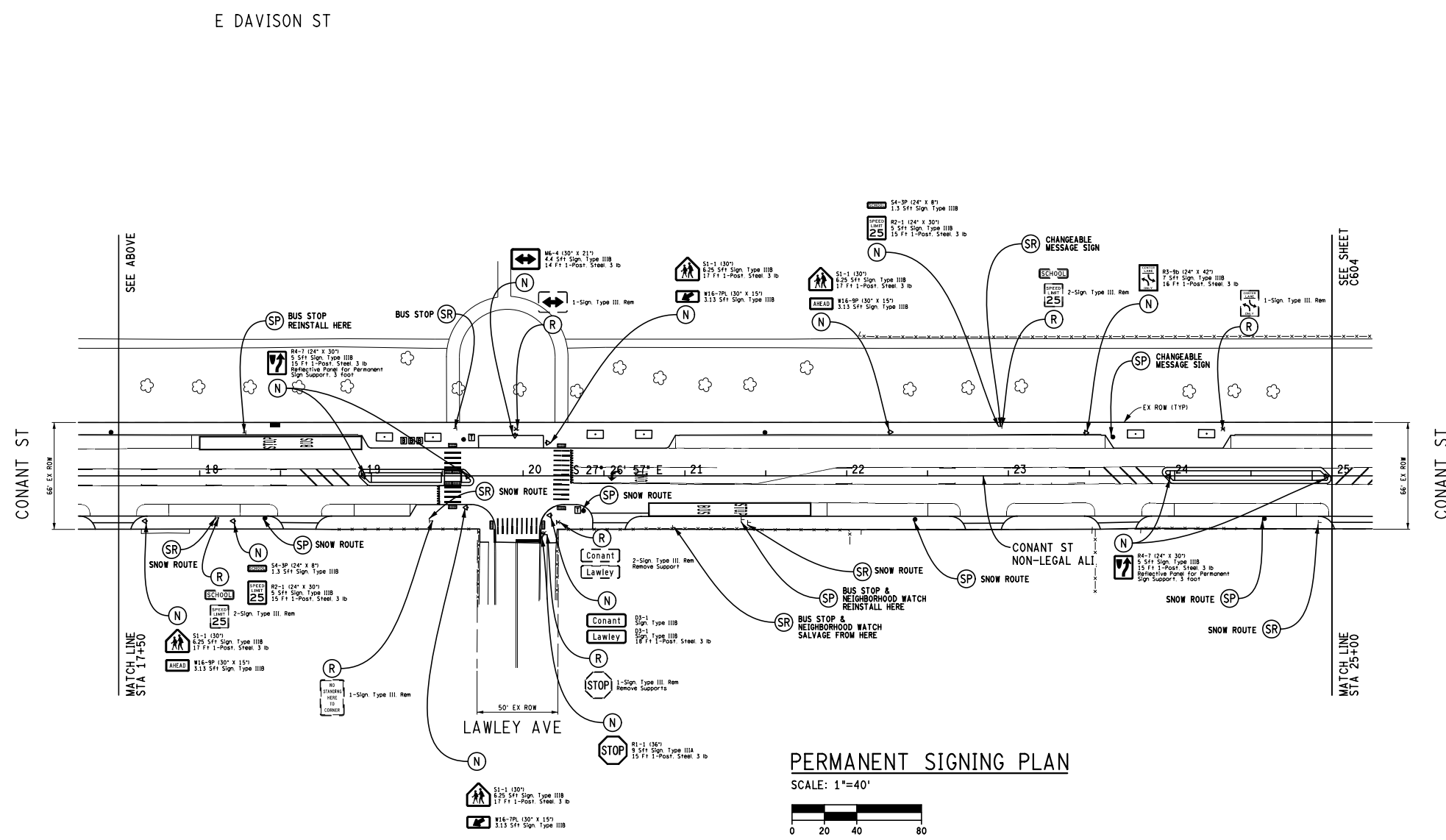
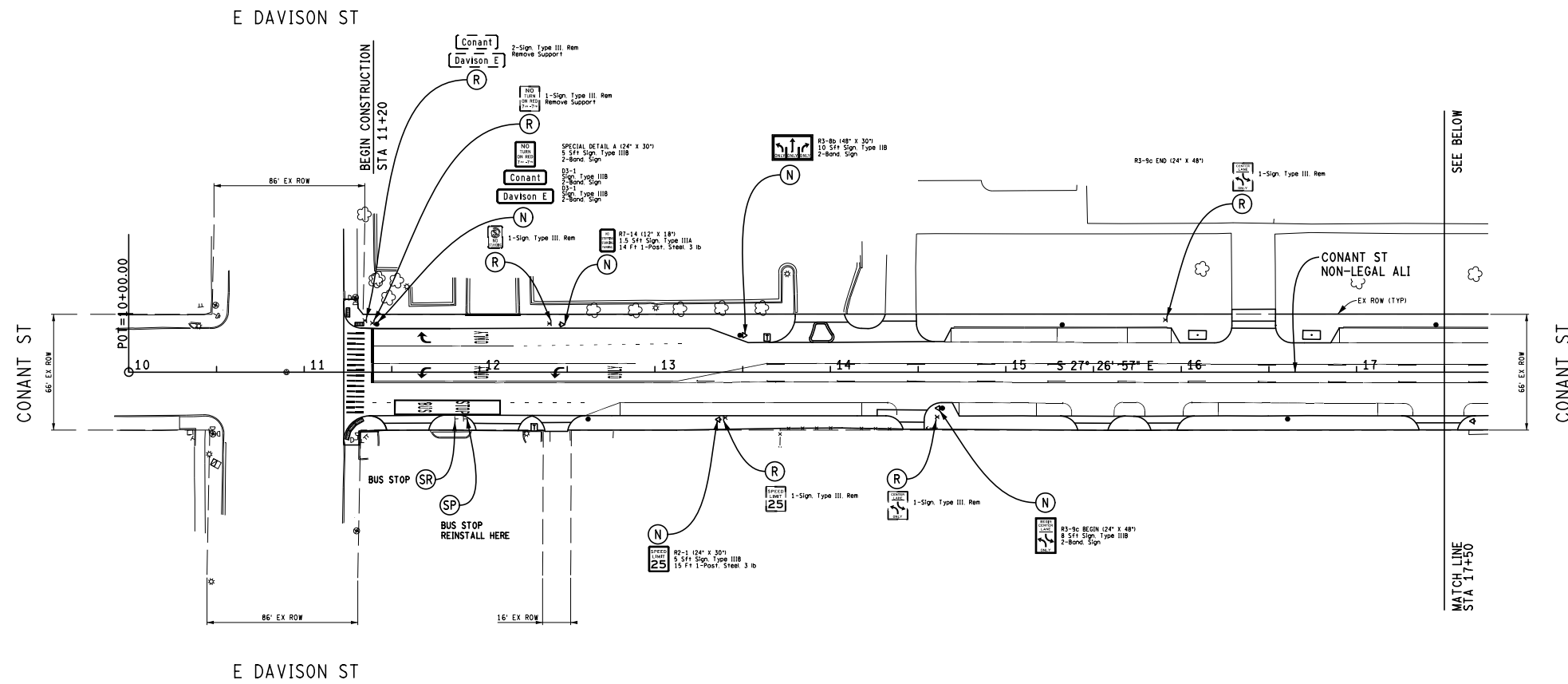
Drawn By: KJS  
 Designer: KJS  
 Reviewer: JJP  
 Manager: LCM

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PROJECT NO.  
**191176**

SHEET NO.

**C602**



**SYMBOL LEGEND**

- (N) NEW SIGN AND SUPPORT
- (P) PROTECT SIGN AND SUPPORT
- (SR) REMOVE, SALVAGE
- (SP) PLACE SALVAGED SIGN WITH NEW SUPPORT
- (R) REMOVE SIGN AND SUPPORT
- ✂ REMOVE SIGN AND SUPPORT
- ⊥ EXISTING SIGN AND SUPPORT
- ▷ NEW SIGN AND SUPPORT

**NOTES**

SEE SHEET C605 FOR SIGNING DETAILS AND SIZES.

ALL SIGNING SHALL COMPLY WITH THE CURRENT EDITION OF "MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."

ALL SIGNS SHALL BE MOUNTED ON STEEL, 3 LB POSTS UNLESS OTHERWISE NOTED.

ALL SALVAGED SIGNS SHALL BE PLACED AT THE SAME LOCATION UNLESS OTHERWISE NOTED.

SNOW ROUTE SIGNS SHALL BE MOUNTED AT A HEIGHT OF 8' ON THE NEAREST STREET LIGHT POLE.

ALL D3-1 SIGNS SHALL BE MOUNTED AT A HEIGHT OF 10'.

ALL SIGNS REMOVED SHALL BE PROVIDED TO THE CITY.

EDGE OF SIGNS SHALL BE NO CLOSER THAN 2' FROM THE FACE OF THE CURB.

**QUANTITIES**

20	Ea	Band, Sign
17	Ea	Post, Hole Through Conc for Steel Post
344	+	Post, Steel, 3 lb
8	Ea	Sign, Type III, Erect, Salv
17	Ea	Sign, Type III, Rem
11	Sft	Sign, Type IIIA
125	Sft	Sign, Type IIIB
4	Ea	Reflective Panel for Permanent Sign Support, 3 foot

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**REVISIONS**

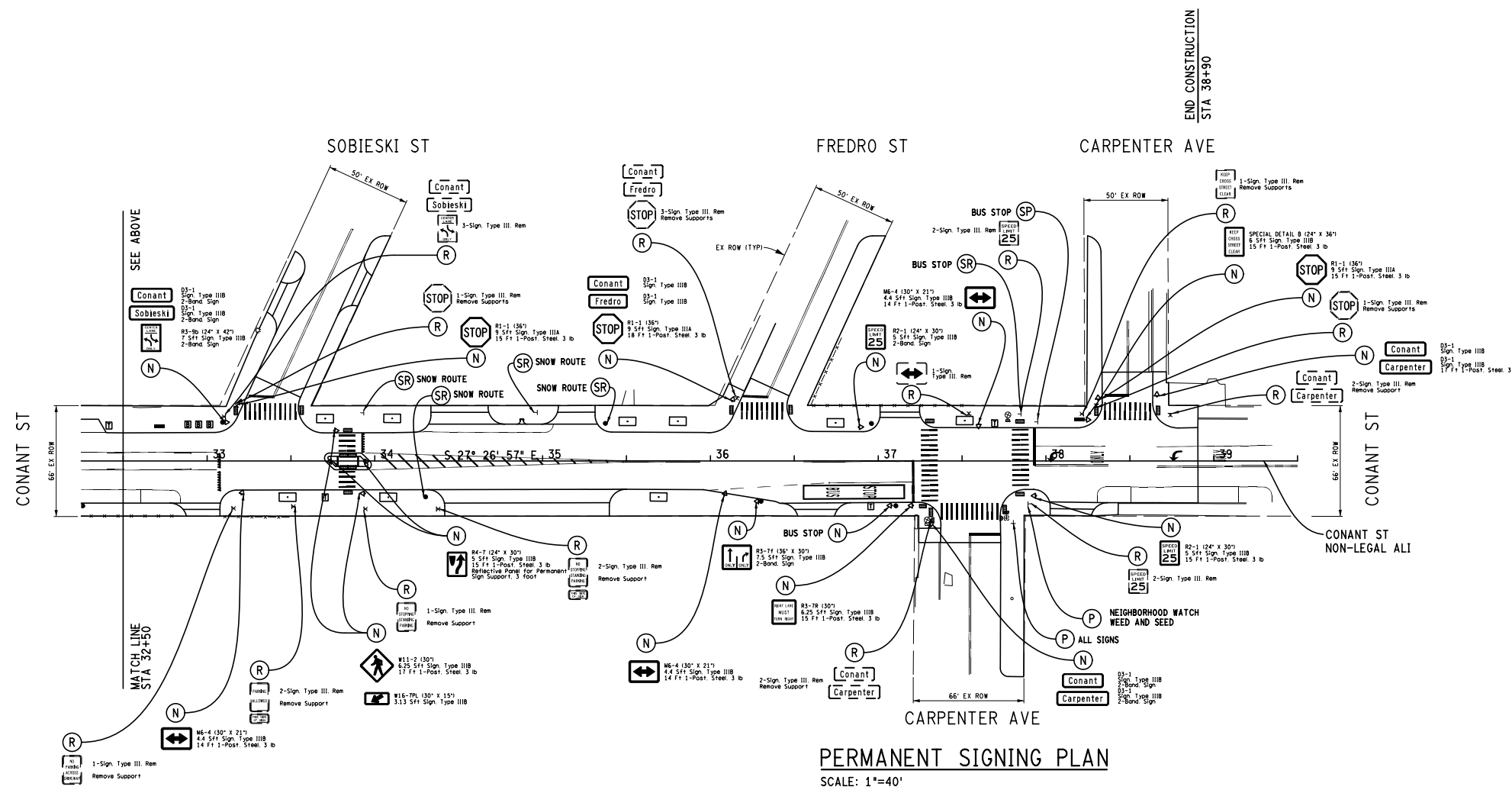
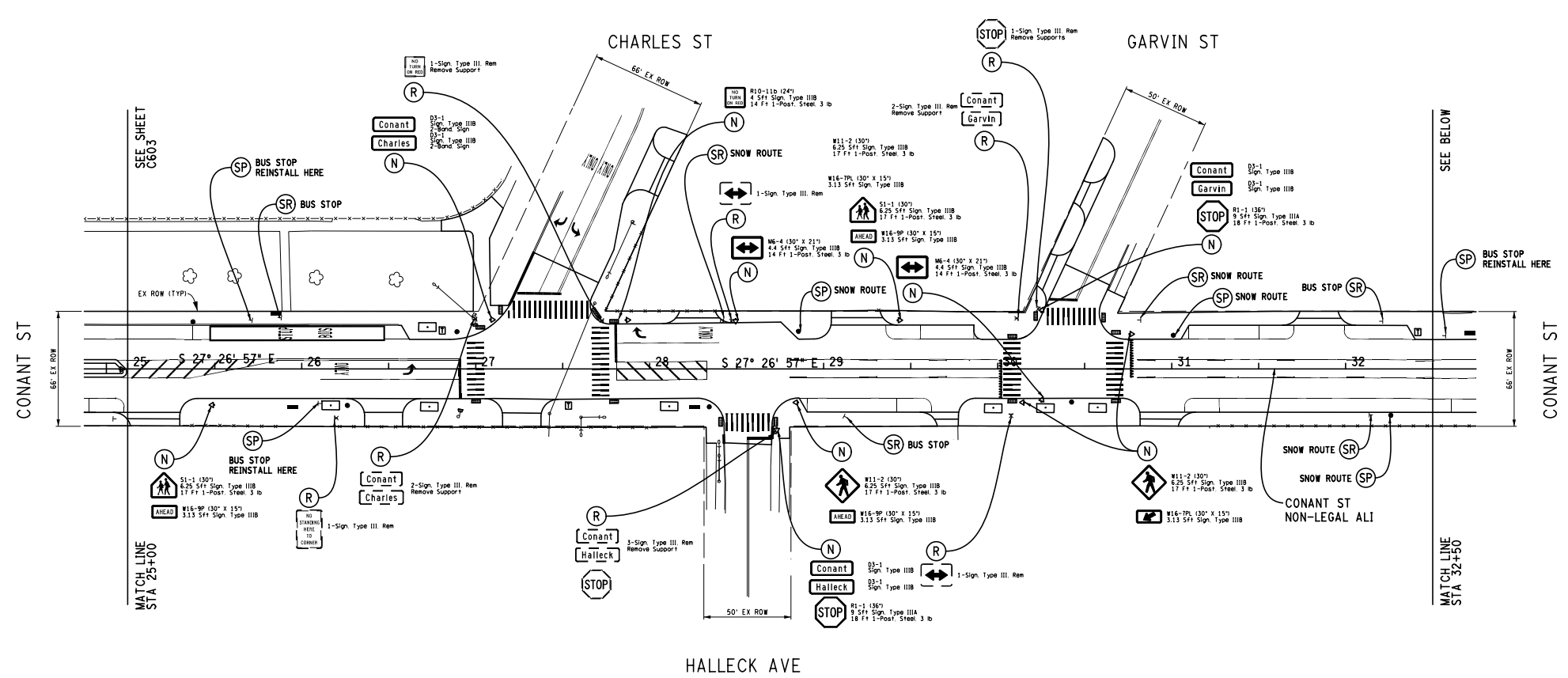
3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

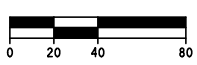
PROJECT NO.  
**191176**

SHEET NO.  
**C603**

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PERMANENT SIGNING PLAN  
SCALE: 1"=40'



SYMBOL LEGEND

- (N) NEW SIGN AND SUPPORT
- (P) PROTECT SIGN AND SUPPORT
- (SR) REMOVE, SALVAGE
- (SP) PLACE SALVAGED SIGN WITH NEW SUPPORT
- (R) REMOVE SIGN AND SUPPORT
- ✕ REMOVE SIGN AND SUPPORT
- EXISTING SIGN
- ▷ NEW SIGN AND SUPPORT

NOTES

- SEE SHEET C605 FOR SIGNING DETAILS AND SIZES.
- ALL SIGNING SHALL COMPLY WITH THE CURRENT EDITION OF "MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
- ALL SIGNS SHALL BE MOUNTED ON STEEL, 3 LB POSTS UNLESS OTHERWISE NOTED.
- ALL SALVAGED SIGNS SHALL BE PLACED AT THE SAME LOCATION UNLESS OTHERWISE NOTED.
- SNOW ROUTE SIGNS SHALL BE MOUNTED AT A HEIGHT OF 8' ON THE NEAREST STREET LIGHT POLE.
- ALL D3-1 SIGNS SHALL BE MOUNTED AT A HEIGHT OF 10'.
- ALL SIGNS REMOVED SHALL BE PROVIDED TO THE CITY.
- EDGE OF SIGNS SHALL BE NO CLOSER THAN 2' FROM THE FACE OF THE CURB.

QUANTITIES

28	Ea	Band, Sign
27	Ea	Post, Hole Through Conc for Steel Post
464	Ft	Post, Steel, 3 lb
11	Ea	Sign, Type III, Erect, Salv
35	Ea	Sign, Type III, Rem
45	Sft	Sign, Type IIIA
191	Sft	Sign, Type IIIB
2	Ea	Reflective Panel for Permanent Sign Support, 3 foot

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313.983.3600  
www.smithgroup.com

City of Detroit  
Conant Streetscape

REVISIONS

3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

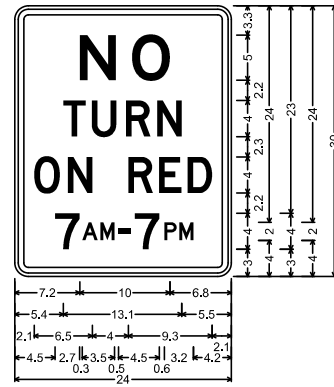
Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

Hard copy is intended to be 24"x36" when plotted. Scales(s) indicated and graphic quality may not be accurate for any other size.

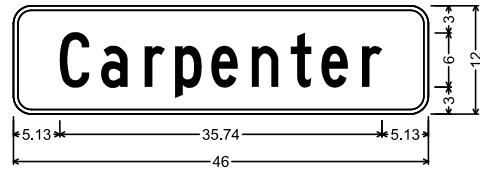
PROJECT NO.  
191176

SHEET NO.

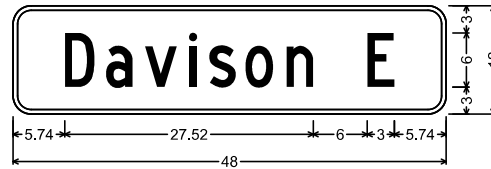
**C604**



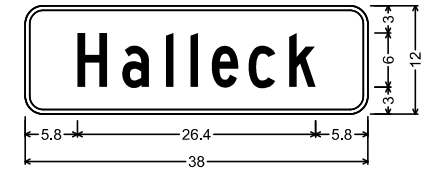
Special Detail A  
 1.5" Radius, 0.5" Border, 0.5" Indent, Black on, White;  
 "NO", E 2K specified length;  
 "TURN", D 2K specified length;  
 "ON RED", D 2K;  
 "7AM-7PM", D 2K;



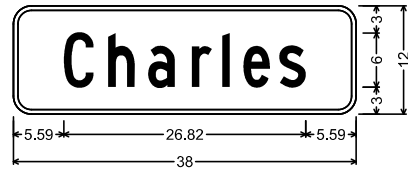
D3-1 (12 inch);  
 2.00" Radius, 0.50" Border, White on, Green;  
 "Carpenter", C;



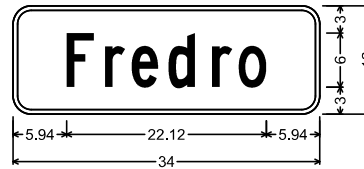
D3-1 (12 inch);  
 2.00" Radius, 0.50" Border, White on, Green;  
 "Davison E", C;



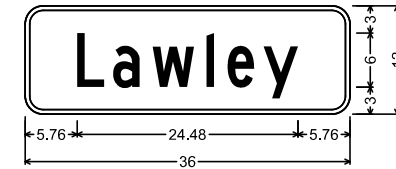
D3-1 (12 inch);  
 2.00" Radius, 0.50" Border, White on, Green;  
 "Halleck", C;



D3-1 (12 inch);  
 2.00" Radius, 0.50" Border, White on, Green;  
 "Charles", C;



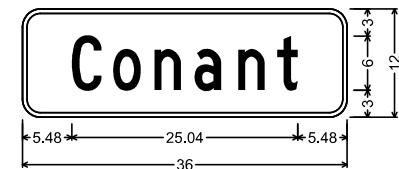
D3-1 (12 inch);  
 2.00" Radius, 0.50" Border, White on, Green;  
 "Fredro", C;



D3-1 (12 inch);  
 2.00" Radius, 0.50" Border, White on, Green;  
 "Lawley", C;



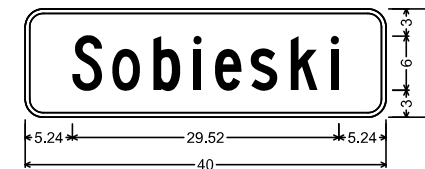
Special Detail B  
 1.5" Radius, 0.5" Border, 0.5" Indent, Black on, White;  
 "KEEP", C 2K; "CROSS", C 2K;  
 "STREET", C 2K;  
 "CLEAR", C 2K;



D3-1 (12 inch);  
 2.00" Radius, 0.50" Border, White on, Green;  
 "Conant", C;



D3-1 (12 inch);  
 2.00" Radius, 0.50" Border, White on, Green;  
 "Garvin", C;



D3-1 (12 inch);  
 2.00" Radius, 0.50" Border, White on, Green;  
 "Sobieski", C;

REVISIONS

3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By: KJS  
 Designer: KJS  
 Reviewer: JJP  
 Manager: LCM

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PROJECT NO.  
**191176**

SHEET NO.

**C605**

# LEGEND SHEET

## UNDERGROUND

- WATER SHUTOFF
- FIRE HYDRANT
- EXISTING MANHOLE
- EXISTING HANDHOLE
- EXISTING SINGLE DUCT RUN
- EXISTING MULTIPLE DUCT RUN
- ABANDON EXISTING DUCT RUN
- EXISTING DIRECT BURIAL OR PARKWAY CABLE
- ABANDON DIRECT BURIAL OR PARKWAY CABLE
- INSTALL DIRECT BURIAL CABLE (NO. AND SIZE WILL BE SHOW)
- BUILD ENCASED CONDUIT (E.C.) (6-5" SHOWN)
- INSTALL DIRECT BURIAL CONDUIT (D.B.) (2-3" SHOWN)
- GALVANIZED IRON CONDUIT JACKED-BORED (J.B.) (2-4" SHOWN)
- M.H.5678 BUILD NEW MANHOLE (2-WAY)
- M.H.9012 BUILD NEW MANHOLE (3-WAY)
- M.H.3456 BUILD NEW MANHOLE (4-WAY)
- M.H.7890 BUILD NEW MANHOLE (CORNER)
- BUILD ROUND HANDHOLE
- BUILD POLYMER CONCRETE HANDHOLE
- BUILD TYPE "S" HANDHOLE
- BUILD TYPE "D" HANDHOLE
- EXISTING UNDERGROUND—FED ST.LTG. UNIT AND FOUNDATION
- REMOVE UNDERGROUND—FED ST.LTG. UNIT AND FOUNDATION (EXCEPT AS OTHERWISE NOTED)
- INSTALL CODE 009-00,010-06, OR 118-06 AS NOTED ST. LTG. UNIT ON BRIDGE OR NEW FDN. INSTALL LUMINAIRE (SALVAGED). EXCEPT WHERE OTHERWISE NOTED. ANCHOR BOLTS IN BRIDGE DECK ON PLAN BY OTHERS
- SALVAGED UNDERGROUND—FED ST. .LTG. UNIT ON NEW FOUNDATION.
- INDICATES TRAFFIC SIGNAL CONTACT ON ST. LTG. STD.

SEE DETAILS FOR SIZES & SHAPES OF HOLES

## DIAGRAMS

(U.G.—FED. ST. LTG. STD. SYMBOLS ARE THE SAME AS THE UNDERGROUND LEGEND ON THIS SHEET).

- PROPOSED MANHOLE
- EXISTING MANHOLE
- PROPOSED HANDHOLE
- EXISTING HANDHOLE
- PROPOSED MANHOLE IN SAME LOCATION AS EXISTING HOLE.
- EXISTING CABLE
- PROPOSED OVERHEAD LINE
- PROPOSED CABLE
- CABLE TO BE ABANDONED
- CABLE TO BE REMOVED
- DISCONNECT, INSULATE AND CAP CABLE END.
- SPLICE STRAIGHT THRU
- SPLICE
- TRAFFIC SIGNAL
- STEEL POLE OR MAST ARM STD.
- WOOD OR CABLE POLE
- PEDESTAL
- SPREAD SPECTRUM RF SIGNAL

## DIAGRAMS

- INDICATES NEW ST. LTG. STANDARD NUMBER
- INDICATES OLD ST. LTG. STANDARD NUMBER
- SECTION OF PROP. CONDUIT WITH PROP. CABLE
- SECTION OF EXIST. CONDUIT WITH EXIST. CABLE
- SECTION OF EXIST. CONDUIT WITH EXIST. & PROP. CABLE
- 2- 4" CONDUIT BROKEN OUT IN HANDHOLE
- 4- 4" CONDUIT BY-PASSING HANDHOLE
- MULT. ST. LTG. CABLE
- COMMUNICATION CABLE
- SERIES ST. LTG. CABLE
- 24KV. CABLE
- MULT. ST. LTG. FEEDER CABLE
- T.S. FEEDER CABLE
- T.S. INTERCONNECT CABLE
- T.S. CABLE
- PRI. DISTRIBUTION CABLE
- FUTURE CABLE
- 1-#6 INDICATES 2000V., 1-1/C #6 ST. LTG. CABLE
- 1/1 INDICATES 2000V., 1-1/C #6 ST. LTG. CABLE & 1-#6 NEUTRAL
- 2/1 INDICATES 2000V., 2-1/C #6 ST. LTG. CABLES & 1-#6 NEUTRAL (ALL UNLABELED CABLE GROUPS ON WIRING DIAGRAM ARE SUCH.) 480/960V.
- 1-#2 INDICATES 2000V., 1-1/C #2 ST. LTG. CABLE
- 1/1 INDICATES 2000V., 1-1/C #2 ST. LTG. CABLE & 1-#2 NEUTRAL
- 2/1 INDICATES 2000V., 2-1/C #2 ST. LTG. CABLES & 1-#2 NEUTRAL (ALL UNLABELED CABLE GROUPS ON WIRING DIAGRAM ARE SUCH.) 240/480V.
- 3/1 INDICATES 2000V., 3-1/C #2 ST. LTG. CABLES & 1-#2 NEUTRAL
- RM. INDICATES REMOVE CABLES IN CONDUIT (REGARDLESS OF SIZE OR NUMBER OF CABLES IN THE CONDUIT.)
- 1-#8 INSTALL 7500V., 1-1/C #8 L.C. ST. LTG. CABLE
- 2-#8 INSTALL 7500V., 2-1/C #8 L.C. ST. LTG. CABLES

## OVERHEAD

- INSTALL OVERHEAD ALLEY LTG. UNIT. WITH 6 FEET BRACKET ARM.
- INSTALL OVERHEAD RESIDENTIAL LTG. UNIT WITH TYPE I 4-WAY LUMINAIRE SHOWN
- INSTALL OVERHEAD RESIDENTIAL LTG. UNIT WITH TYPE II 2-WAY LUMINAIRE SHOWN
- EXISTING WOOD POLE (AMERTECH POLE SHOWN)
- REMOVE WOOD POLE (P.L.D. POLE SHOWN)
- REPLACE WOOD POLE (HEIGHT & CLASS AS INDICATED)
- INSTALL WOOD POLE (HEIGHT & CLASS AS INDICATED) (USE SALVAGED POLE WHERE INDICATED)
- EXISTING OVERHEAD ST. LTG. UNIT
- REMOVE OVERHEAD ST. LTG. UNIT (D.E. CO. POLE SHOWN)
- INSTALL OVERHEAD ST. LTG. UNIT WITH BFT. MAIN ST. LTG. BRACKET ARM.
- EXISTING OVERHEAD LINE
- REMOVE OVERHEAD LINE
- INSTALL OVERHEAD LINE
- INSTALL AND LATER REMOVE OVERHEAD LINE
- INSTALL GUY AND ANCHOR (3/8" GUY SHOWN)
- REMOVE GUY AND ANCHOR ROD
- INSTALL POLE GUY (3/8" GUY SHOWN)
- INSTALL ARM GUY (1/4" GUY SHOWN)
- EXISTING R.R. TRACKS
- EXISTING STREETCAR TRACKS
- EXISTING FENCE
- EXISTING PUBLIC TELEPHONE
- EXISTING TELEPHONE CONTROL BOX
- EXISTING TRANSFORMER
- NEW TRANSFORMER
- EXISTING R.R. CROSSING GATE AND FLASHERS
- EXISTING R.R. FLASHERS
- EXISTING R.R. CROSSING MAST ARM AND FLASHERS
- EXISTING DOUBLE POST SIGN (TYPE SHOWN ON PLANS)
- INSTALL DOUBLE POST SIGN (TYPE SHOWN ON PLANS)
- EXISTING SINGLE POST SIGN (TYPE SHOWN ON PLANS)
- INSTALL SINGLE POST SIGN (TYPE SHOWN ON PLANS)
- EXISTING MAST ARM ROAD SIGN (TYPE SHOWN ON PLANS)

## OVERHEAD

- REMOVE GUY (POLE OR ARM GUY WILL BE INDICATED)
- RM. MATERIALS TO BE REMOVED
- IN. MATERIALS TO BE INSTALLED
- C.P. CABLE POLE
- EX. EXISTING MATERIALS
- M.S.S. MAKE WOOD POLE SELF-SUPPORTING IN CRUSHED STONE
- XYZ PHASES OF P.L.D. DISTRIBUTION WIRES OR EQUIPMENT
- E D.E. CO. DISTRIBUTION WIRE
- es D.E. SECONDARY WIRE
- INSTALL SUSPENSION INSULATOR
- P.L.D. DISTRIBUTION WIRE
- P.L.D. SERIES ST. LTG. WIRE
- P.L.D. MULT. ST. LTG. WIRE

## GENERAL

- GUARD RAIL (CONCRETE)
- GUARD RAIL (STEEL)
- CENTER LINE (CL)
- PROPERTY LINE (PL) OR RIGHT OF WAY (ROW)
- PAVEMENT JOINTLINE AND CURB
- EXISTING CURB LINE
- PROPOSED CURB LINE
- EXISTING STORM LINE
- EXISTING SEWER LINE, MANHOLE & CATCH BASIN
- EXISTING DETROIT EDISON UNDERGROUND LINE & M.H.
- EXISTING TELEPHONE UNDERGROUND LINE & MANHOLE
- EXISTING TELEPHONE OVERHEAD LINE
- EXISTING GAS LINE & VALVE
- EXISTING WATER LINE & GATEWELL
- EXISTING DETROIT PUBLIC LIGHTING UNDERGROUND LINE & H.H.
- EXISTING UNDERGROUND STEAM LINE
- EXISTING R.R. TRACKS
- EXISTING STREETCAR TRACKS
- EXISTING FENCE
- EXISTING PUBLIC TELEPHONE
- EXISTING TELEPHONE CONTROL BOX
- EXISTING TRANSFORMER
- NEW TRANSFORMER
- EXISTING R.R. CROSSING GATE AND FLASHERS
- EXISTING R.R. FLASHERS
- EXISTING R.R. CROSSING MAST ARM AND FLASHERS
- EXISTING DOUBLE POST SIGN (TYPE SHOWN ON PLANS)
- INSTALL DOUBLE POST SIGN (TYPE SHOWN ON PLANS)
- EXISTING SINGLE POST SIGN (TYPE SHOWN ON PLANS)
- INSTALL SINGLE POST SIGN (TYPE SHOWN ON PLANS)
- EXISTING MAST ARM ROAD SIGN (TYPE SHOWN ON PLANS)

## TRAFFIC SIGNAL

- INSTALL 3-SECTION TRAFFIC SIGNAL WITH SALVAGED HEADS (2-WAY SHOWN)
- REMOVE 3-SECTION TRAFFIC SIGNAL (3-WAY SHOWN)
- EXISTING 3-SECTION TRAFFIC SIGNAL (4-WAY SHOWN)
- INSTALL 3-SECTION 12" TRAFFIC SIGNAL (1-WAY SHOWN) (EXCEPT AS OTHERWISE NOTED)
- EXISTING 1 OR 2-SECTION 12" TRAFFIC SIGNAL FLASHERS
- INSTALL 1 OR 2-SECTION 12" TRAFFIC SIGNAL FLASHERS
- INSTALL TWO-WAY ILLUMINATED CASE SIGN
- INSTALL TWO-WAY ILLUMINATED CASE SIGN (SALVAGED)
- REMOVE TWO-WAY ILLUMINATED CASE SIGN
- EXISTING TWO-WAY ILLUMINATED CASE SIGN
- INSTALL FOUR-WAY ILLUMINATED CASE SIGN
- INSTALL FOUR-WAY ILLUMINATED CASE SIGN (SALVAGED)
- REMOVE FOUR-WAY ILLUMINATED CASE SIGN
- EXISTING FOUR-WAY ILLUMINATED CASE SIGN
- INSTALL 1-SECTION, 16" L.E.D. PEDESTRIAN (WALK-DON'T WALK) WITH COUNTDOWN TIMER TRAFFIC SIGNAL (2-WAY SHOWN)
- INSTALL 1-SECTION, 16" L.E.D. PEDESTRIAN (WALK-DON'T WALK) WITH COUNTDOWN TIMER TRAFFIC SIGNAL WITH SALVAGED HEAD (2-WAY SHOWN)
- REMOVE 1-SECTION/2-SECTION, PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL (1-WAY SHOWN)
- EXISTING 1-SECTION/2-SECTION, PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL (1-WAY SHOWN)
- INSTALL TRAFFIC SIGNAL CONTROLLER (NEW OR SALVAGED AS SHOWN) (EXCEPT AS OTHERWISE NOTED).
- INSTALL MAST ARM STD. & MAST ARM ON NEW FOUNDATION (EXCEPT AS OTHERWISE NOTED).
- INSTALL TRAFFIC SIGNAL PEDESTAL ON NEW FOUNDATION (EXCEPT AS OTHERWISE NOTED).
- INSTALL ANCHOR BASE STEEL STRAIN POLE ON NEW FOUNDATION (EXCEPT AS OTHERWISE NOTED).(USE 18" BOLT CIRCLE FOR ALL NEW STRAIN POLES).
- EXISTING TRAFFIC SIGNAL CONTROLLER
- EXISTING MAST ARM STANDARD
- EXISTING PEDESTAL
- EXISTING STEEL STRAIN POLE
- INSTALL OVERHEAD PLASTIC JACKETED CABLE (P.J.)
- EXISTING OVERHEAD PLASTIC JACKETED CABLE (P.J.)
- REMOVE OVERHEAD PLASTIC JACKETED CABLE (P.J.)
- INSTALL JUNCTION BOX (J.B.)
- INSTALL SALVAGED JUNCTION BOX (J.B.)
- REMOVE JUNCTION BOX (J.B.)
- EXISTING JUNCTION BOX (J.B.)
- EXISTING LOOP DETECTOR
- INSTALL LOOP DETECTOR
- POLE CONTACT HEIGHT OF TRAFFIC SIGNAL SPAN WIRE
- LOWEST CONTACT HEIGHT OF TRAFFIC SIGNAL TO SPAN WIRE.
- REMOVE HOOD AND INSTALL LAMPS (INCIDENTAL TO INSTALLATION OF TRAFFIC SIGNAL ON THIS CONTRACT)
- BACK-OUT LAMPS AND HOOD (SIGNALS INCLUDED IN THE INSTALLATION OF TRAFFIC SIGNAL ON THIS CONTRACT).
- EXISTING STOP BAR
- STOP BAR TO BE INSTALLED
- INSTALL 12" YELLOW LED SOLAR ACTIVATED BEACON SIGNAL HEAD
- 900MHZ RADIO SYSTEM
- 5.8MHZ RADIO SYSTEM
- MICROWAVE VEHICLE DETECTOR
- EVP, GPS, SYSTEM
- VIDEO DETECTION CAMERA
- PTZ CAMERA ASSEMBLY
- WIRELESS ETHERNET SYSTEM
- INSTALL WIRELESS SENSOR NODE ("PUCK" DETECTOR)
- INSTALL ACCESS POINT (FOR "PUCK" DETECTOR)

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**City of Detroit**

**Cc SIGNAL LEGEND**

REVISIONS	
3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

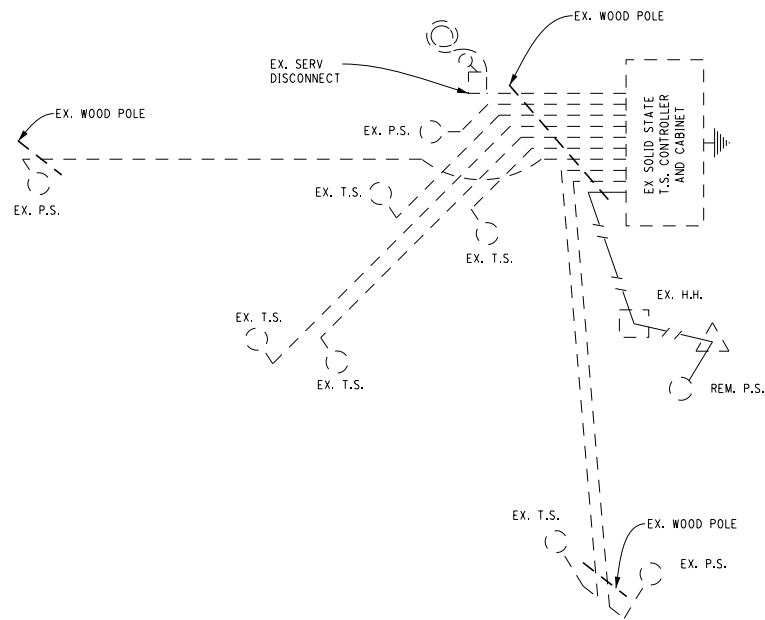
Drawn By KJS  
Designer KJS  
Reviewer JJP  
Manager LCM

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PROJECT NO.  
**191176**

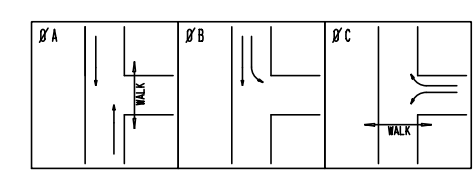
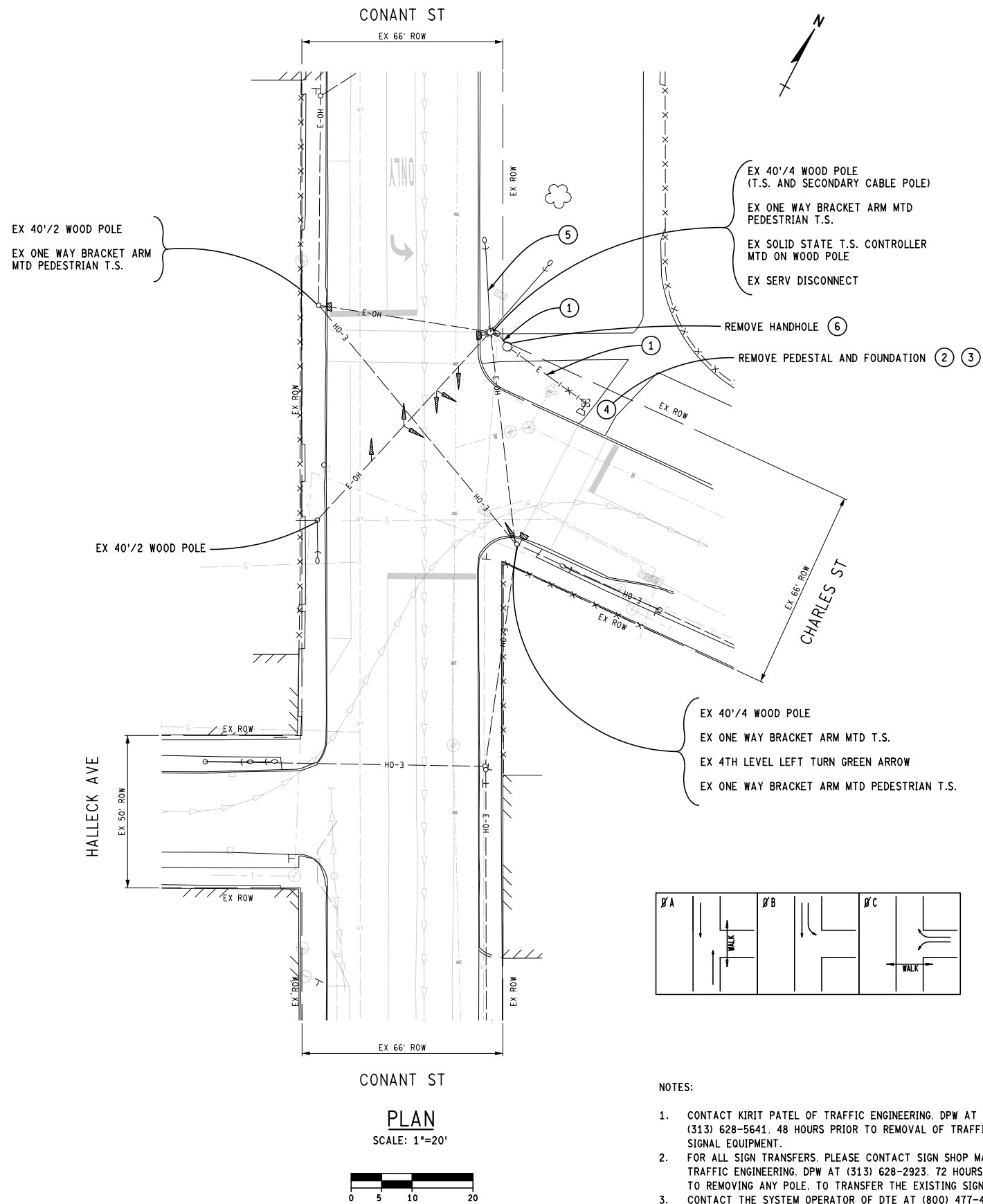
SHEET NO.  
**C606**

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**WIRING DIAGRAM**  
N.T.S.


LIST OF MATERIAL			
No.	ITEM	QUANTITIES	ITEM CODE
①	Conduit, Rem	40 Ft	8190140
②	Pedestal, Fdn, Rem	1 Ea	8200106
③	Pedestal, Rem	1 Ea	8200110
④	TS, Pedestrian, Pedestal Mtd, Rem	1 Ea	8200181
⑤	Guy, Rem	1 Ea	8200167
⑥	Hh, Rem	1 Ea	8190254




- NOTES:**
- CONTACT KIRIT PATEL OF TRAFFIC ENGINEERING, DPW AT (313) 628-5641, 48 HOURS PRIOR TO REMOVAL OF TRAFFIC SIGNAL EQUIPMENT.
  - FOR ALL SIGN TRANSFERS, PLEASE CONTACT SIGN SHOP MANAGER TRAFFIC ENGINEERING, DPW AT (313) 628-2923, 72 HOURS PRIOR TO REMOVING ANY POLE, TO TRANSFER THE EXISTING SIGNS.
  - CONTACT THE SYSTEM OPERATOR OF DTE AT (800) 477-4747 FOR ELECTRICAL SERVICE CONNECTION.
  - ALL REMOVED TRAFFIC SIGNAL EQUIPMENTS SHALL BE SALVAGED IN REUSABLE CONDITION AND SHALL BECOME PROPERTY OF DPW (DEPARTMENT OF PUBLIC WORKS). ALL REMOVED MATERIAL WILL BE STORED ON SITE FOR PICKUP BY DPW. ALL MATERIAL LEFT FOR THE CONTRACTOR WILL BECOME THE RESPONSIBILITY OF THE CONTRACTOR FOR DISPOSAL AWAY FROM THE SITE.
  - ALL FOUNDATIONS THAT ARE TO BE REMOVED, SHALL BE REMOVED FULL DEPTH. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVE THAT THE FOUNDATIONS HAVE BEEN COMPLETELY REMOVED.



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DETROIT, MI 48266  
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www.smithgroup.com

**City of Detroit**

Conant St at Charles St  
Signal Modernization - Removal Plan

REVISIONS	
3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

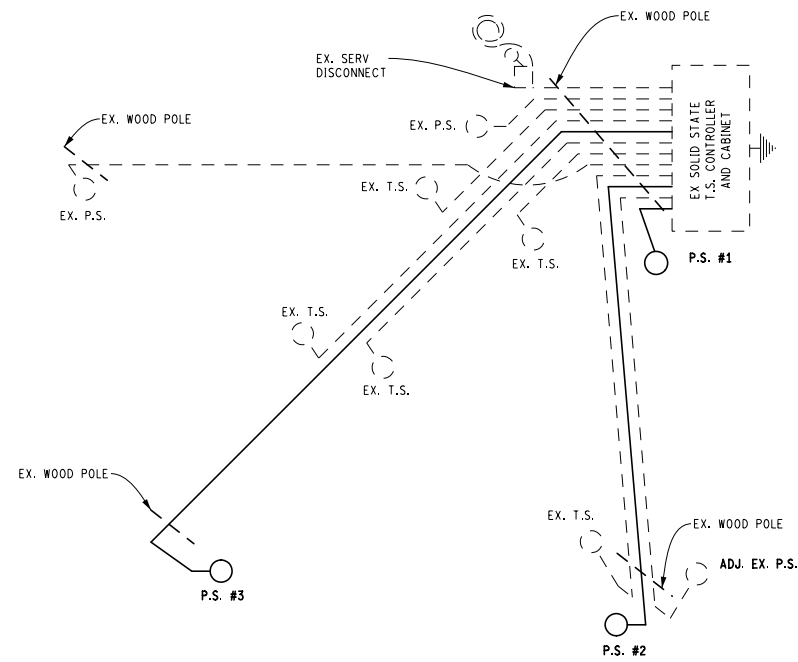
Drawn By	KJS
Designer	DW
Reviewer	JJP
Manager	LCM

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SHEET NO.  
**C607**

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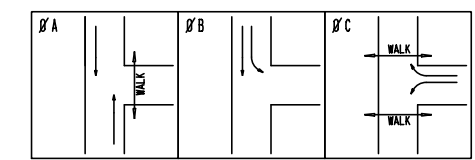
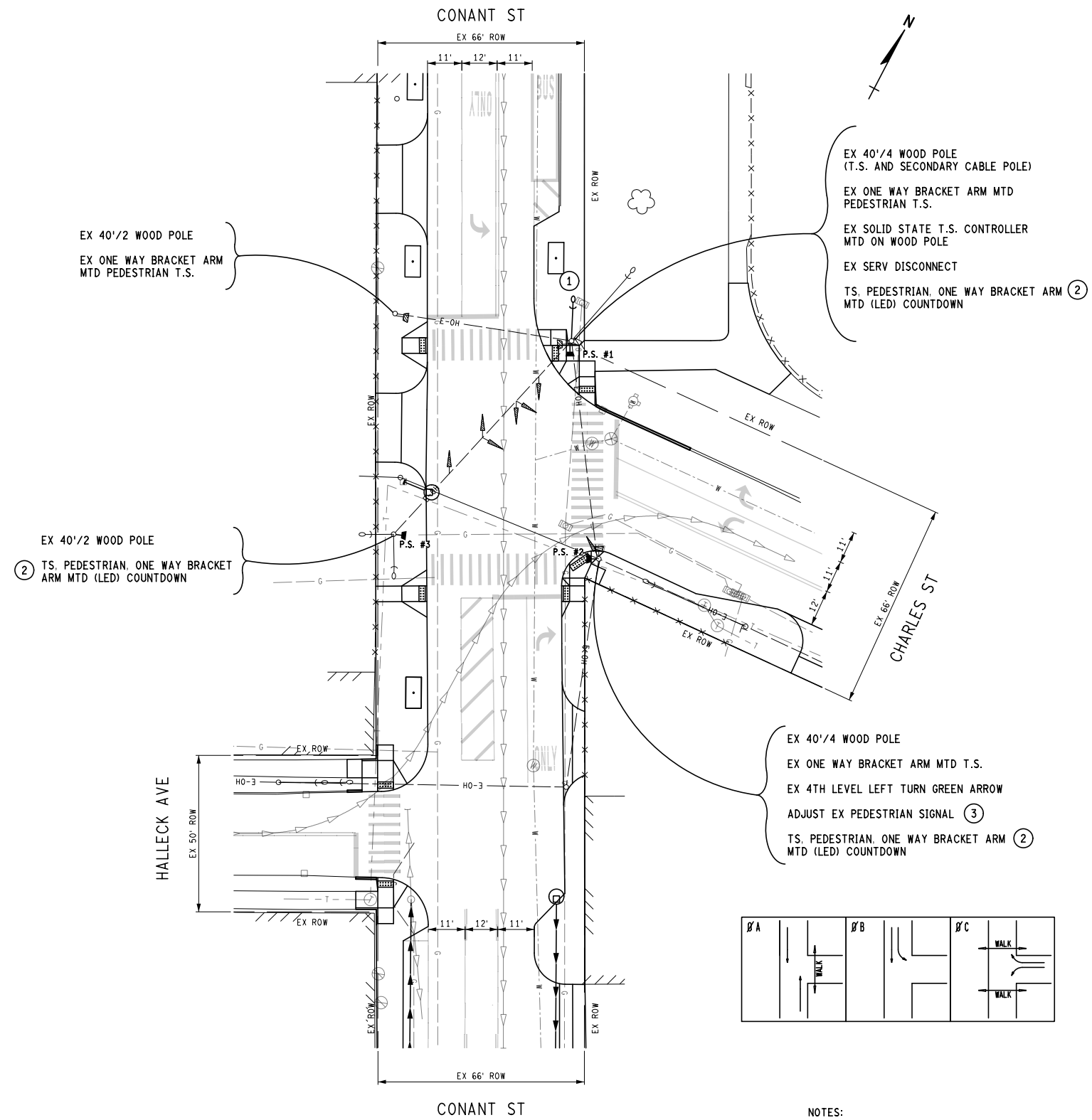
**WIRING DIAGRAM**  
N.T.S.

TS/PS HEAD TYPE	CABLE TYPE
1W3C TS	1-7/C#16 PJ
2W3C TS	1-10/C#16 PJ
3W3C TS	1-12/C#16 PJ
4W3C TS	2-10/C#16 PJ
1W1S PS	1-5/C#16 PJ
1W2S PS	1-5/C#16 PJ
2W1S PS	1-7/C#16 PJ
2W2S PS	1-7/C#16 PJ
CASE SIGN	1-3/C#16 PJ
PUSHBUTTON	1-2/C#12 SHIELDED (IMSA 50-2)

LIST OF MATERIAL			
No.	ITEM	QUANTITIES	ITEM CODE
①	Strut Guy	1 Ea	8200168
②	TS, Pedestrian, One Way Bracket Arm Mtd (LED) Countdown	3 Ea	8200336
③	TS Head, Adj	1 Ea	8200345



L.E.D.  
COUNT DOWN HEAD



- NOTES:
- CONTACT KIRIT PATEL OF TRAFFIC ENGINEERING, DPW AT (313) 628-5641, 48 HOURS PRIOR TO ACTIVATION OF NEW TRAFFIC SIGNALS.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE CONTROLLER, AND WIRING THE CABINET. TIMING PERMITS CAN BE OBTAINED BY CONTACTING KIRIT PATEL, (313) 628-5641, OF THE CITY OF DETROIT DPW, TRAFFIC ENGINEERING DIVISION.
  - EXACT LOCATIONS FOR SUPPORT POSTS SHALL BE DETERMINED BY THE ENGINEER.
  - COORDINATE SIDEWALK AND SIGNAL CONSTRUCTION.

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**City of Detroit**

Conant St at Charles St  
Signal Modernization - Construction Plan

REVISIONS	
3/20/2020	100% CD
3/8/2020	95% CD
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12/10/2019	30% CD

Drawn By: KJS  
Designer: DW  
Reviewer: JJP  
Manager: LCM

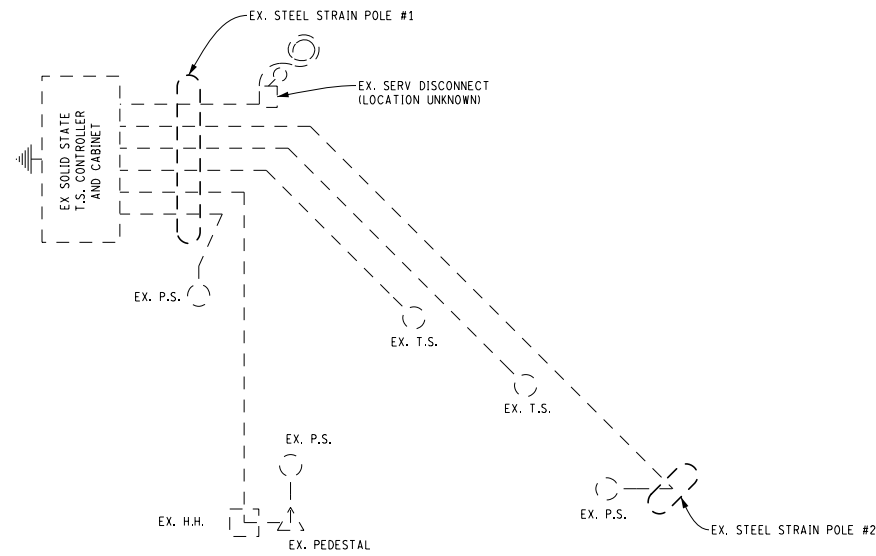
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PROJECT NO.  
**191176**

SHEET NO.

**C608**





**WIRING DIAGRAM**

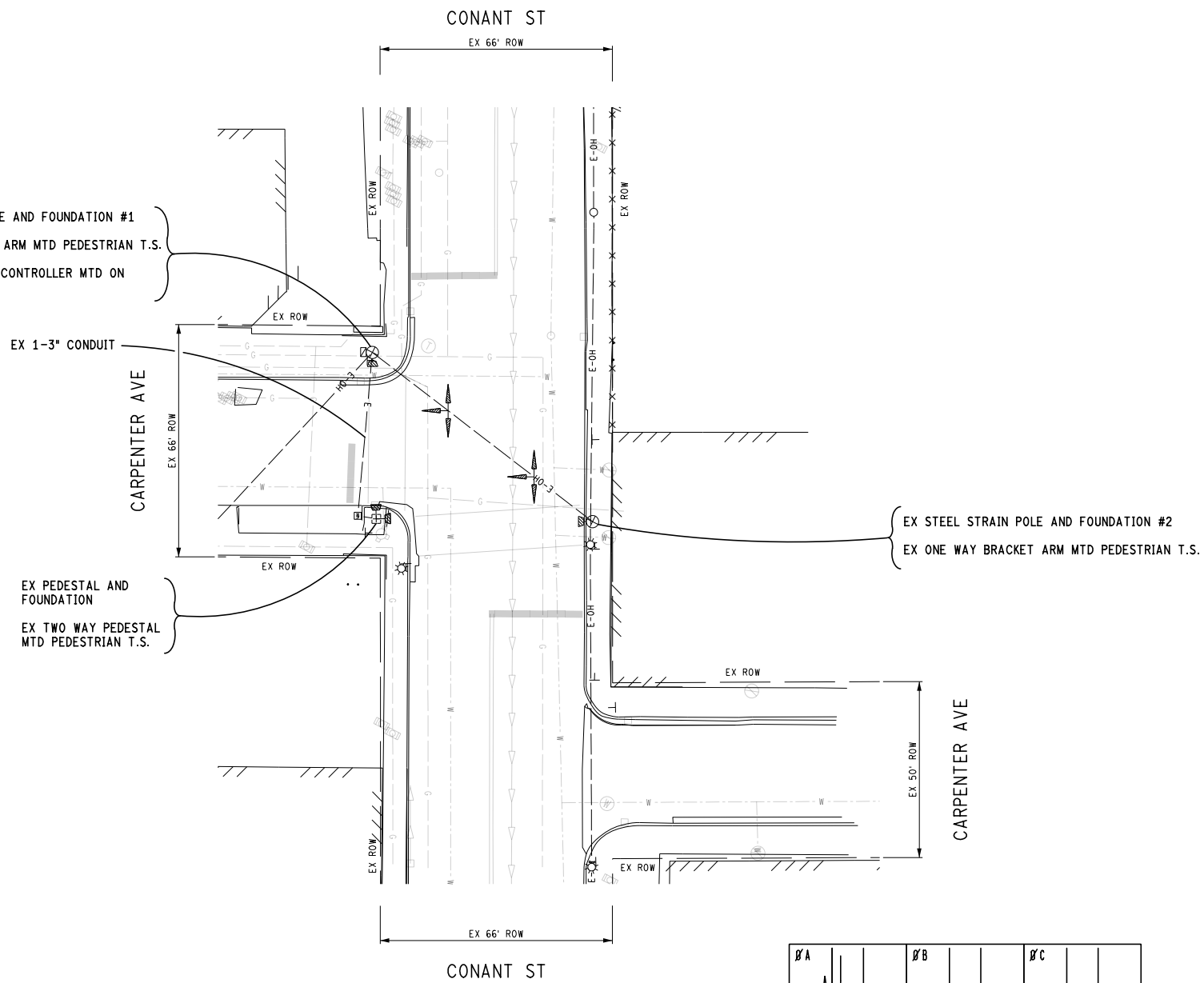
N.T.S.

NOTE:  
RECORD DRAWINGS ARE INCOMPLETE AND DO NOT SHOW  
EXISTING WIRING DIAGRAM.

EX STEEL STRAIN POLE AND FOUNDATION #1  
EX ONE WAY BRACKET ARM MTD PEDESTRIAN T.S.  
EX SOLID STATE T.S. CONTROLLER MTD ON  
STRAIN POLE

EX 1-3" CONDUIT

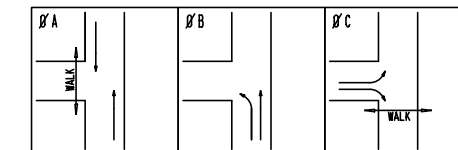
EX PEDESTAL AND  
FOUNDATION  
EX TWO WAY PEDESTAL  
MTD PEDESTRIAN T.S.



CONANT ST

**PLAN**

SCALE: 1"=20'



NOTES:

- CONTACT KIRIT PATEL OF TRAFFIC ENGINEERING, DPW AT (313) 628-5641, 48 HOURS PRIOR TO REMOVAL OF TRAFFIC SIGNAL EQUIPMENT.
- FOR ALL SIGN TRANSFERS, PLEASE CONTACT SIGN SHOP MANAGER TRAFFIC ENGINEERING, DPW AT (313) 628-2923, 72 HOURS PRIOR TO REMOVING ANY POLE, TO TRANSFER THE EXISTING SIGNS.
- CONTACT THE SYSTEM OPERATOR OF DTE AT (800) 477-4747 FOR ELECTRICAL SERVICE CONNECTION.
- ALL REMOVED TRAFFIC SIGNAL EQUIPMENTS SHALL BE SALVAGED IN REUSABLE CONDITION AND SHALL BECOME PROPERTY OF DPW (DEPARTMENT OF PUBLIC WORKS). ALL REMOVED MATERIAL WILL BE STORED ON SITE FOR PICKUP BY DPW. ALL MATERIAL LEFT FOR THE CONTRACTOR WILL BECOME THE RESPONSIBILITY OF THE CONTRACTOR FOR DISPOSAL AWAY FROM THE SITE.
- ALL FOUNDATIONS THAT ARE TO BE REMOVED, SHALL BE REMOVED FULL DEPTH. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVE THAT THE FOUNDATIONS HAVE BEEN COMPLETELY REMOVED.

REVISIONS

3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

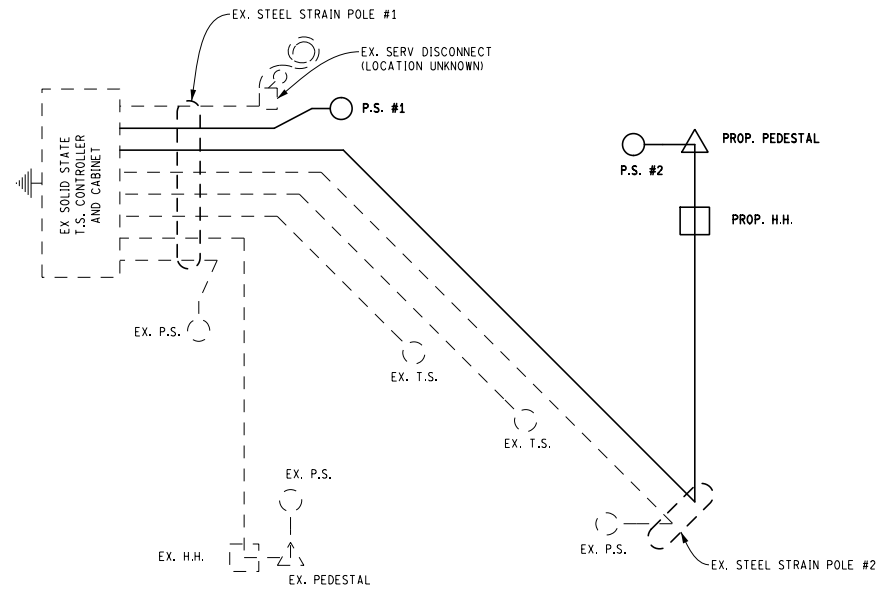
Drawn By: KJS  
Designer: DW  
Reviewer: JJP  
Manager: LCM

Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO.  
**191176**

SHEET NO.

**C609**



**WIRING DIAGRAM**

N.T.S.

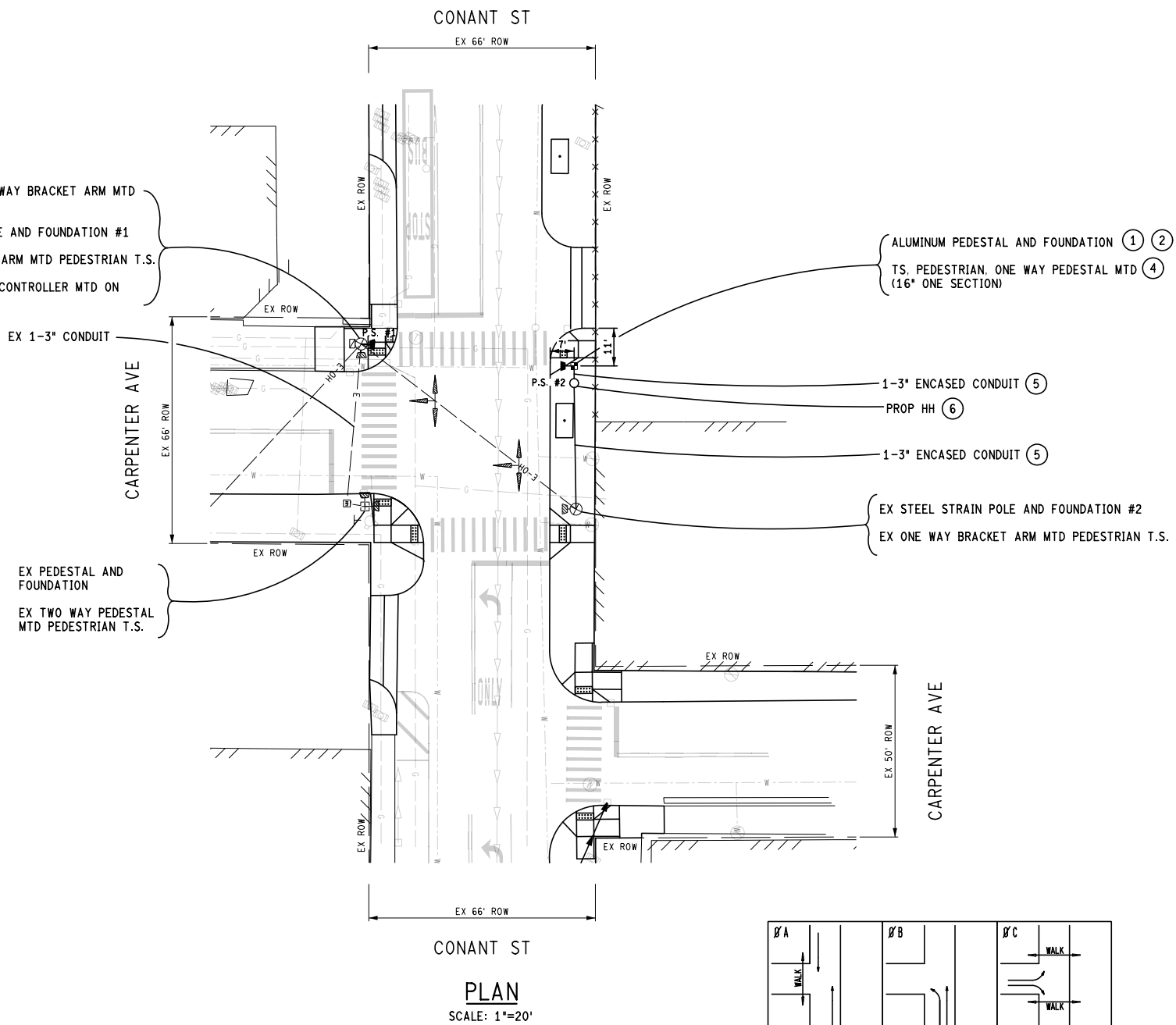
NOTE:  
RECORD DRAWINGS ARE INCOMPLETE AND DO NOT SHOW  
EXISTING WIRING DIAGRAM.

TS/PS HEAD TYPE	CABLE TYPE
1W3C TS	1-7/C#16 PJ
2W3C TS	1-10/C#16 PJ
3W3C TS	1-12/C#16 PJ
4W3C TS	2-10/C#16 PJ
1W1S PS	1-5/C#16 PJ
1W2S PS	1-5/C#16 PJ
2W1S PS	1-7/C#16 PJ
2W2S PS	1-7/C#16 PJ
CASE SIGN	1-3/C#16 PJ
PUSHBUTTON	1-2/C#12 SHIELDED (IMSA 50-2)

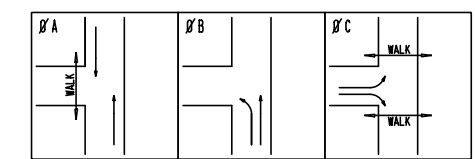
LIST OF MATERIAL			
No.	ITEM	QUANTITIES	ITEM CODE
①	Pedestal, Alum, Modified	1 Ea	8207050
②	Pedestal, Fdn, Modified	1 Ea	8207050
③	TS, Pedestrian, One Way Bracket Arm Mtd (LED) Countdown	1 Ea	8200336
④	TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown	1 Ea	8200345
⑤	Conduit, Encased, 1.3 inch, Modified	45 Ft	8197001
⑥	Hh, Round, Modified	1 Ea	8197050

NOTE:  
COST OF CONNECTION OF PROPOSED CONDUIT TO STEEL STRAIN POLE #2 SHALL  
BE INCLUDED IN THE PAY ITEM: CONDUIT, ENCASED, 1.3 INCH, MODIFIED.

- ③ TS, PEDESTRIAN, ONE WAY BRACKET ARM MTD (16" ONE SECTION)
- EX STEEL STRAIN POLE AND FOUNDATION #1
- EX ONE WAY BRACKET ARM MTD PEDESTRIAN T.S.
- EX SOLID STATE T.S. CONTROLLER MTD ON STRAIN POLE



**PLAN**  
SCALE: 1"=20'



- NOTES:
- CONTACT KIRIT PATEL OF TRAFFIC ENGINEERING, DPW AT (313) 628-5641, 48 HOURS PRIOR TO ACTIVATION OF NEW TRAFFIC SIGNALS.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE CONTROLLER, AND WIRING THE CABINET. TIMING PERMITS CAN BE OBTAINED BY CONTACTING KIRIT PATEL, (313) 628-5641, OF THE CITY OF DETROIT DPW, TRAFFIC ENGINEERING DIVISION.
  - EXACT LOCATIONS FOR SUPPORT POSTS SHALL BE DETERMINED BY THE ENGINEER.
  - COORDINATE SIDEWALK AND SIGNAL CONSTRUCTION.

**fishbeck**  
Engineers | Architects | Scientists | Constructors

**CITY OF DETROIT**

**CDLZ**  
ENGINEERS - ARCHITECTS - SCIENTISTS  
PLANNERS - SURVEYORS

**SMITHGROUP**  
500 GRIEZWOLD  
SUITE 1700  
DETROIT, MI 48266  
313.983.3600  
www.smithgroup.com

**City of Detroit**

Conant St at Carpenter Ave  
Signal Modernization - Construction Plan

REVISIONS	
3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By: KJS  
Designer: DW  
Reviewer: JJP  
Manager: LCM

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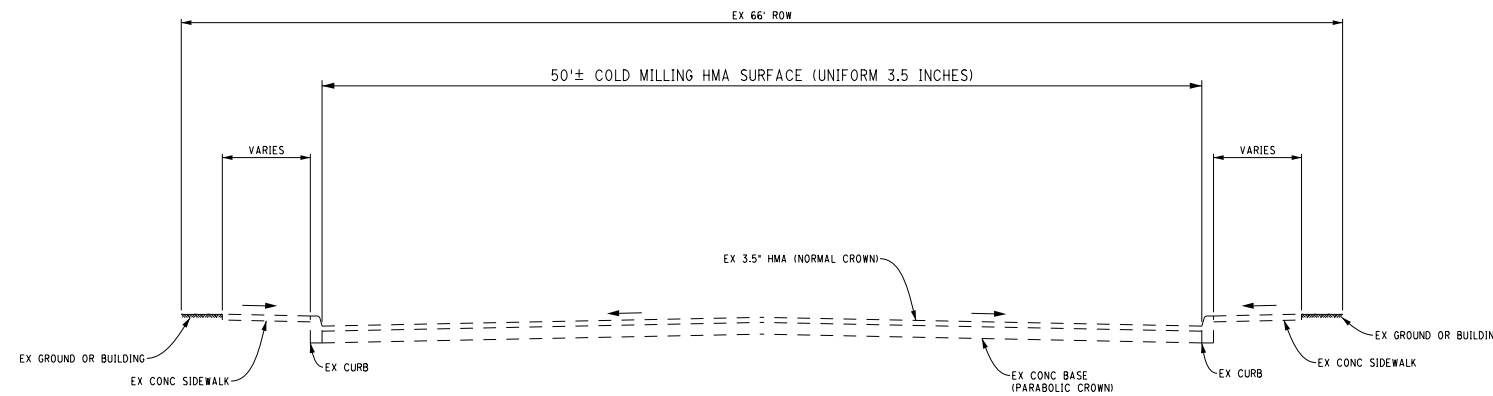
PROJECT NO.  
**191176**

SHEET NO.

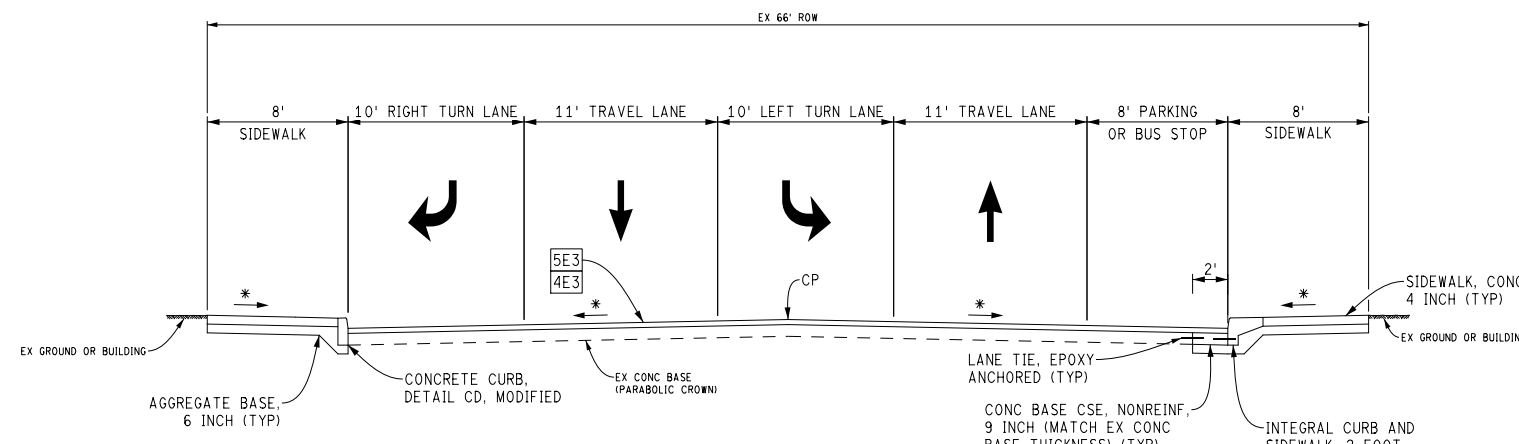
**C610**

NOTES

SEE MISCELLANEOUS DETAIL SHEETS FOR DETAILS NOT SHOWN.

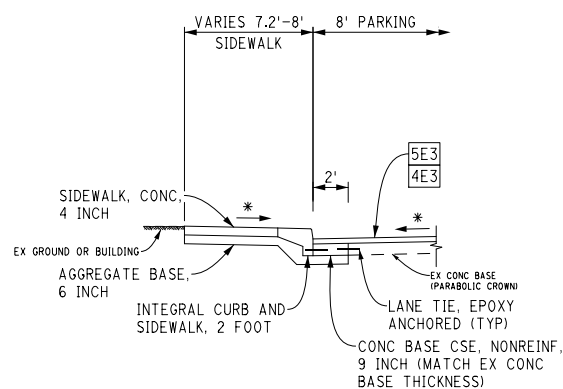


EXISTING CROSS SECTION  
STA 11+37 TO 38+90



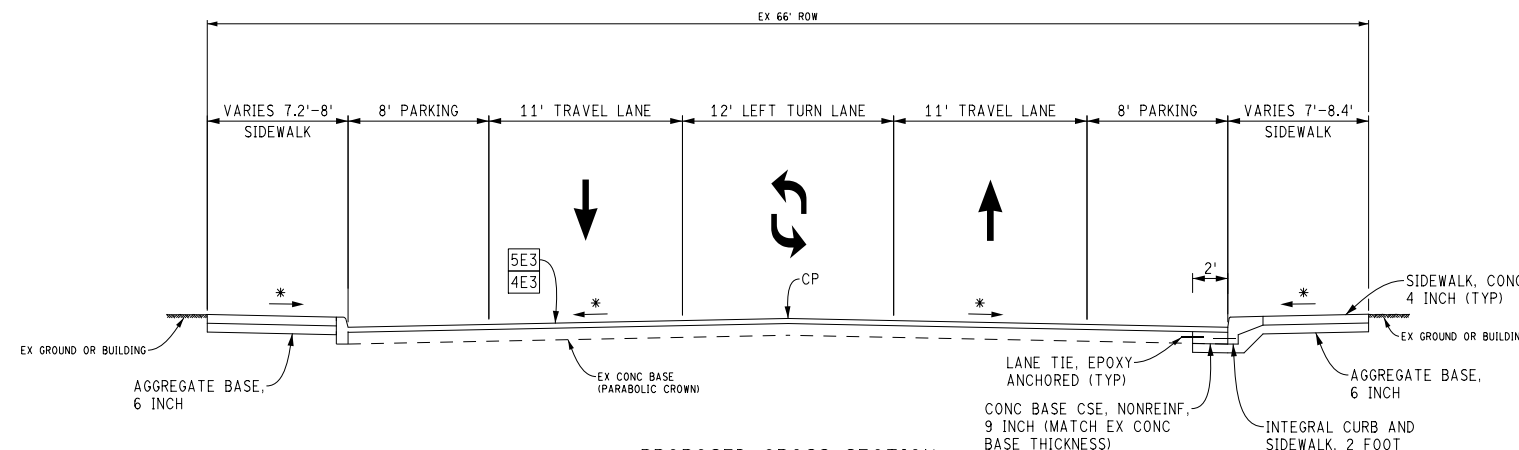
PROPOSED CROSS SECTION  
STA 11+37.2 TO 13+31.0

\*VARIES, SEE GRADING PLANS



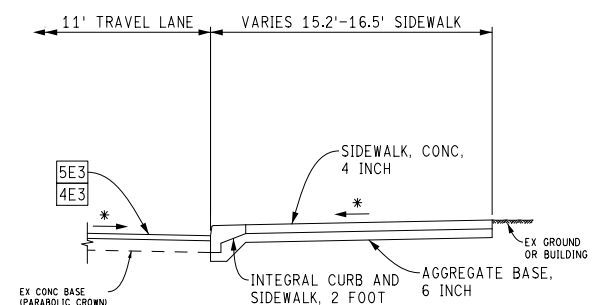
PROPOSED DETAIL SECTION

SECTION APPLIES TO:  
STA 29+04.4 TO 29+86.4  
STA 31+10.0 TO 32+35.4



PROPOSED CROSS SECTION

STA 13+31.0 TO 18+98.5  
STA 21+95.0 TO 23+95.2  
STA 24+99.4 TO 27+79.8  
STA 28+75.4 TO 33+73.0

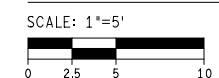


PROPOSED DETAIL SECTION

SECTION APPLIES TO:  
STA 13+31.0 TO 13+79.8 (LEFT)  
STA 14+49.5 TO 14+69.0 (LEFT)  
STA 15+94.4 TO 16+90.0 (LEFT)  
STA 23+59.9 TO 23+95.2 (LEFT)  
STA 26+26.3 TO 27+79.8  
STA 26+57.4 TO 27+10.0 (LEFT)  
STA 28+75.4 TO 28+90.4  
STA 28+75.4 TO 29+04.4 (LEFT)  
STA 29+77.4 TO 30+81.8  
STA 29+86.4 TO 31+10.0 (LEFT)  
STA 32+35.4 TO 33+73.0 (LEFT)  
STA 33+07.7 TO 33+73.0

HMA APPLICATION ESTIMATE				
IDENT NO	ITEM	RATE LBS PER SYD	PERFORMANCE GRADE	REMARKS
5E3	HMA, 5E3	165	64-22	TOP COURSE (AWI=260)
4E3	HMA, 4E3	220	64-22	LEVELING COURSE
HP	HAND PATCHING	VARIES	64-22	USE HMA, 5E3
	*BOND COAT	0.05-0.15 GAL		

TYPICAL CROSS SECTIONS



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ENGINEERS ARCHITECTS SCIENTISTS  
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500 GRIFFWOLD  
SUITE 1700  
DETROIT, MI 48266  
313.983.3600  
www.smithgroup.com

City of Detroit  
Conant Streetscape

REVISIONS

DATE	DESCRIPTION	BY	APP'D
12/8/2020	100% CD		
3/8/2020	95% CD		
2/4/2020	90% CD		
1/10/2020	80% CD		
12/10/2019	30% CD		

Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

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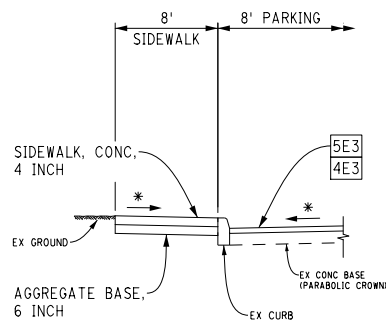
PROJECT NO.  
**191176**

SHEET NO.

**C701**

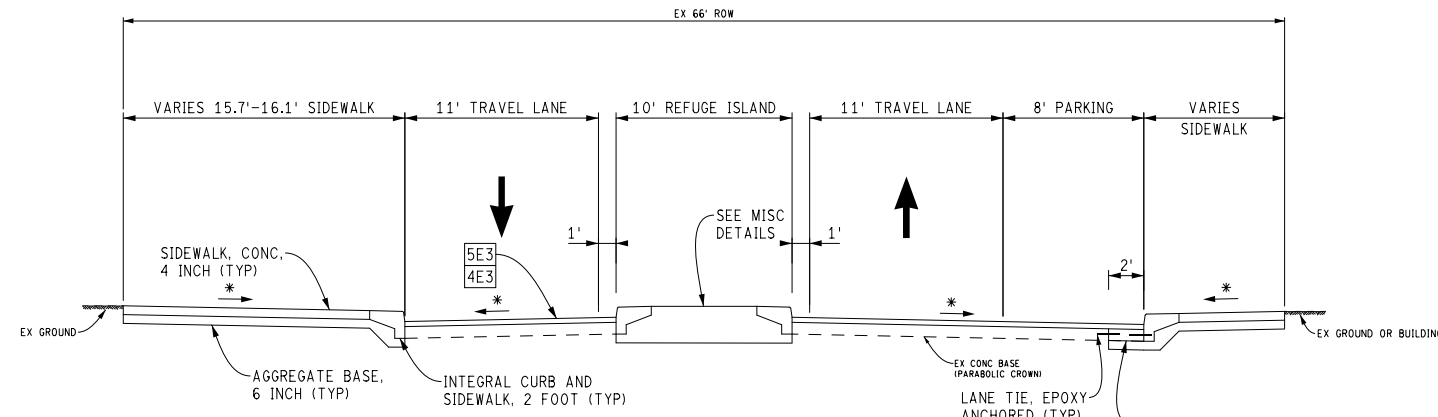
NOTES

SEE MISCELLANEOUS DETAIL SHEETS FOR DETAILS NOT SHOWN.



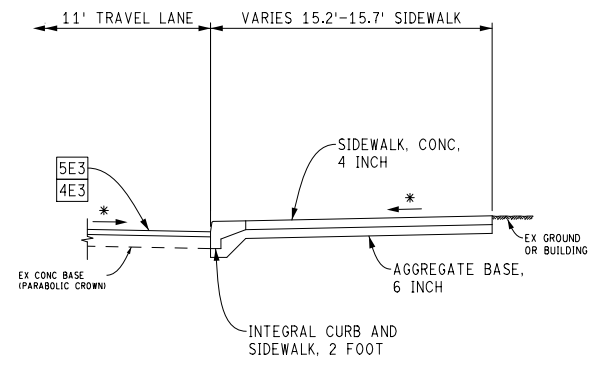
PROPOSED DETAIL SECTION

SECTION APPLIES TO:  
STA 24+37.4 TO 24+99.4



PROPOSED CROSS SECTION

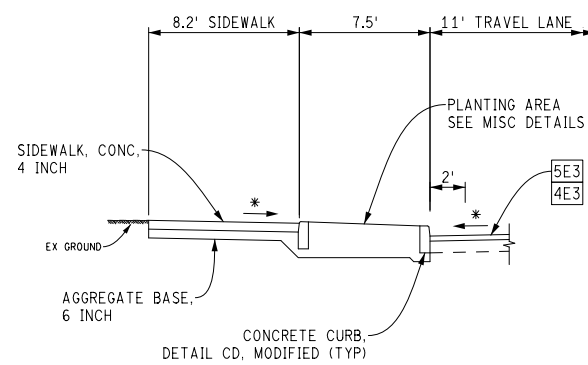
STA 18+98.5 TO 19+69.5  
STA 23+95.2 TO 24+99.4  
STA 33+73.0 TO 33+98.0



PROPOSED DETAIL SECTION

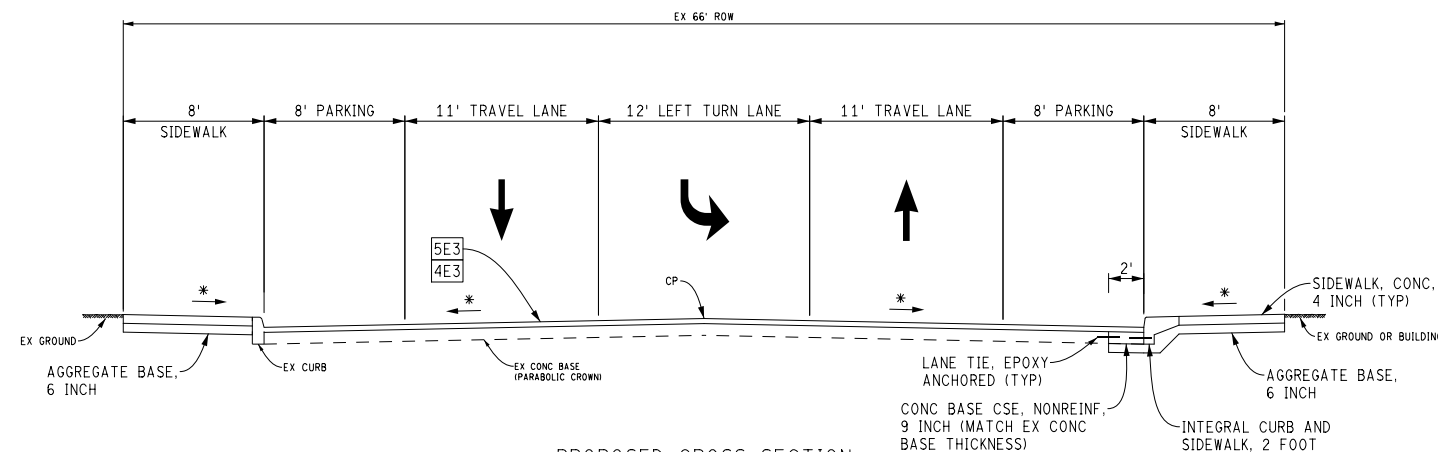
SECTION APPLIES TO:  
STA 19+30.0 TO 19+75.5  
STA 33+70.0 TO 33+98.0

\*VARIES. SEE GRADING PLANS



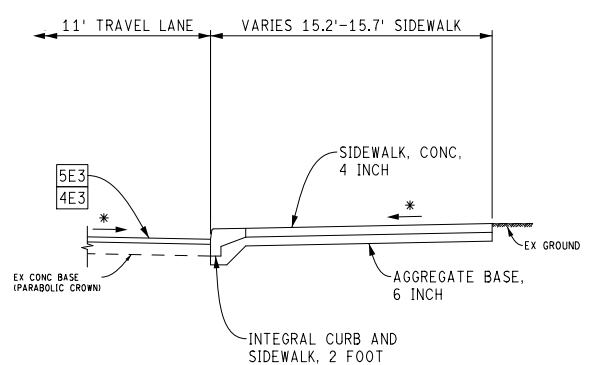
PROPOSED DETAIL SECTION

SECTION APPLIES TO:  
STA 19+72.5 TO 20+12.5



PROPOSED CROSS SECTION

STA 19+69.5 TO 21+95.0

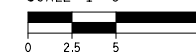


PROPOSED DETAIL SECTION

SECTION APPLIES TO:  
STA 19+69.5 TO 20+43.0  
STA 19+69.5 TO 19+72.5 (LEFT)  
STA 20+12.5 TO 20+94.1 (LEFT)

TYPICAL CROSS SECTIONS

SCALE: 1"=5'



REVISIONS

12/8/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

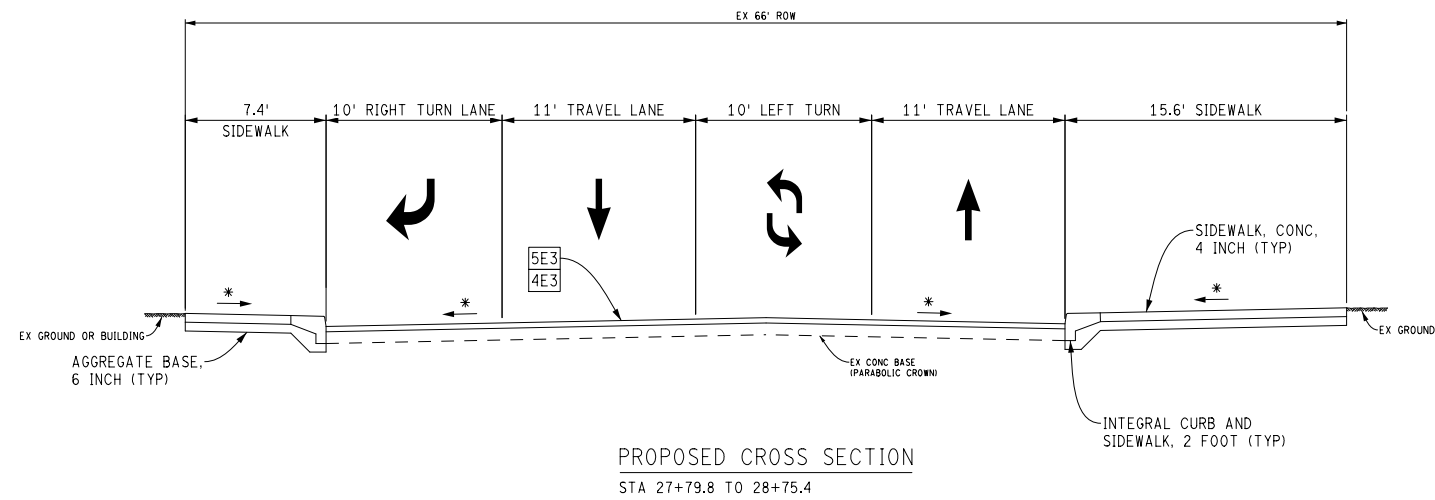
PROJECT NO.  
**191176**

SHEET NO.

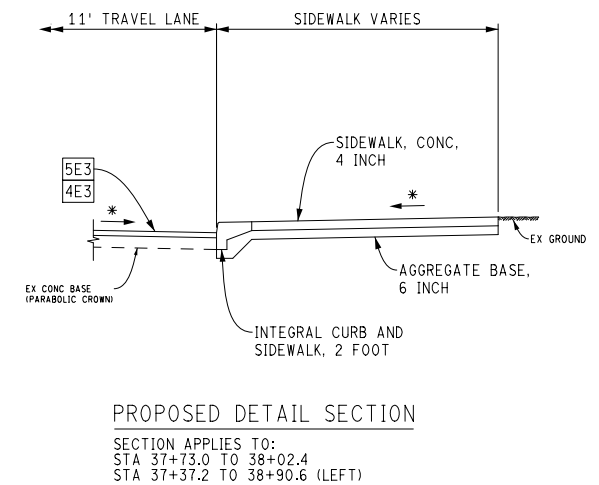
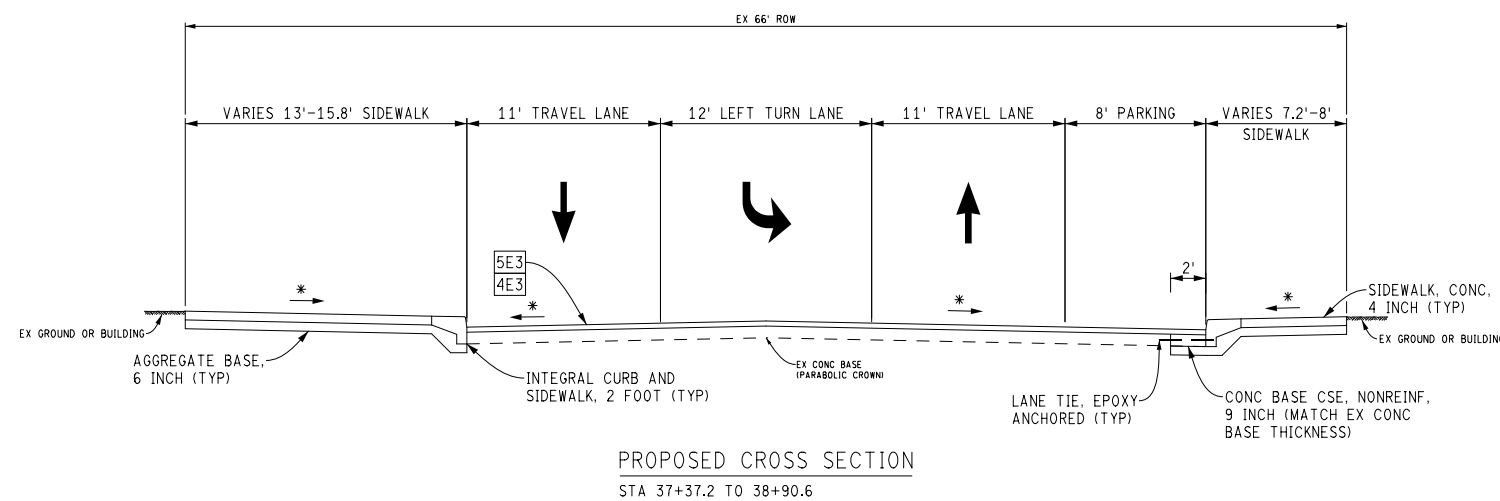
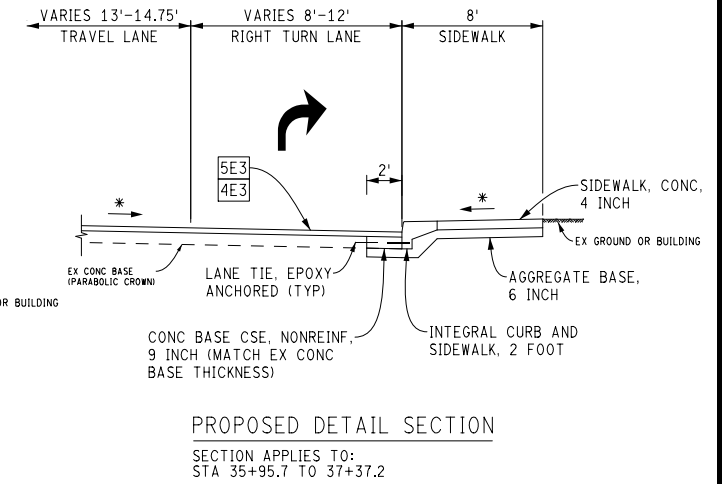
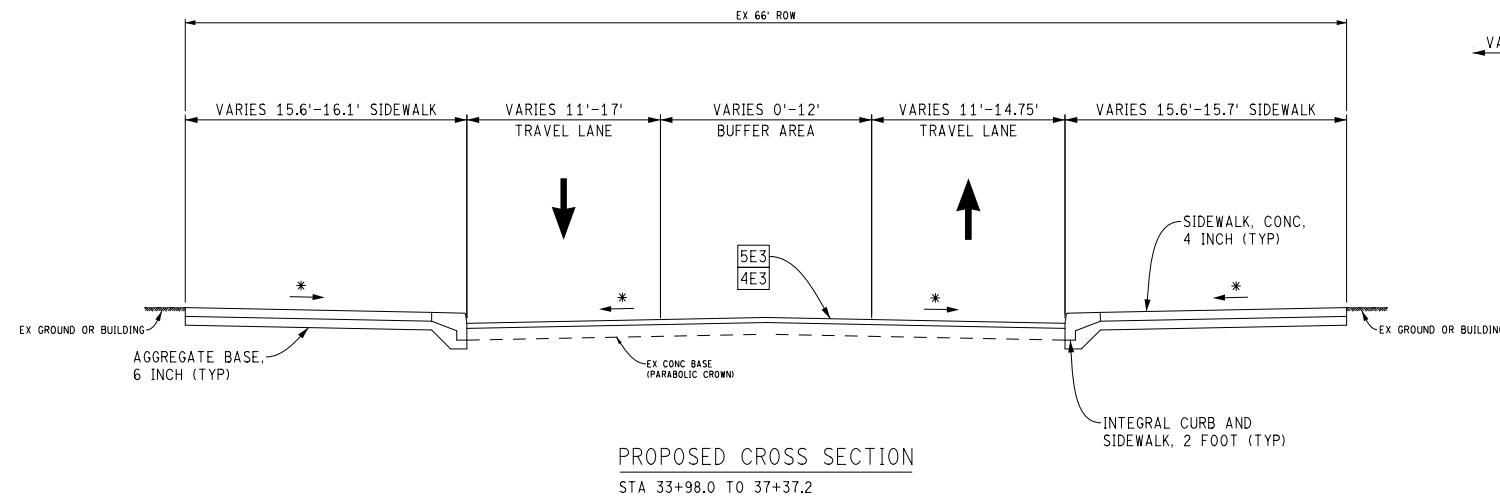
**C702**

NOTES

SEE MISCELLANEOUS DETAIL SHEETS FOR DETAILS NOT SHOWN.

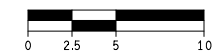


\*VARIES, SEE GRADING PLANS



TYPICAL CROSS SECTIONS

SCALE: 1"=5'



REVISIONS

12/8/2019	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

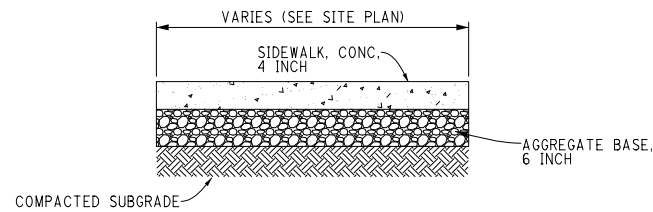
Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

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PROJECT NO.  
**191176**

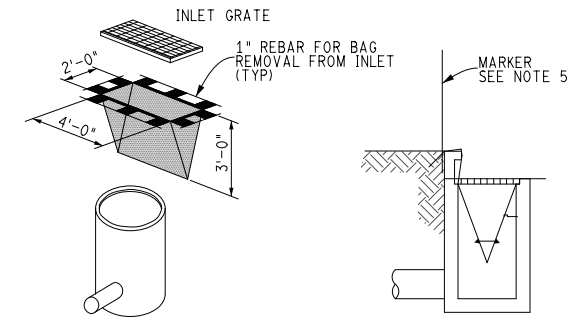
SHEET NO.

**C703**



SIDWALK, CONC, 4 INCH

NOTE:  
 SIDWALK THICKNESS TO BE 8" AT ALL DRIVE ENTRANCES  
 AND 6" AT ALL ADA RAMPS..



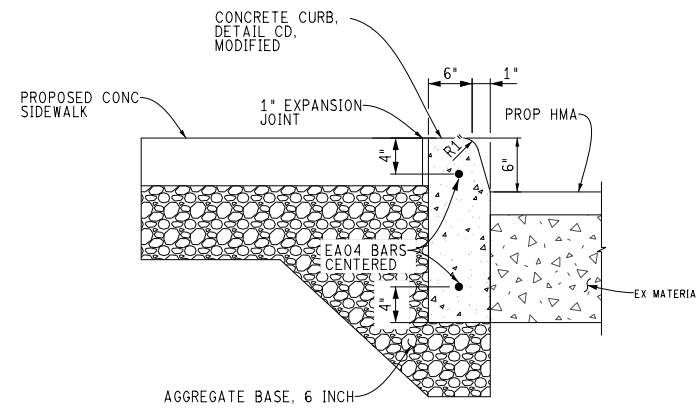
ISOMETRIC VIEW

INSTALLATION DETAIL

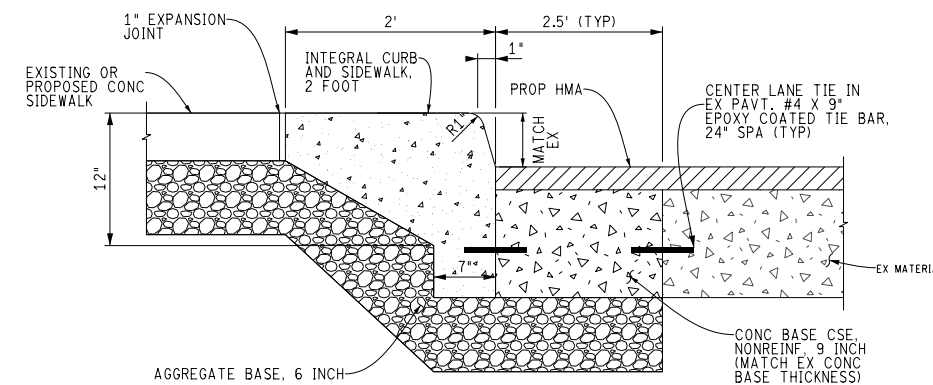
NOTES:

1. PLACE FILTER FABRIC BAG INSIDE THE INLET BENEATH THE GRATE.
2. REPLACE GRATE, WHICH WILL HLD BAG IN PLACE.
3. ANCHOR FILTER BAG SO IT WILL NOT DROP INTO CATCH BASIN.
4. EXTEND FLAPS OF BAG BEYOND THE GRATE. BURY IN SOIL IN EARTH AREAS.
5. IF CATCH BASIN IS IN A LOW DEPRESSION - MARK CB LOCATION WITH A MARKER TO ASSIST LOCATING CATCH BASIN IF FLOODING OCCURS.
6. INSPECT DROP INLET FILTERS ROUTINELY AND AFTER EACH RAIN EVENT.
7. REPLACE DAMAGED FILTER BAGS IMMEDIATELY.
8. CLEAN AND/OR REPLACE FILTER BAG WHEN HALF FULL. REPLACE CLOGGED FABRIC IMMEDIATELY.
9. VACUUM OUT CATCH BASIN SUMP IF FILTER BAG TEARS.
10. REMOVE ENTIRE PROTECTIVE MECHANISM WHEN UPGRADIENT AREAS ARE STABILIZED AND STREETS HAVE BEEN SWEEPED AND/OR DIRECTED BY THE ENGINEER OR OWNER.

EROSION CONTROL, INLET PROTECTION,  
 SEDIMENT TRAP



CONCRETE CURB, DETAIL CD, MODIFIED



INTEGRAL CURB AND SIDEWALK, 2 FOOT

NOTE:

CONSTRUCT CURB PER CITY OF DETROIT DETAIL STANDARD C-4550 EXCEPT AS SHOWN AT THE LOCATIONS BELOW:  
 STA 11+37 TO 14+44 (RIGHT)  
 STA 15+93 TO 19+30 (RIGHT)  
 STA 20+42 TO 25+30 (RIGHT)  
 STA 28+90 TO 29+78 (RIGHT)  
 STA 30+81 TO 33+08 (RIGHT)  
 STA 36+40 TO 37+25 (RIGHT)  
 STA 38+02 TO 38+90 (RIGHT)

MISCELLANEOUS DETAILS  
 NO SCALE

REVISIONS

11/8/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

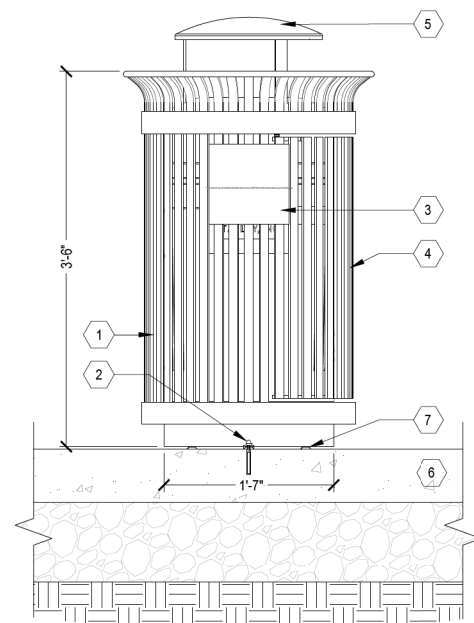
Drawn By: KJS  
 Designer: KJS  
 Reviewer: JJP  
 Manager: LCM

Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO.  
 191176

SHEET NO.

**C704**

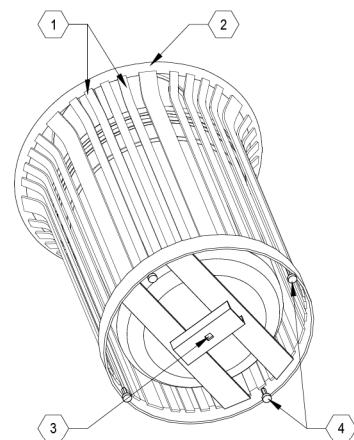


FRONT ELEVATION

- 1 VICTOR STANLEY MODEL SD-42 TRASH RECEPTACLE
- 2 1/2" Ø X 3" S.S. VANDAL RESISTANT ANCHOR BOLT, TYP.
- 3 CUSTOM STEEL PLAQUE WITH PRESSURE SENSITIVE OUTDOOR DECAL OF CITY OF DETROIT LOGO - ONE PLAQUE ON OPPOSITE SIDE OF SELF-CLOSING DOOR.
- 4 STANDARD LOCKABLE LATCH
- 5 RAIN BONNET LID
- 6 \_SIDEWALK, CONC, 4 INCH
- 7 PROVIDE ADJUSTABLE GLIDES

NOTES:

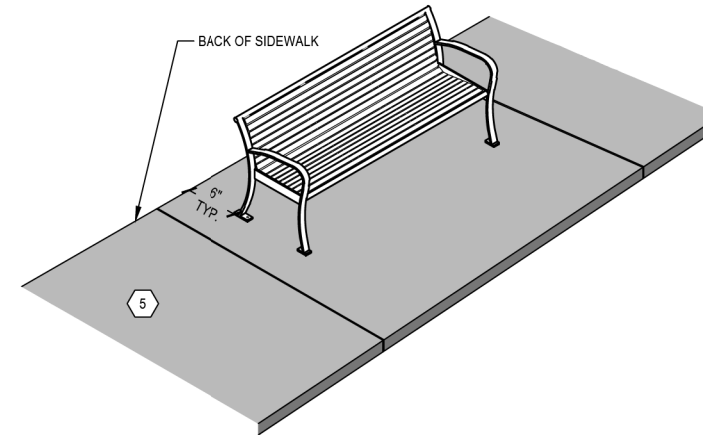
1. TRASH RECEPTACLE TO BE VICTOR STANLEY, MODEL SD-42 WITH RAIN BONNET LID, 36 GALLON CAPACITY.
2. ALL FABRICATED COMPONENTS ARE STEEL HOT-DIPPED GALVANIZED WITH BLACK POWDER COAT FINISH.
3. SURFACE MOUNT USING (1) 1/2" Ø X 3" S.S. THREADED ANCHOR RODS. FILL HOLES WITH ANCHORING ADHESIVE/ EPOXY.
4. SEE LAYOUT PLANS FOR TRASH RECEPTACLE LOCATIONS. CONFIRM ALL TRASH RECEPTACLE LOCATIONS AND ORIENTATIONS WITH ENGINEER PRIOR TO INSTALLATION.
5. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
6. PROVIDE HIGH DENSITY PLASTIC LINER. DRILL 3/8" Ø DRAINAGE HOLES IN BOTTOM OF LINER.



AXONOMETRIC VIEW- SURFACE MOUNTING

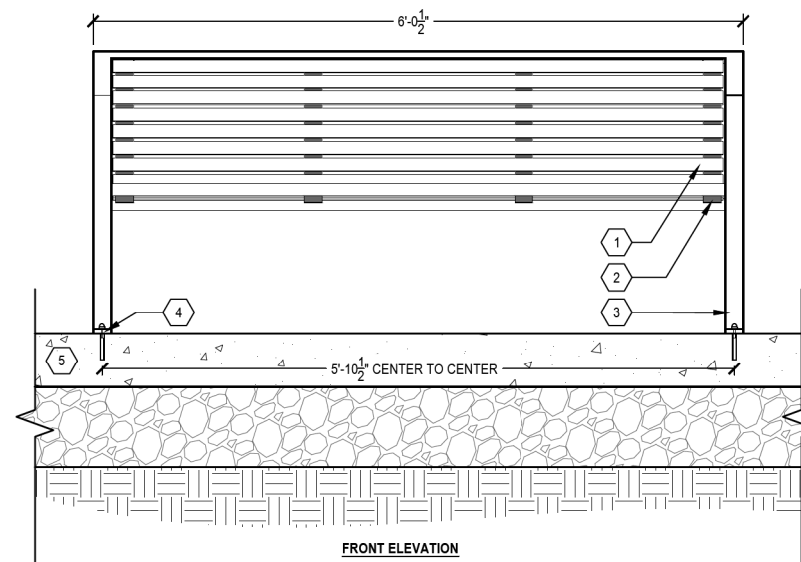
- 1 3/8" X 1" VERTICAL SOLID STEEL BARS
- 2 5/8" SOLID STEEL TOP RING
- 3 3/4" SQUARE CENTER ANCHOR BOLT HOLD
- 4 LEVELING FEET WITH A 3/8" Ø THREADED STEEL SHAFT

TRASH RECEPTICLE DETAILS



NOTES:

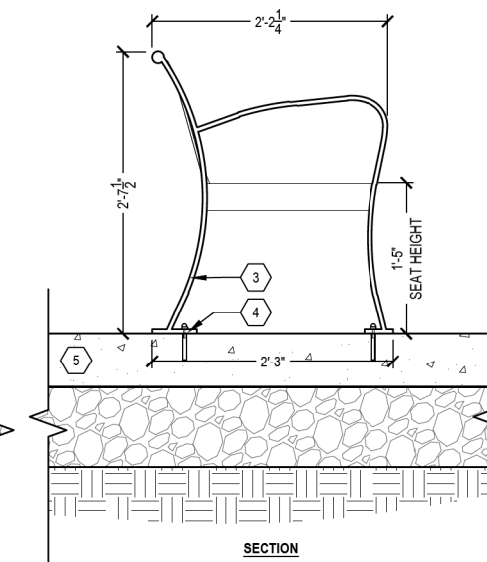
1. WHEN LOCATED ON SIDEWALK, BACK OF BENCH TO BE 6" FROM BACK OF WALK. WHEN LOCATED ON BUS ISLAND, BACK OF BENCH SHALL BE 6" FROM FACE OF PEDESTRIAN GUARDRAIL.
2. CONFIRM ALL BENCH LOCATIONS AND ORIENTATIONS ON-SITE WITH ENGINEER PRIOR TO INSTALLATION.



FRONT ELEVATION

- 1 STEEL SLATS ARE FORMED FROM 1/4" X 1-1/2" SOLID STEEL BARS
- 2 1/4" x 2" BRACES FOR ADDITIONAL SUPPORT
- 3 FINISHED END UNIT IS MADE FROM 1/2" x 2" SOLID STEEL BAR
- 4 1/2" DIA. X 3" S.S. VANDAL RESISTANT ANCHOR BOLT, TYP.
- 5 \_SIDEWALK, CONC, 4 INCH

BENCH DETAILS



SECTION

NOTES:

1. BENCH TO BE VICTOR STANLEY STEELSITES RB COLLECTION, MODEL 'RB-28', 8'-0" LENGTH.
2. ALL FABRICATED COMPONENTS ARE STEEL HOT-DIPPED GALVANIZED WITH BLACK POWDER COAT FINISH.
3. BENCH TO BE SURFACE MOUNTED WITH 1/2" Ø S.S. VANDAL RESISTANT ANCHOR BOLTS (4) PER BENCH
4. SEE LAYOUT PLANS FOR BENCH LOCATIONS

MISCELLANEOUS DETAILS  
NO SCALE

REVISIONS

12/8/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

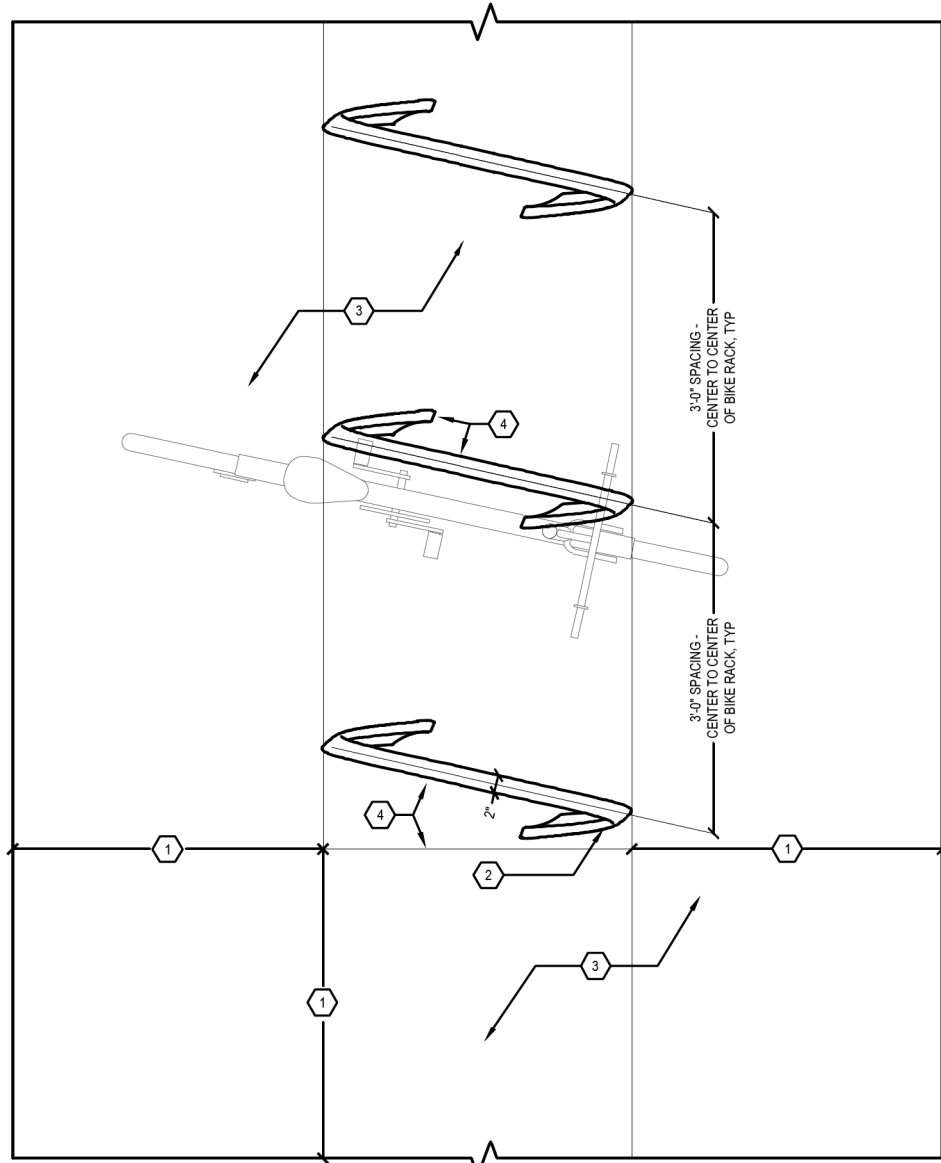
Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

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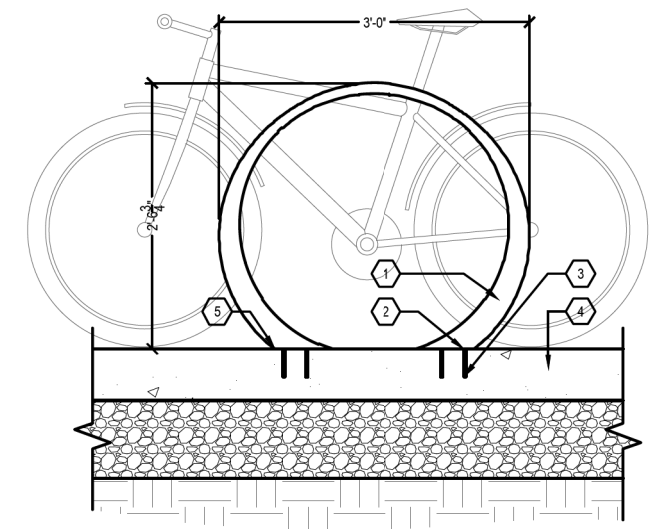
PROJECT NO.  
**191176**

SHEET NO.

**C705**

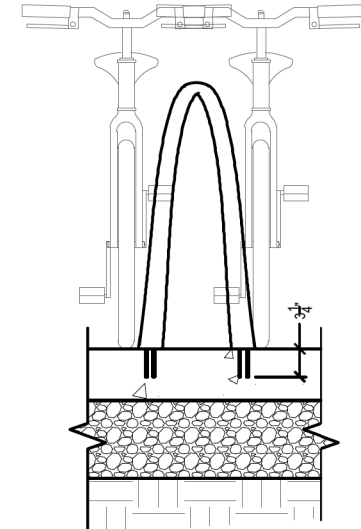


- PLAN - LAYOUT**
- 1 PROVIDE MIN 3'-0" CLEARANCE AROUND ALL SIDES OF BIKE RACK AND ADJACENT WALLS, CURBS, STRUCTURES, AND OTHER OBSTRUCTIONS
  - 2 LOOP BIKE RACK
  - 3 \_SIDEWALK, CONC
  - 4 BIKE RACKS ARE MANUFACTURED WITH A TWIST IN THE ALIGNMENT. LAYOUT BIKE RACKS IN PARALLEL AS SHOWN WITH ANGLE TO ADJACENT BACK OF SIDEWALK, CURB, AND BUILDING AS SHOWN.



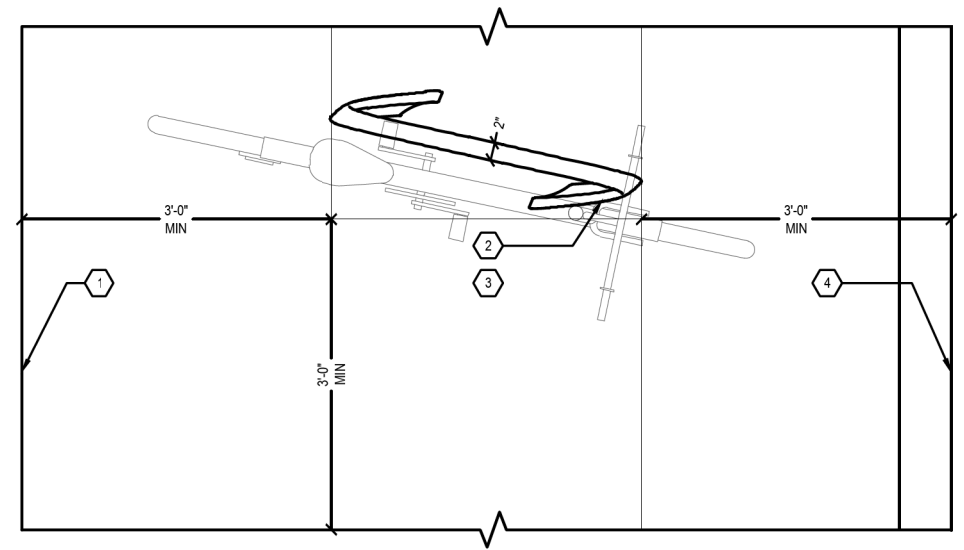
**FRONT ELEVATION**

- 1 LOOP BIKE RACK
- 2 7/16" Ø X 3" S.S. THREADED ANCHOR RODS
- 3 (4) 7/16" DIA. HOLES - 3 1/4" DEEP FOR ANCHOR RODS
- 4 CONCRETE PAVEMENT, SEE PLANS
- 5 BOTTOM OF BIKE RACK TO SET FLUSH ON CONCRETE PAVEMENT

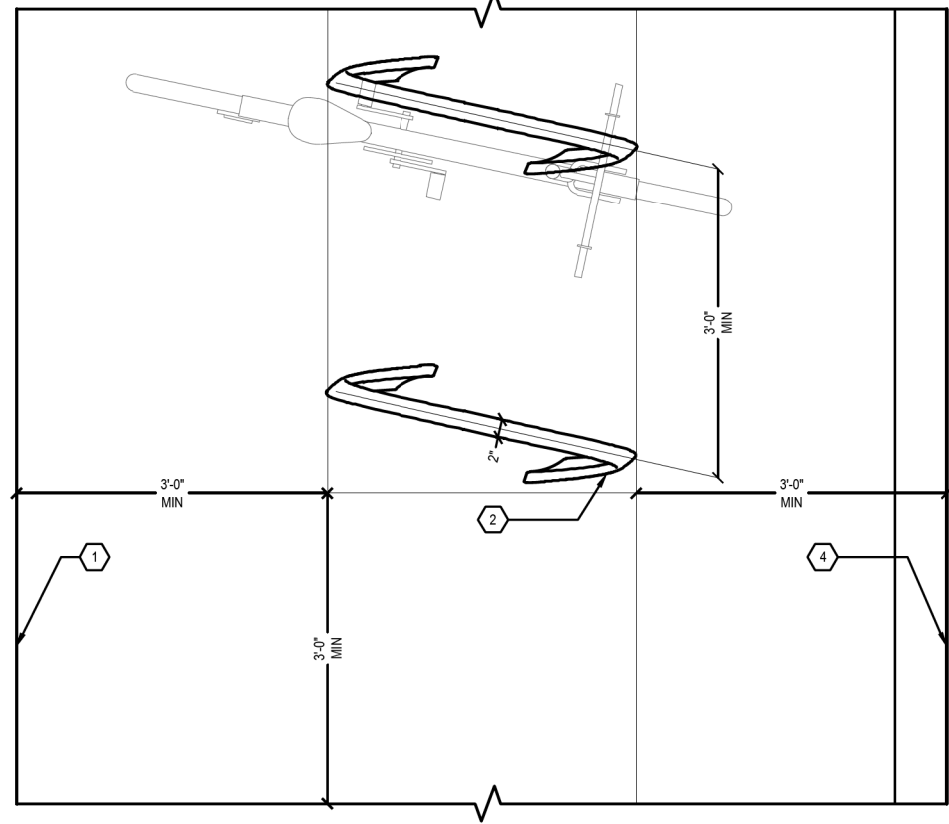


**SECTION**

- NOTES:**
1. BIKE RACK TO BE LANDSCAPE FORMS, 35 COLLECTION, MODEL 'LOOP'.
  2. BIKE RACK IS ALUMINUM CASTING WITH MATTE BLACK POWDER COAT FINISH.
  3. SURFACE MOUNT USING (4) 7/16" Ø X 3" S.S. THREADED ANCHOR RODS. FILL HOLES WITH ANCHORING ADHESIVE/ EPOXY. REMOVE EXCESS EPOXY FROM CONCRETE AND BIKE RACK BEFORE IT CURES.
  4. SEE LAYOUT PLANS FOR BIKE RACK LOCATIONS. CONFIRM LOCATIONS, SPACING, AND ORIENTATION ON-SITE WITH ENGINEER PRIOR TO INSTALLATION.
  5. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
  6. PRIOR TO INSTALLATION CONFIRM WITH ENGINEER THAT AN ACCESSIBLE ADA PEDESTRIAN PATH IS PROVIDED ADJACENT TO BIKE RACKS.



**BIKE RACK DETAILS**



**MISCELLANEOUS DETAILS**  
NO SCALE

**REVISIONS**

12/8/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	60% CD
12/10/2019	30% CD

Drawn By KJS  
Designer KJS  
Reviewer JJP  
Manager LCM

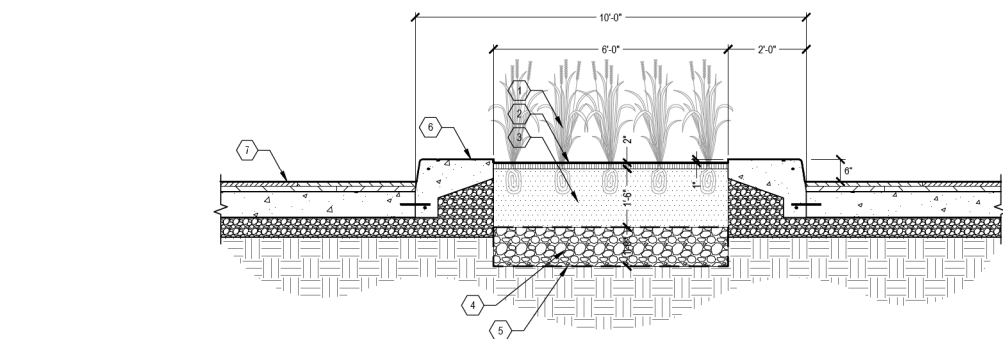
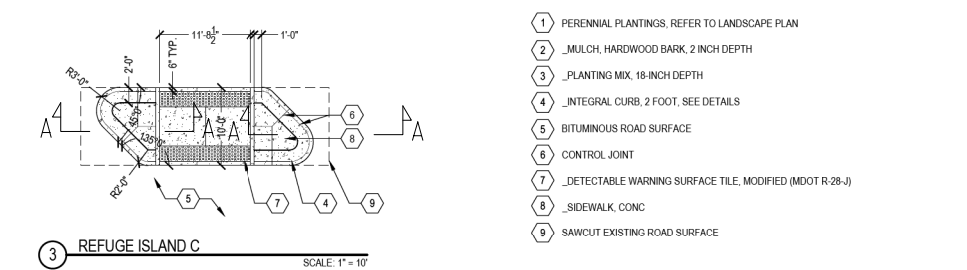
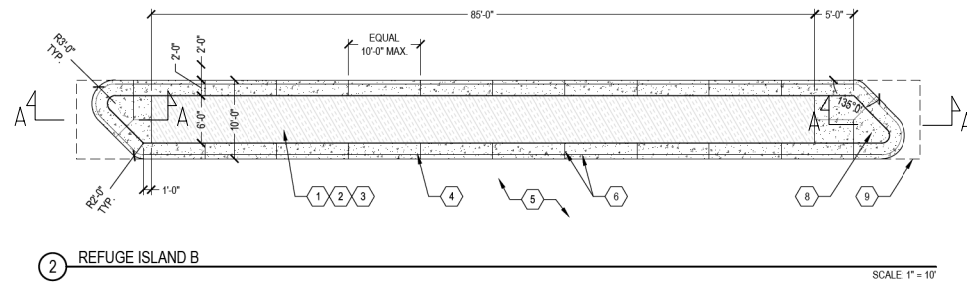
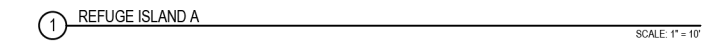
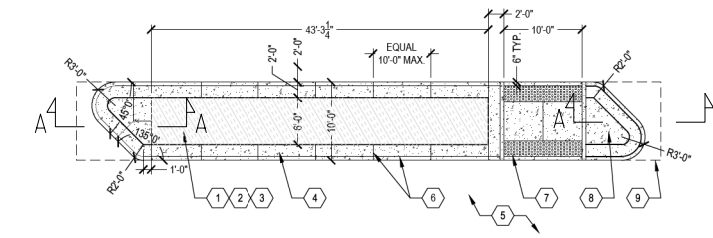
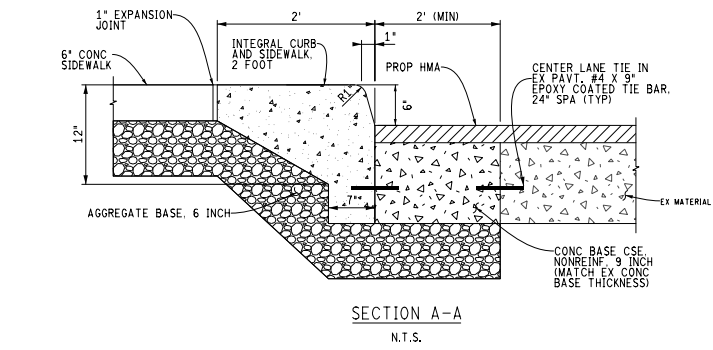
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PROJECT NO.  
**191176**

SHEET NO.

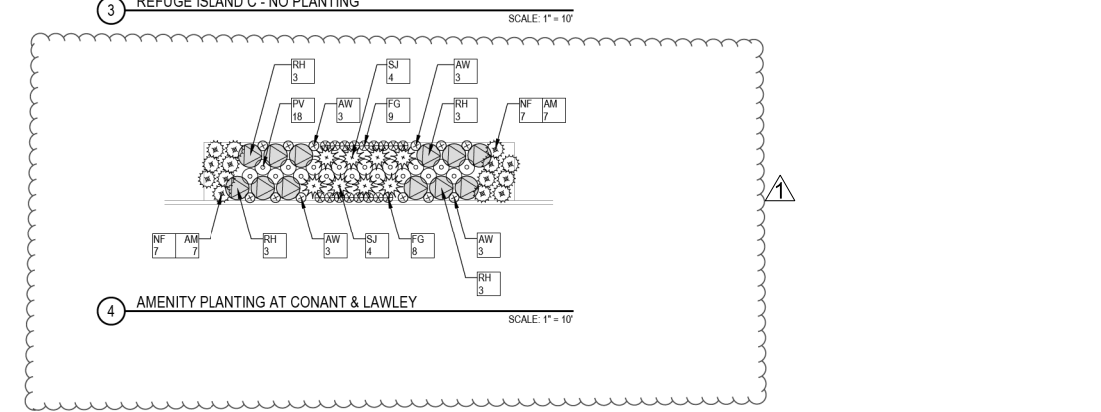
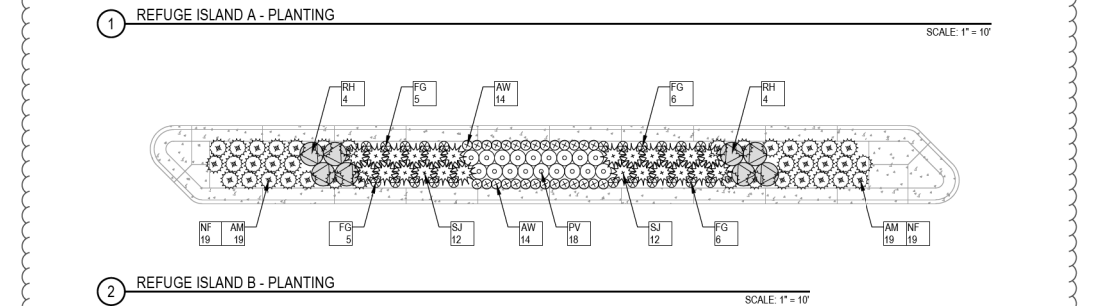
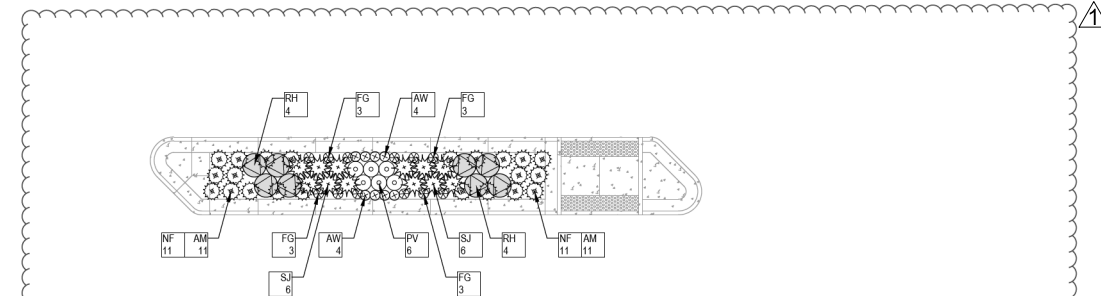
**C706**





- 1 PERENNIAL PLANTINGS, REFER TO LANDSCAPE PLAN
- 2 MULCH, HARDWOOD BARK, 2 INCH DEPTH
- 3 PLANTING MIX, 18-INCH DEPTH
- 4 INTEGRAL CURB, 2 FOOT, SEE DETAILS
- 5 BITUMINOUS ROAD SURFACE
- 6 CONTROL JOINT
- 7 DETECTABLE WARNING SURFACE TILE, MODIFIED (MDOT R-28-J)
- 8 SIDEWALK, CONC
- 9 SAWCUT EXISTING ROAD SURFACE
- 5 GEOTEXTILE SEPARATION FABRIC
- 6 INTEGRAL CURB, 2 FOOT, REFER TO MISCELLANEOUS DETAILS
- 7 BITUMINOUS ROAD SURFACE
- 4 AGGREGATE BASE, DRAINAGE COURSE, 12-INCH DEPTH

4 REFUGE ISLAND SECTION SCALE: 1/2" = 1'



**PLANT SCHEDULE**

Qty.	Abv.	Botanical Name	Common Name	Root	Size	Comments	Spacing
<b>Deciduous Trees</b>							
6	AF	<i>Acer x freemanii</i> 'Celebration'	Celebration Maple	B&B	14" cal.	One central leader, well branched.	As shown
9	GD	<i>Gymnocladus dioica</i> 'Espresso'	Espresso Kentucky Coffeetree	B&B	4" cal.	MALE ONLY (no seed pods), one central leader, well branched.	As shown
9	LE	<i>Nirxus florifer</i>	Frontier Elm	B&B	14" cal.	One central leader, well branched.	As shown
<b>Shrubs, Perennials, Grasses &amp; Groundcovers</b>							
48	AW	<i>Aster</i> 'Wood's Light Blue'	Wood's Light Blue Aster	Cont.	No. 2	Full plant, well rooted.	15" o.c.
74	AM	<i>Allium</i> 'Millenium'	Millenium Allium	Cont.	No. 2	Full plant, well rooted, scatter between NF.	See note
44	SJ	<i>Spiraea japonica</i> 'Gold Mound'	Gold Mound Spiraea	Cont.	No. 3	Full plant, well rooted.	30" o.c.
51	FG	<i>Festuca glauca</i> 'Boulder Blue'	Boulder Blue Fescue	Cont.	No. 2	Full plant, well rooted.	15" o.c.
74	NF	<i>Nepeta x faassenii</i> 'LimeLight'	LimeLight Catmint	Cont.	No. 2	Full plant, well rooted.	30" o.c.
42	PV	<i>Panicum virgatum</i> 'Shenandoah'	Shenandoah Switchgrass	Cont.	No. 2	Full plant, well rooted.	24" o.c.
28	RH	<i>Rosa</i> 'Horcogill At Last'	At Last Rose	B&B	124"	Matched specimens.	36" o.c.

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**GDLZ**  
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PLANNERS - SURVEYORS

**SMITHGROUP**  
500 GRISWOLD  
SUITE 1700  
DETROIT, MI 48266  
313.983.3600  
www.smithgroup.com

**City of Detroit**

Conant Streetscape

**REVISIONS**

Date	Description
5/5/2020	Addendum No. 1
3/8/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

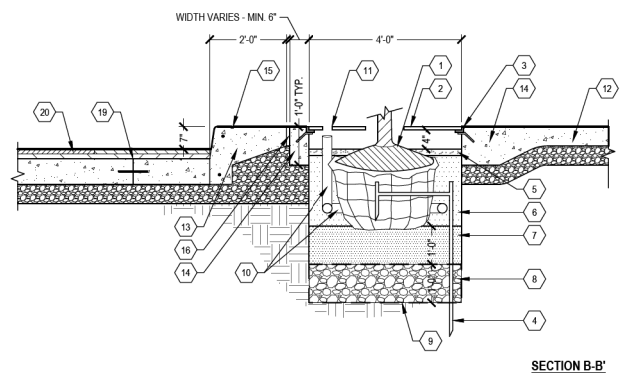
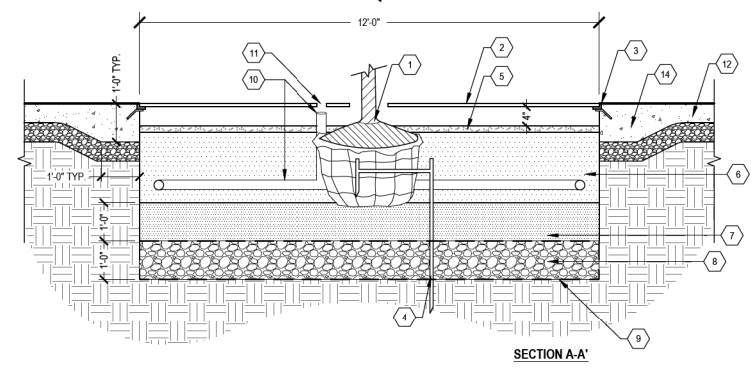
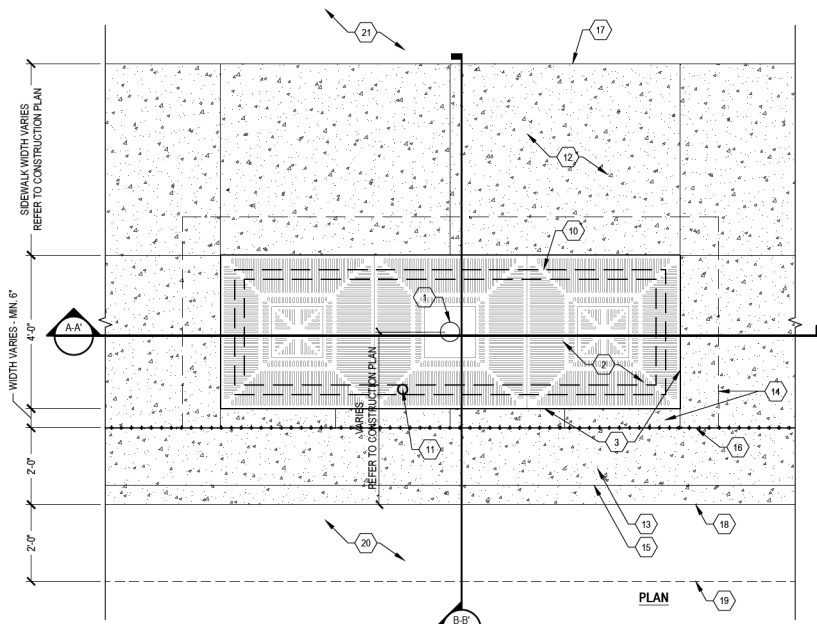
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PROJECT NO.  
**191176**

SHEET NO.

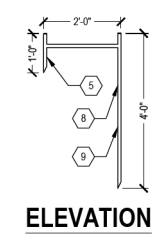
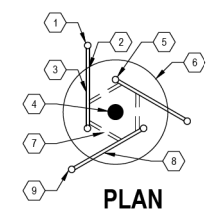
**C707**

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- 1 DECIDUOUS TREE, REFER TO LANDSCAPE PLANS
- 2 TREE GRATE, IRON SMITH ADA OR E.J. SUNRAY (CONFIRM MODEL AND MANUFACTURER)
- 3 TREE GRATE, FRAME AND FRAME ANCHOR INTO CONCRETE
- 4 ROOT BALL STABILIZER, SEE DETAIL 2
- 5 PEA STONE, 2-INCH DEPTH
- 6 PLANTING MIX (COMPACT TO 70-80% PROCTOR)
- 7 PLANTING MIX (BELOW ROOT BALL, COMPACT TO 85-90% PROCTOR)
- 8 AGGREGATE BASE, DRAINAGE COURSE, 12-INCH DEPTH
- 9 GEOTEXTILE SEPARATION FABRIC
- 10 WATERING / AERATION PIPE LOOP, 3-INCH Ø PVC, PROVIDE CAP WITH S. S. SCREEN, 3' X 11' RECTANGLE, 90° FITTINGS TO BE GLUED, 1/8-INCH Ø HOLES DRILLED EVERY 6" ON BOTTOM OF PIPE, NO DRILLING WITHIN FITTINGS
- 11 ACCESS HOLE IN GRATE (ALIGNED ON ROAD SIDE OF TREE GRATE) TO ALIGN WITH VERTICAL PIPE OF WATERING / AERATION SYSTEM, COORDINATE WITH TREE GRATE MANUFACTURER
- 12 SIDEWALK, CONC
- 13 INTEGRAL CURB AND SIDEWALK, 2 FOOT, MODIFIED
- 14 THICKENED EDGE CONCRETE
- 15 CONTROL JOINT
- 16 SEALED EXPANSION JOINT
- 17 BACK OF SIDEWALK
- 18 FACE OF CURB
- 19 SAWCUT EXISTING ROAD SURFACE
- 20 BITUMINOUS ROAD SURFACE
- 21 ADJACENT CONDITIONS VARY, REFER TO CONSTRUCTION PLANS

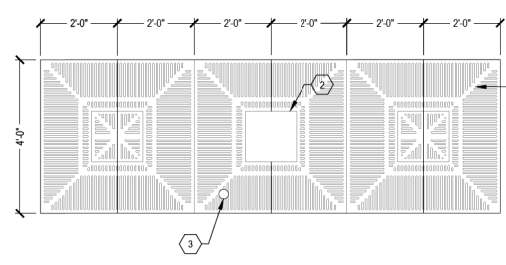
- NOTES:
1. TREE GRATES: SEE MANUFACTURER INFORMATION FOR EACH GRATE - SEE DETAILS
  2. TREE GRATE TO BE ADA COMPLIANT.
  3. TREE OPENING SIZE OF 12" X 12" SQUARE
  4. PROVIDE TREE GRATE IN CAST DUCTILE IRON MEETING LOAD CLASS C WITH BAKED-ON-OIL FINISH.
  5. SPOT WELD EACH TREE GRATE SECTION TO THE FRAME IN A MINIMUM OF 3 LOCATIONS TO ENSURE TREE GRATES CAN NOT BE REMOVED.
  6. PROVIDE (1) - 3" DIAMETER HOLE IN THE TREE GRATE 1'-6" FROM THE OUTSIDE CORNERS OF THE CENTER OF THE TREE GRATE FOR THE AERATION / WATERING RISER. THE HOLE SHALL BE PROVIDED BY THE MANUFACTURER AT THE FACTORY AND SHALL BE COORDINATED WITH THE GRATE DESIGN AND STRUCTURAL LOAD RATING.
  7. PROVIDE MATCHING FRAME FROM EACH MANUFACTURER FOR EACH TREE GRATE. FRAME SHALL BE PROVIDED WITH ANCHORS THAT ALLOW THE FRAME TO BE CAST INTO THE SURROUNDING CONCRETE.
  8. LOCATE TREE GRATES AS SHOWN ON LAYOUT AND MATERIALS PLANS AND CONFIRM LOCATION WITH ENGINEER PRIOR TO PROCEEDING WITH INSTALLATION OF CAST-IN-PLACE CONCRETE SIDEWALK.
  9. ORIENT LONG PATTERN OF GRATE AS SHOWN ON PLANS.
  10. INSTALL THE TREE GRATE AND FRAME WITH A UNIFORM SLOPE IN ONE DIRECTION CORRESPONDING WITH THE ADJACENT PAVEMENT SLOPE. DO NOT WARP OR UNEVENLY DROP THE ELEVATION OF ONE OR MORE CORNERS OF THE TREE GRATE AND FRAME TO ENSURE GRATES SET FLUSH CONTINUOUSLY AROUND THE FRAME WITHOUT ROOKING. ENSURE THE TREE GRATES ARE SET FLUSH AND EVEN WITH THE FRAME AND ADJACENT PAVEMENT.



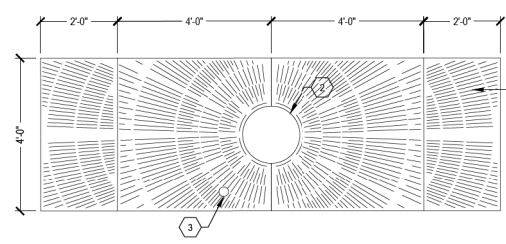
- 1 PLACE SAFETY CAPS ON EXPOSED ENDS AFTER INSTALLATION
- 2 LOCATE ROOT BALL STABILIZERS (STAPLES) EQUALLY AROUND THE TREE BALL
- 3 DRIVE ROOT BALL STABILIZER (STAPLE) INTO THE GROUND UNTIL THE CROSS-BAR IS RECESSED 1" TO 2" BELOW THE SURFACE OF THE ROOT BALL
- 4 TREE TRUNK
- 5 SHORT PRONG - LOCATE HALFWAY BETWEEN THE TREE TRUNK AND OUTER EDGE OF THE TREE BALL
- 6 TREE ROOT BALL
- 7 FOR LOOSE ROOT BALLS OR CONTAINER STOCK, TIE BURLAP TREE WRAP (3'-5' WIDTH TO THE CROSS BARS ON EITHER SIDE OF THE TREE TRUNK, KEEP BURLAP WRAP AWAY FROM TREE TRUNK)
- 8 48" STEEL ROOT BALL STABILIZER (STAPLE) PROVIDE (3) PER TREE
- 9 LONG PRONG - LOCATE OUTSIDE AND ADJACENT TO THE TREE BALL

2 ROOT BALL STABILIZER

SCALE: 1" = 1'



- 1 TREE GRATE, IRON SMITH ADA, 4X12, SIX PANELS 812.662.9644 WWW.IRONSMITH.CC
- 2 12" X 12" OPENING SIZE
- 3 ACCESS HOLE IN GRATE (ALIGNED ON ROAD SIDE OF TREE GRATE) TO ALIGN WITH VERTICAL PIPE OF WATERING / AERATION SYSTEM, COORDINATE WITH TREE GRATE MANUFACTURER



- 1 TREE GRATE, E.J. SUNRAY, 4X12, TWO PANEL SIZES: (2) 4'X2' AND (2) 4'X4' 800.626.4653 WWW.EJCO.COM
- 2 12" RADIUS OPENING
- 3 ACCESS HOLE IN GRATE (ALIGNED ON ROAD SIDE OF TREE GRATE) TO ALIGN WITH VERTICAL PIPE OF WATERING / AERATION SYSTEM, COORDINATE WITH TREE GRATE MANUFACTURER

SCALE: 1/2" = 1'

1 TREE GRATE - OPTION 1

TREE GRATE AND PIT DETAILS

MISCELLANEOUS DETAILS  
SCALE AS NOTED

REVISIONS

10/8/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

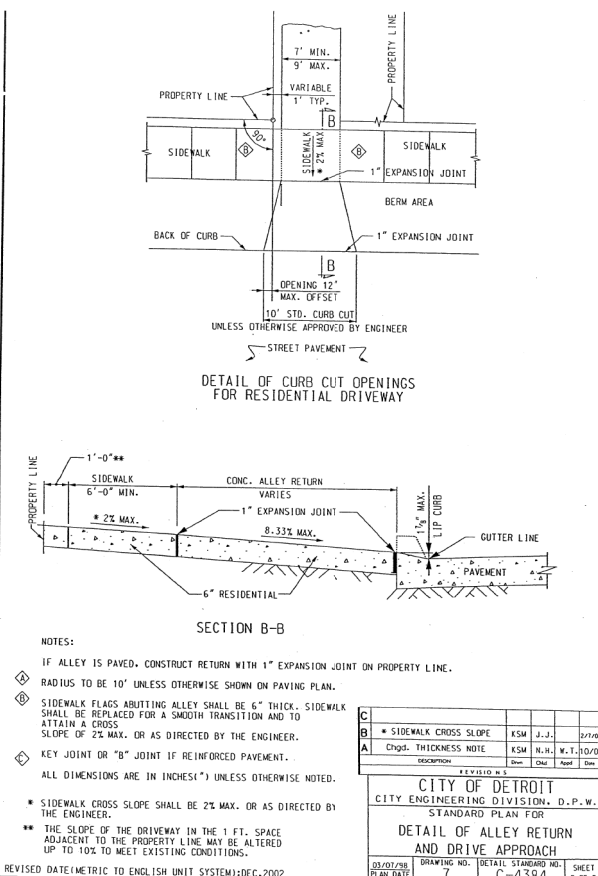
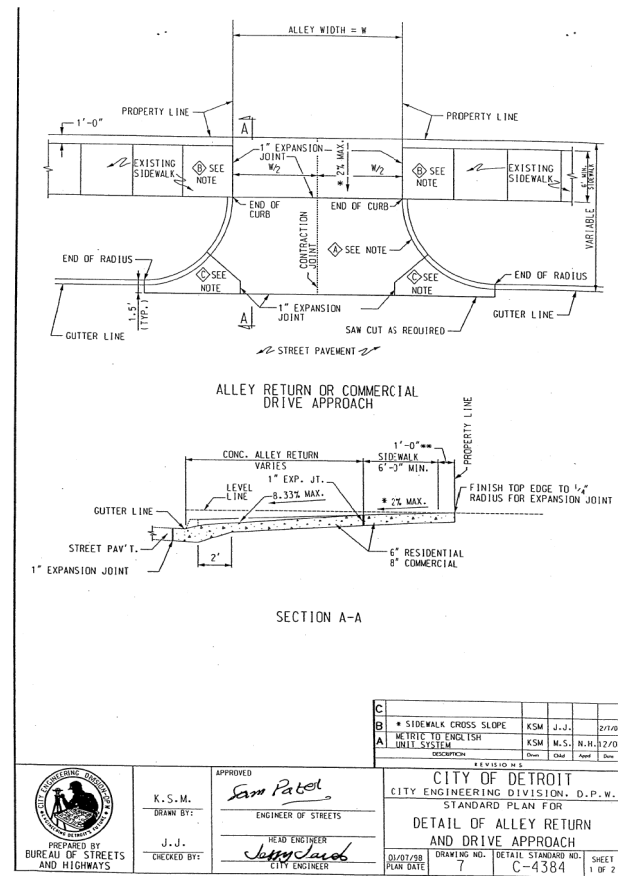
Drawn By: KJS  
Designer: KJS  
Reviewer: JJP  
Manager: LCM

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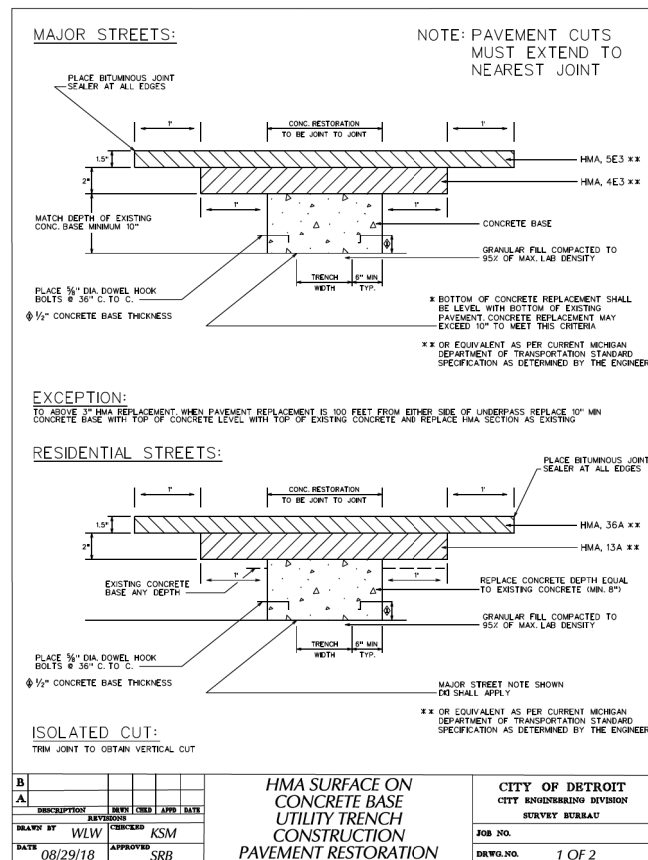
PROJECT NO.  
**191176**

SHEET NO.

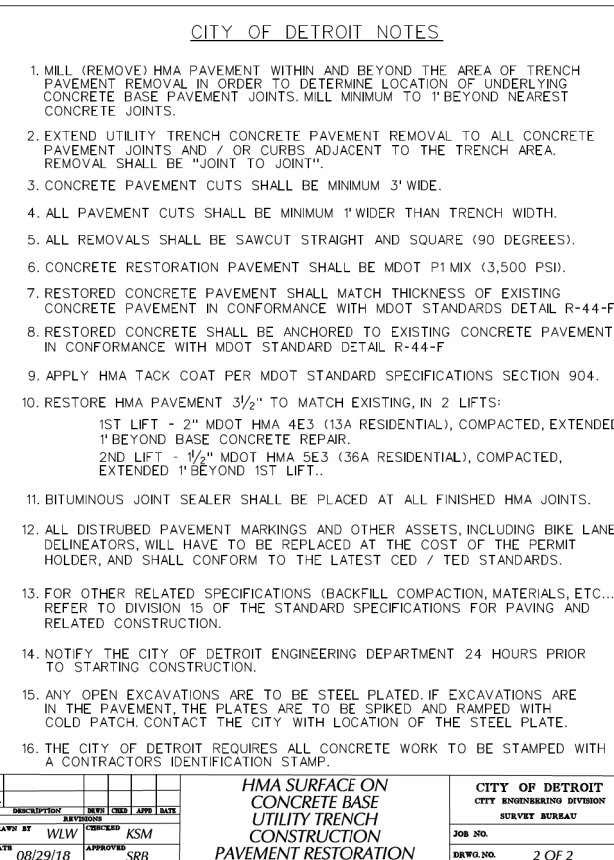
**C708**



DETAIL OF ALLEY RETURN AND DRIVE APPROACH



UTILITY TRENCH DETAIL



MISCELLANEOUS DETAILS  
SCALE AS NOTED

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PLANNERS SURVEYORS

**SMITHGROUP**

500 Griswold  
Suite 1700  
Detroit, MI 48226  
313.983.3600  
www.smithgroup.com

**City of Detroit**  
Conant Streetscape

REVISIONS	
3/20/2020	100% CD
3/8/2020	95% CD
2/4/2020	90% CD
1/10/2020	80% CD
12/10/2019	30% CD

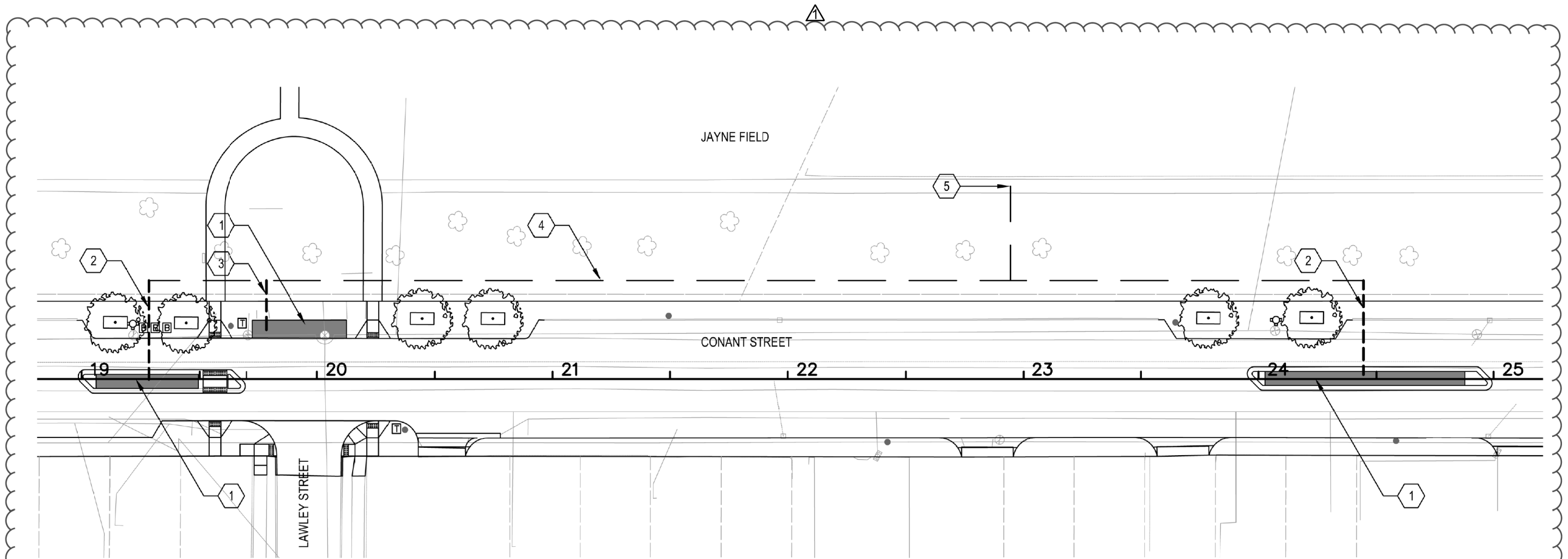
Drawn By	KJS
Designer	KJS
Reviewer	JJP
Manager	LCM

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PROJECT NO.	191176
SHEET NO.	C709

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- 1 INSTALL SPRAY HEAD IRRIGATION SYSTEM IN LANDSCAPE ISLAND / BED PER IRRIGATION SPECIAL PROVISIONS REQUIREMENTS.
- 2 INSTALL 4" PVC SLEEVE BY DIRECTIONAL BORING TO CENTER LANDSCAPE ISLAND. EXTEND 1" POLYETHYLENE LATERAL PIPE THROUGH SLEEVE AND CONNECT TO IRRIGATION SPRAY HEAD IRRIGATION SYSTEM IN LANDSCAPE ISLAND.
- 3 INSTALL 4" PVC SLEEVE UNDER PROPOSED SIDEWALK TO LANDSCAPE BED. EXTEND 1" POLYETHYLENE LATERAL PIPE THROUGH SLEEVE AND CONNECT TO IRRIGATION SPRAY HEAD IRRIGATION SYSTEM IN LANDSCAPE BED.
- 4 PROVIDE 1" POLYETHYLENE LATERAL PIPE TO CONNECT TO THREE LANDSCAPE BEDS FOR IRRIGATION.
- 5 CONNECT 1" POLYETHYLENE LATERAL PIPE TO MAINLINE IRRIGATION SYSTEM AT JAYNE FIELD.
  - PROVIDE AUTOMATIC CONTROL VALVE WITH PRESSURE REGULATOR IN IRRIGATION VALVE BOX FOR DEDICATED ZONE FOR THE THREE LANDSCAPE BEDS.
  - EXTEND IRRIGATION CONTROL WIRES FROM AUTOMATIC CONTROL VALVE TO JAYNE FIELD IRRIGATION CONTROLLER (#14 AWG UL APPROVED FOR DIRECT BURY).
  - FIELD VERIFY LOCATION OF CONNECTION, VALVE BOX, AND TIE-IN TO JAYNE FIELD IRRIGATION SYSTEM WITH JAYNE FIELD PROJECT CONTRACTOR:

BRAD BYARSKI  
 PREMIER GROUP ASSOCIATES  
 313-363-1886

- NOTES:
1. ALL IRRIGATION SYSTEM COMPONENTS TO MEET THE IRRIGATION SPECIAL PROVISION REQUIREMENTS.
  2. CONTRACTOR TO PROVIDE SPRAY HEAD IRRIGATION SYSTEM DESIGN AND SHOP DRAWING FOR THE THREE LANDSCAPE BEDS PER THE PERFORMANCE REQUIREMENTS AND SPECIFICATIONS DEFINED IN THE IRRIGATION SPECIAL PROVISION.
  3. LOCATION OF IRRIGATION SLEEVE BORINGS SHALL BE COORDINATED WITH ALL UNDERGROUND UTILITIES, STRUCTURES, AND PROPOSED IMPROVEMENTS.
  4. ALL IRRIGATION WORK SHOWN ON THIS PLAN SHALL BE INCLUDED AND PAID FOR AS \_IRRIGATION.
  5. CONTRACTOR IS REQUIRED TO COORDINATE ALL IRRIGATION WORK WITH ENGINEER AND WITH JAYNE FIELD CONTRACTOR PRIOR TO PROCEEDING WITH WORK.
  6. STREET TREES ARE NOT IRRIGATED AND WILL BE HAND-WATERED.

1 IRRIGATION

IRRIGATION DETAILS

MISCELLANEOUS DETAILS  
 SCALE AS NOTED

REVISIONS

DATE	DESCRIPTION	BY
5/5/2020	Addendum No. 1	AA
3/8/2020	100% CD	
3/8/2020	95% CD	
2/4/2020	90% CD	
1/10/2020	80% CD	
12/10/2019	30% CD	

Drawn By: KJS  
 Designer: KJS  
 Reviewer: JJP  
 Manager: LCM

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PROJECT NO.  
 191176

SHEET NO.

**C711**



# PUBLIC LIGHTING AUTHORITY OF DETROIT

CITY OF DETROIT, WAYNE COUNTY, MICHIGAN  
CONSTRUCTION PLANS FOR CONANT STREET LIGHTING - 48212  
STREETSCAPE PROJECT

## PLAN SHEET INDEX



## PROJECT LOCATION MAP

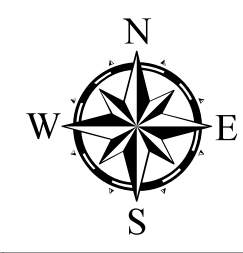


## SHEET INDEX

COVER	COVER
GI	GENERAL INFORMATION
CON-01 TO CON-06	CONSTRUCTION AND REMOVALS PLANS
DT-01	ROUND TAPERED ALUMINUM STANDARD DETAILS
DT-02	STREET LUMINAIRE DETAILS (2 SHEETS)
DT-03	SIDEWALK LUMINAIRE DETAILS
DT-04	UNDERGROUND ALUMINUM 2 AWG 600V XHHW-2 CABLE DETAILS (2 SHEETS)
DT-05	OVERHEAD ALUMINUM 2 AWG 600V TRIPLEX CABLE DETAILS (2 SHEETS)
DT-06	UNDERGROUND FED LIGHTING STANDARD BASE ELECTRICAL CONNECTIONS DETAILS (2 SHEETS)
DT-07	LAMP CORD CABLE DETAILS (2 SHEETS)
DT-08	RECEPTACLE CORD CABLE DETAILS (2 SHEETS)
DT-09	FUSE HOLDER DETAILS (2 SHEETS)
DT-11	IDENTIFICATION TAG DETAILS (2 SHEETS)
DT-12	STREET LIGHTING PHOTO CONTROLLER DETAILS
DT-13	UNDERGROUND LIGHTING AND RECEPTACLE CIRCUITS TYPICAL WIRING SCHEMA DETAILS (3 SHEETS)
DT-15	UNDERGROUND STRUCTURES DETAILS (6 SHEETS)

### PLA - CONANT STREET - PROJECT ESTIMATE

		CONSTRUCTION QUANTITIES								
MDOT CODE	DESCRIPTION	SHEET	CON-01	CON-02	CON-03	CON-04	CON-05	TOTAL	UOM	
8190032	Conduit, DB, 2, 3 inch		1,409	1,600	1,691	515		5,215	Ft	
8190360	Luminaire, Rem		8	8	8	4		28	Ea	
8190490	Wood Pole, Fit Up, Metered Sec Elec Serv with Photo Control				2			2	Ea	
8190505	Wood Pole, Rem		6	7	7	3		23	Ea	
8197001	Cable, Equipment Grounding Wire, 1/C#2, Modified		1,409	1,600	1,691	515		5,215	Ft	
8197001	Cable, Sec, 600V, 3, 1/C#2, Modified		1,409	1,600	1,691	515		5,215	Ft	
8197001	Cable, Sec, Triplex, 1, 3/C#2, Modified				325		325	650	Ft	
8197050	Bracket Arm, Bolt On, Rem		6	7	7	3		23	Ea	
8197050	Ground Rod, Install, Wood Pole				2			2	Ea	
8197050	Hh, Polymer Conc, Modified		8	8	10	4		30	Ea	
8197050	Light Std Fdn, Modified		8	8	8	4		28	Ea	
8197050	Light Std, Livernois Decorative, Install		8	8	8	4		28	Ea	
8197050	Luminaire, 82W, Install		8	8	8	4		28	Ea	
8197050	Luminaire, 111W, Install		8	8	8	4		28	Ea	



REVISION		
REV #	DATE	DESCRIPTION
01		
02		



PLA STREETLIGHTING			
MES JOB #:	1036-20-1070	DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	NOT TO SCALE	CHECKED BY:	BRENDAN MULLANE
PLOT DATE:	3/19/2020	DATE:	3/19/2020



PLA STREETLIGHTING	
CONANT - DAVISON TO CARPENTER	
CITY OF DETROIT	
WAYNE COUNTY, MI	

GRAPHIC SCALE  
NOT TO SCALE



SHEET INFORMATION			
CO-01	TOTAL SHEETS	SHEET NO.	
	01	01	



**GENERAL INFORMATION**



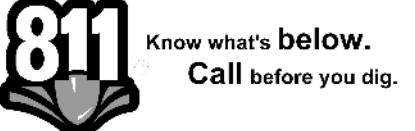
1. ALL MATERIAL AND EQUIPMENT FURNISHED BY THE CONTRACTOR MUST BE NEW AND MUST COMPLY WITH THE SPECIFICATIONS FOR THAT MATERIAL AND EQUIPMENT. THE OWNER SHALL HAVE THE RIGHT TO REJECT ANY EQUIPMENT WHICH DOES NOT MEET WITH SPECIFICATIONS.
2. CONSTRUCTION MUST BE PERFORMED BY QUALIFIED AND EXPERIENCED PERSONNEL. ALL WORK MUST MEET THE STANDARDS AND PRACTICES OF THE PUBLIC LIGHTING AUTHORITY (PLA), THE NATIONAL ELECTRICAL CODE, THE ELECTRIC CODE OF THE CITY OF DETROIT AND THE NATIONAL ELECTRICAL SAFETY CODE.
3. THE CONTRACTOR MUST USE PUBLIC LIGHTING AUTHORITY (PLA) SPECIFICATIONS FOR THIS PROJECT.
4. THE CONSTRUCTION CONTRACTOR SHALL RETURN ALL SALVAGED PUBLIC LIGHTING AUTHORITY (PLA) EQUIPMENT TO THE PLA.

LOCATION: 1135 BEAUFAIT STREET, DETROIT, MICHIGAN 48207  
 CONTACT: MELANIE STEELE (STATELINE) AT (313) 909-7509 AND JOHN VERNON (PLA) AT (313) 324-8290  
 HOURS: MONDAY FRIDAY FROM 9:30 A.M. TO 3:30 P.M. MUST PROVIDE 48 HOURS NOTICE.

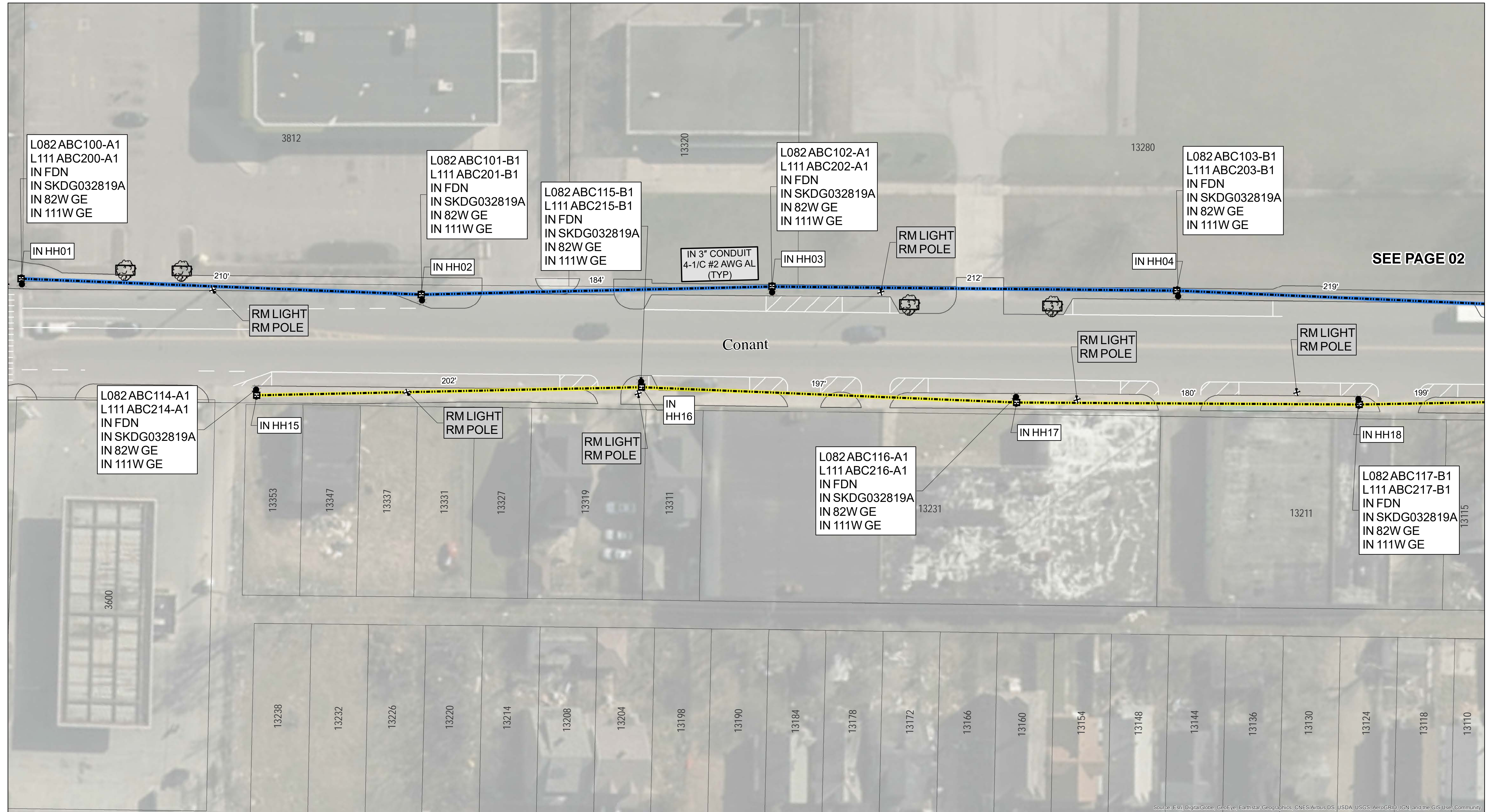
THE CONSTRUCTION CONTRACTOR IS RESPONSIBLE FOR TRANSPORTING ALL SALVAGED EQUIPMENT TO THE PLA YARD.

5. THE CONSTRUCTION CONTRACTOR SHALL RETURN ALL REMOVED DETROIT PUBLIC LIGHTING DEPARTMENT (PLD) EQUIPMENT TO THE PLD.  
 THE CONSTRUCTION CONTRACTOR IS RESPONSIBLE FOR TRANSPORTING DECOMMISSIONED EQUIPMENT TO THE PLD YARD.
6. ALL SHOP DRAWINGS MUST BE APPROVED BY THE PUBLIC LIGHTING AUTHORITY (PLA). CONTACT (313) 324-8290.
7. CALL MISS DIG AT 811 OR (800) 482-7171 A FULL THREE WORKING DAYS BEFORE TO ANY EXCAVATION FOR THE LOCATIONS OF UNDERGROUND UTILITIES.
8. THE CONTRACTOR IS TO NOTIFY DTE GAS AT (800) 477-4747 IF A PROTECTIVE COATED GAS MAIN IS EXPOSED OR DAMAGED.
9. THE CONTRACTOR IS TO NOTIFY DTE ELECTRIC AT (800) 477-4747 IF THE PROTECTIVE COATING OF ANY DTE ELECTRIC HIGH VOLTAGE UNDERGROUND LINE IS EXPOSED OR DAMAGED.
10. ALL EXISTING DETROIT PUBLIC LIGHTING DEPARTMENT (PLD) LIGHTING, PRIMARY TRANSMISSION, ETC., CIRCUITS MUST ALWAYS BE MAINTAINED IN AN OPERATIONAL CONDITION. NOTIFY THE PLD SYSTEM OPERATOR AT (313) 961-1364 48 HOURS BEFORE TO BEGINNING WORK ON PLD CIRCUITS AND KEEP THE OPERATOR INFORMED DAILY.
11. ALL VEHICLE DIRECTION, STREET NAME, AND PARKING SIGNS ON CITY OF DETROIT ROADS ARE THE PROPERTY OF THE CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS (DPW). THE CONTRACTOR WILL NOT REMOVE OR RELOCATE ANY VEHICLE DIRECTION, STREET NAME OR PARKING SIGNS UNLESS CITY OF DETROIT DPW GRANTS ADVANCE AUTHORIZATION. FOR ANY VEHICLE DIRECTION, STREET NAME OR PARKING SIGN ENCOUNTERED ON A STREET LIGHT POLE, THE CONTRACTOR WILL STOP WORK AND CALL THE DETROIT DPW SIGN SHOP AT (313) 224-6950 TO COORDINATE 72 HOURS PRIOR TO THE REMOVAL OR RELOCATION.
12. ANY PERMANENT SIGNS THAT ARE DAMAGED OR REMOVED MUST EITHER BE REINSTALLED, IF IN USABLE CONDITION, OR REPLACED WITH A UNIT THAT MEETS THE CURRENT SPECIFICATIONS OF THE SIGN'S MAINTAINING AGENCY.
13. REMOVAL, REPLACEMENT, EXCAVATION, AND BACKFILL RELATED TO PAVEMENT, SIDEWALKS AND CURBS MUST BE DONE ACCORDING TO THE CITY OF DETROIT, DEPARTMENT OF PUBLIC WORKS, CITY ENGINEERING DIVISION STANDARD SPECIFICATIONS FOR PAVING AND RELATED CONSTRUCTION OR THE SPECIFICATION OF THE AUTHORITY HAVING JURISDICTION.
14. WITHIN FIVE DAYS OF COMPLETING EACH SECTION OF THE UNDERGROUND OR OVERHEAD WORK, THE CONTRACTOR SHALL FURNISH TO THE PUBLIC LIGHTING AUTHORITY (PLA) AN EXACT RECORD, AS-BUILT DRAWINGS, OF ALL UNDERGROUND AND OVERHEAD WORK INSTALLED. THE AS-BUILT DRAWINGS SHALL INCLUDE, BUT NOT LIMITED TO, STREET LIGHTING COMPONENTS, STRUCTURES, CONDUIT LENGTHS AND CABLE ROUTING INCLUDING THEIR LOCATIONS.
15. THE CONTRACT UNIT PRICE SHALL BE PAYMENT IN FULL FOR FOUNDATION REMOVAL AND BACKFILLING THE HOLE WITH GRANULAR MATERIAL. DISPOSAL OF WASTE EXCAVATED MATERIAL ALONG WITH REMOVING PAVEMENT, SIDEWALK, CURB AND GUTTER ALONG WITH ANY ASSOCIATED REPLACEMENT IS ALSO INCLUDED.
16. THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS COVERING CONSTRUCTION OPERATIONS INCLUDING PERMITS FROM THE PUBLIC AUTHORITIES HAVING JURISDICTION OVER THE STREETS OR OTHER PUBLIC PROPERTIES IN WHICH THE WORK IS LOCATED AND THE IMPROVEMENT THEREIN. THE BIDDER SHALL ASCERTAIN THE AMOUNT OF ANY CHARGES REQUIRED BY SUCH AUTHORITIES AND WILL INCLUDE THE COST THEREOF IN THE BID PRICES.

17. THE CONTRACTOR MUST ASCERTAIN THE REQUIREMENTS OF THE PUBLIC AUTHORITIES HAVING JURISDICTION OVER THE STREETS OR OTHER PUBLIC PROPERTIES; OR THE PRIVATE PROPERTY OWNER AND INCLUDE IN HIS BID PRICE ALL EXISTING INFRASTRUCTURE RESTORATION COSTS INCLUDING SIDEWALKS, PAVEMENT AND LANDSCAPING TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION OR PROPERTY OWNER IN EACH CASE, WHICH MAY INCLUDE UPGRADES FROM THE EXISTING CONDITION.
18. THE CONTRACTOR ASSUMES ALL RISKS AND RESPONSIBILITIES BECAUSE OF EXISTING SOIL CONDITIONS AND MUST COMPLETE THE WORK IN WHATEVER MATERIAL AND UNDER WHATEVER GROUND CONDITIONS MAY BE ENCOUNTERED OR CREATED WITHOUT ADDITIONAL COST TO THE PUBLIC LIGHTING AUTHORITY (PLA).
19. THE LOCATIONS OF EXISTING UNDERGROUND OBSTRUCTIONS OR UTILITY FACILITIES ARE NOT NECESSARILY INDICATED ON THE PLANS. WHERE UTILITY FACILITIES ARE SHOWN, LOCATIONS ARE ONLY APPROXIMATIONS. CORRECTNESS OF EXACT UTILITY LOCATIONS IS NOT GUARANTEED. THE CONTRACTOR MUST EXERCISE CAUTION IN AVOIDING DAMAGE TO UTILITIES AND MUST NOTIFY THE UTILITIES THAT THEY ARE PROPOSING TO BREAK PAVEMENT OR EXCAVATE SO THAT THEY MAY PROVIDE THE CONTRACTOR WITH THE VERY LATEST LOCATION INFORMATION OF THEIR EXISTING FACILITIES.
20. HANDHOLE AND MANHOLE STRUCTURE LOCATIONS ARE SHOWN IN PROXIMITY TO WHERE THEY ARE TO BE INSTALLED. STRUCTURES ARE NOT TO BE INSTALLED IN ADA RAMPS. STRUCTURE INSTALLATION IN SIDEWALKS, ROADWAYS OR DRIVEWAYS IS TO BE AVOIDED WHERE POSSIBLE UNLESS CALLED FOR BY THE PLANS. STRUCTURES INSTALLED IN ROADWAYS OR DRIVEWAYS SHALL BE OF THE PRECAST CONCRETE TYPE. STRUCTURES SHALL NOT BE INSTALLED ON PRIVATE PROPERTY UNLESS CALLED FOR SPECIFICALLY BY THE PLANS WITH AN AUTHORIZED EASEMENT. FURTHER, STRUCTURES ARE TO BE INSTALLED CLEAR OF FIRE HYDRANTS, TREES, UTILITIES, AND ANY OTHER UNDERGROUND STRUCTURES.
21. NO SPLICING WILL BE ALLOWED BETWEEN THE CONTROL CABINET AND HANDHOLE/MANHOLE; HANDHOLE/MANHOLE TO HANDHOLE/MANHOLE; HANDHOLE/MANHOLE TO UNDERGROUND STREET LIGHTING STANDARD; AND HANDHOLE/MANHOLE TO CABLE RISER.
22. THE FOLLOWING WIRE COLOR CODING IS TO BE USED FOR THE UNDERGROUND STREET LIGHTING AND RECEPTACLES ON THIS PROJECT: BLACK (A PHASE); RED (B PHASE); WHITE (NEUTRAL); GREEN (GROUND).
23. THE FOLLOWING CABLE IDENTIFICATION IS TO BE USED FOR GROUNDED OVERHEAD TRIPLEX AND QUADRUPLX ON THIS PROJECT: NO RIB (A PHASE); ONE RIB (NEUTRAL); TWO RIBS (B PHASE); BARE MESSENGER (EQUIPMENT GROUNDING CONDUCTOR OR EGC).  
 THE CABLE IDENTIFICATION FOR INSTANCES OF EXISTING UNGROUNDED OVERHEAD DUPLEX OR TRIPLEX ALONG WITH CONNECTIONS TO THE EXISTING UNGROUNDED OVERHEAD ON THIS PROJECT: NO RIB (A PHASE); ONE RIB (B PHASE); BARE MESSENGER (NEUTRAL).  
 IF ANY EXISTING OVERHEAD CABLE DOES NOT MATCH EITHER OF THESE SCENARIOS, CONTACT THE PROJECT ENGINEER BEFORE MAKING ANY CONNECTIONS.
24. THE CONTRACTOR MUST CORE INTO PRECAST HANDHOLES AND MANHOLES.
25. THE CONTRACTOR IS TO TRIM EXISTING TREES TO PROVIDE A CLEAR 10 FOOT RADIUS AROUND EACH LUMINAIRE.
26. ALL UNDERGROUND STREET LIGHTING STANDARD LOCATIONS ARE TO BE INSTALLED WITH THE CENTER 3 FEET BACK OF CURB FACE (BOC) UNLESS OTHERWISE INDICATED ON THE PLANS.
27. THE CONTRACTOR IS TO CALL THE DETROIT PUBLIC LIGHTING DEPARTMENT (PLD) SENIOR SYSTEM OPERATOR AT (313) 267-4151 FOR ANY PLD FACILITIES COORDINATION. COORDINATION INCLUDES BEING GRANTED ACCESS TO PLD MANHOLES AND HANDHOLES; GAINING LOCKOUT/TAGOUT PROTECTION FOR WORKING ON PLD EQUIPMENT; ANY OTHER WORK INVOLVING PLD FACILITIES.
28. THE CONTRACTOR IS TO CALL (313) 224-1610 FOR COORDINATING ANY DETROIT DEPARTMENT OF PUBLIC WORKS TRAFFIC SIGNAL WORK.
29. LUMINAIRE WOOD POLE MOUNTING HEIGHT SHALL BE AT 30 FEET UNLESS THE PLANS SPECIFY OTHERWISE.
30. REPLACEMENT LUMINAIRE LOCATIONS SHALL BE CONNECTED TO THE SAME CIRCUIT PHASE OF THE LUMINAIRE LOCATION THEY ARE REPLACING. NEW LUMINAIRE LOCATIONS WILL BE CONNECTED TO THE CIRCUIT PHASE CALLED FOR ON THE PLAN SHEETS.
31. INSTALL SHORTING CAPS ON ALL LUMINAIRES UNLESS OTHERWISE DIRECTED BY THE PLANS.
32. REFER TO THE STREETScape PAVING PLANS FOR UNDERGROUND UTILITY LOCATIONS.

 <p>2021 S. SCHAEFER HWY.                  DETROIT, MICHIGAN 48217                  PHONE: 734.483.1427 FAX: 734.483.3431                  WWW.MESOLUTIONS.COM</p>	PLA STREETLIGHTING		 <p>PUBLIC LIGHTING AUTHORITY OF DETROIT</p>	GENERAL INFORMATION		GRAPHIC SCALE NOT TO SCALE		SHEET INFORMATION			
	MES JOB #:	N/A		DRAWN BY:	RYAN JALYNSKI			STANDARD DETAIL	<b>GI-01</b>	TOTAL SHEETS	SHEET NO.
	PLOT SCALE:	NOT TO SCALE		CHECKED BY:	ANURAG			CITY OF DETROIT		01	01
	PLOT DATE:	2/19/2020		DATE:	2/19/2020			WAYNE COUNTY, MI			





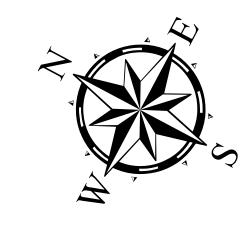
SEE PAGE 02

**Legend**

✕	REMOVAL	○	Pole	⊠	NHH	☼	EXISTING LIGHT	---	EXISTING OVERHEAD	---	LCMABC01
●	NLL	◆	NLC	⋯	NCC	---	TRIPLEX	---	REMOVE OVERHEAD	---	LCMABC02
											LCMABC03

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CONSTRUCTION SITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.



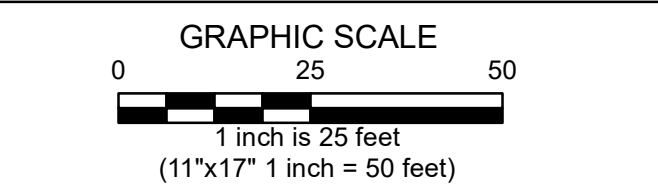
REVISION		
REV #	DATE	DESCRIPTION
01		
02		



PLA STREETLIGHTING	
MES JOB #:	1036-20-1070
DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	1 inch = 50 feet
CHECKED BY:	BRENDAN MULLANE
PLOT DATE:	3/20/2020
DATE:	3/20/2020

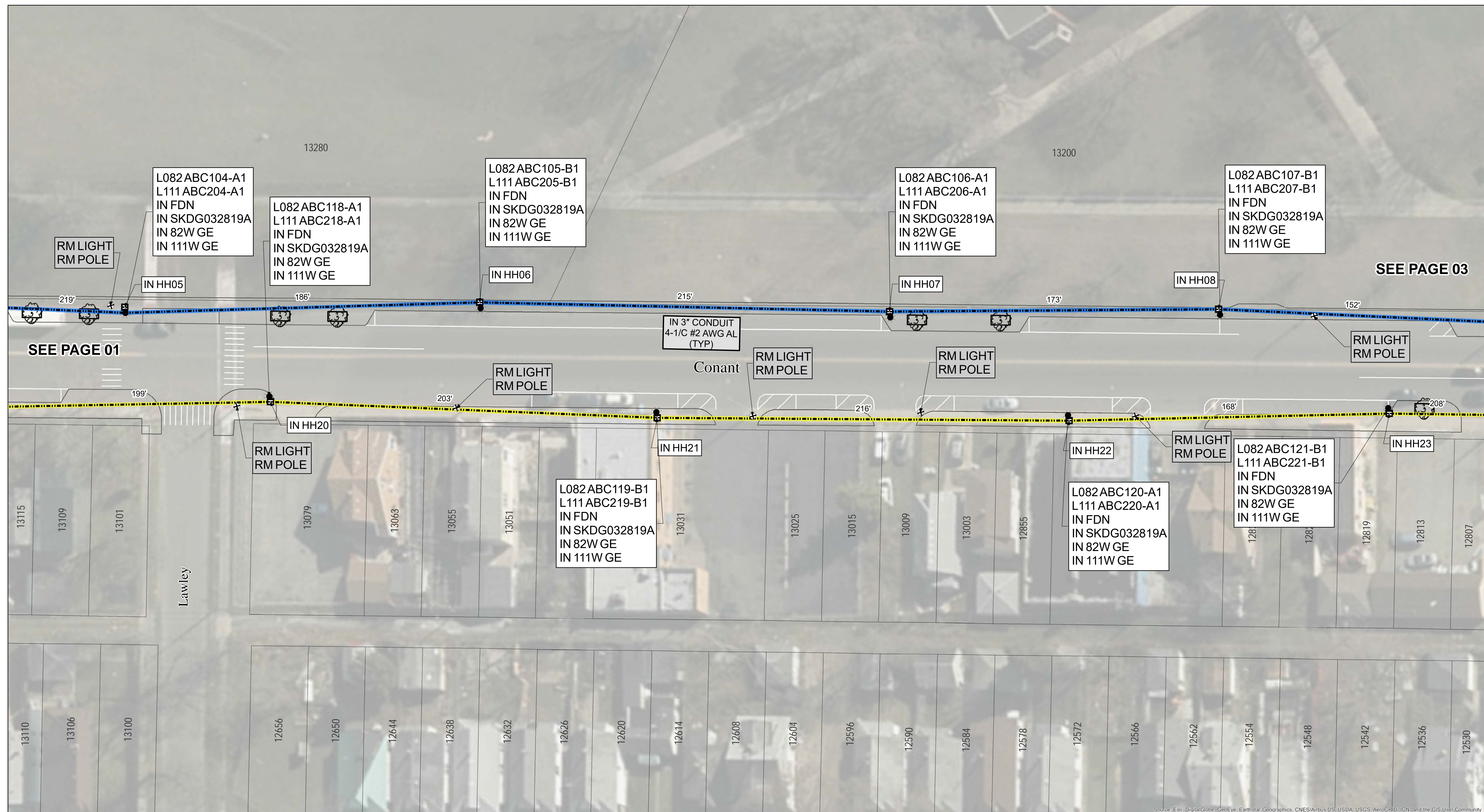


PLA STREETLIGHTING	
CONANT - DAVISON TO CARPENTER	
CITY OF DETROIT	
WAYNE COUNTY, MI	



SHEET INFORMATION	
<b>CON-01</b>	
TOTAL SHEETS	SHEET NO.
06	01





SEE PAGE 01

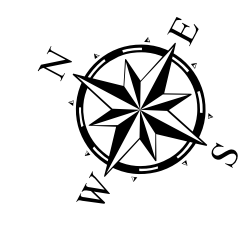
SEE PAGE 03

**Legend**

✕	REMOVAL	○	Pole	⊠	NHH	☼	EXISTING LIGHT	---	EXISTING OVERHEAD	---	LCMABC01
●	NLL	■	NLC	⋯	NCC	---	TRIPLEX	---	REMOVE OVERHEAD	---	LCMABC02
										---	LCMABC03

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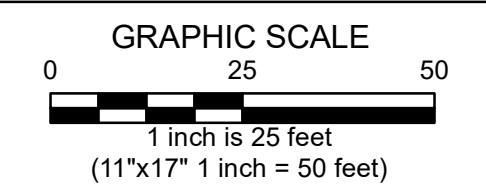
REVISION		
REV #	DATE	DESCRIPTION
01		
02		

**METRO ENGINEERING SOLUTIONS**  
 2021 S. SCHAEFER HWY.  
 DETROIT, MICHIGAN 48217  
 PHONE: 734.483.1427 FAX: 734.483.3431  
 WWW.METROES.COM

PLA STREETLIGHTING	
MES JOB #:	1036-20-1070
DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	1 inch = 50 feet
CHECKED BY:	BRENDAN MULLANE
PLOT DATE:	3/20/2020
DATE:	3/20/2020

**PUBLIC LIGHTING AUTHORITY OF DETROIT**

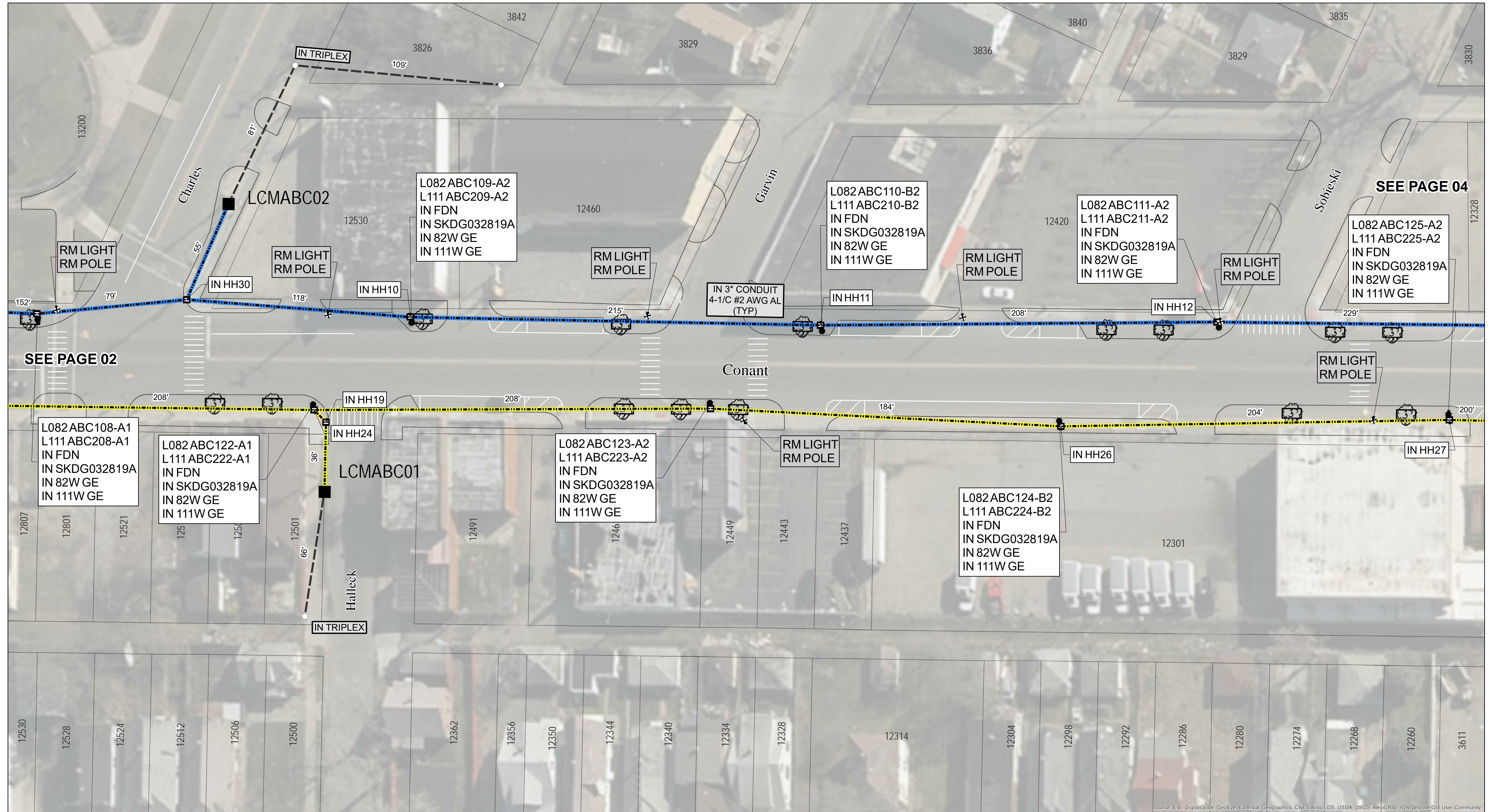
PLA STREETLIGHTING	
CONANT - DAVISON TO CARPENTER	
CITY OF DETROIT	
WAYNE COUNTY, MI	



**811** Know what's below. Call before you dig.

SHEET INFORMATION	
<b>CON-02</b>	
TOTAL SHEETS	SHEET NO.
06	02



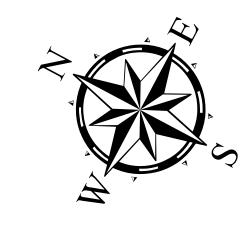


**Legend**

✕	REMOVAL	○	Pole	⬛	NHH	☀	EXISTING LIGHT	---	EXISTING OVERHEAD	---	LCMABC01
●	NLL	⬛	NLC	---	NCC	---	TRIPLEX	---	REMOVE OVERHEAD	---	LCMABC02
										---	LCMABC03

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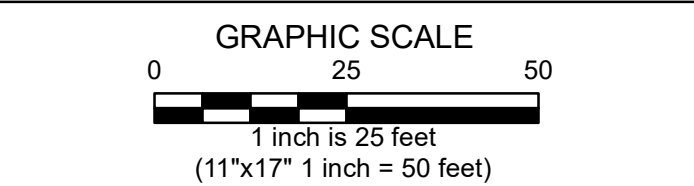
REVISION		
REV #	DATE	DESCRIPTION
01		
02		

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 WWW.METROES.COM

PLA STREETLIGHTING			
MES JOB #:	1036-20-1070	DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	1 inch = 50 feet	CHECKED BY:	BRENDAN MULLANE
PLOT DATE:	3/20/2020	DATE:	3/20/2020

**PUBLIC LIGHTING AUTHORITY OF DETROIT**

PLA STREETLIGHTING	
CONANT - DAVISON TO CARPENTER	
CITY OF DETROIT	
WAYNE COUNTY, MI	



**811** Know what's below. Call before you dig.

SHEET INFORMATION	
<b>CON-03</b>	TOTAL SHEETS: 06 SHEET NO.: 03







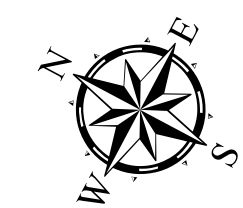


**Legend**

✕	REMOVAL	○	Pole	⬛	NHH	☀	EXISTING LIGHT	---	EXISTING OVERHEAD	---	LCMABC01
●	NLL	⬛	NLC	⋯	NCC	---	TRIPLEX	---	REMOVE OVERHEAD	---	LCMABC02
								---	LCMABC03		

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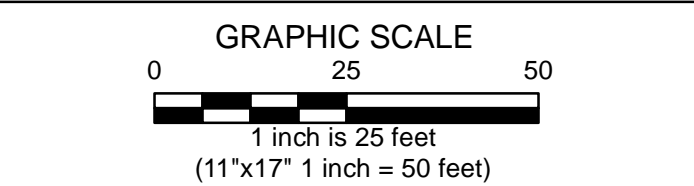
REVISION		
REV #	DATE	DESCRIPTION
01		
02		

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PLA STREETLIGHTING	
MES JOB #:	1036-20-1070
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PLOT SCALE:	1 inch = 50 feet
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**PUBLIC LIGHTING AUTHORITY OF DETROIT**

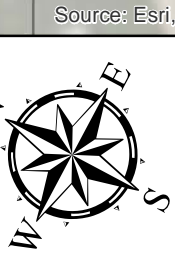
PLA STREETLIGHTING	
CONANT - DAVISON TO CARPENTER	
CITY OF DETROIT	
WAYNE COUNTY, MI	



**811** Know what's below. Call before you dig.

SHEET INFORMATION	
<b>CON-05</b>	
TOTAL SHEETS	SHEET NO.
06	05





**Legend**

✕	REMOVAL	○	Pole	⬛	NHH	☀	EXISTING LIGHT	---	EXISTING OVERHEAD	---	REMOVE OVERHEAD	---	LCMABC01
●	NLL	⬛	NLC	⋯	NCC	---	TRIPLEX	---	LCMABC02	---	LCMABC03	---	LCMABC03

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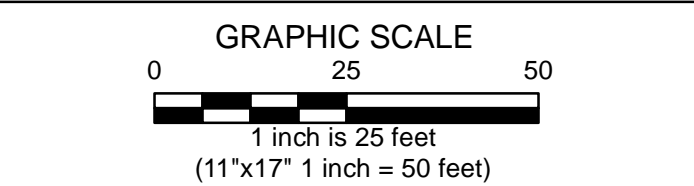
REVISION		
REV #	DATE	DESCRIPTION
01		
02		



PLA STREETLIGHTING	
MES JOB #:	1036-20-1070
DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	1 inch = 50 feet
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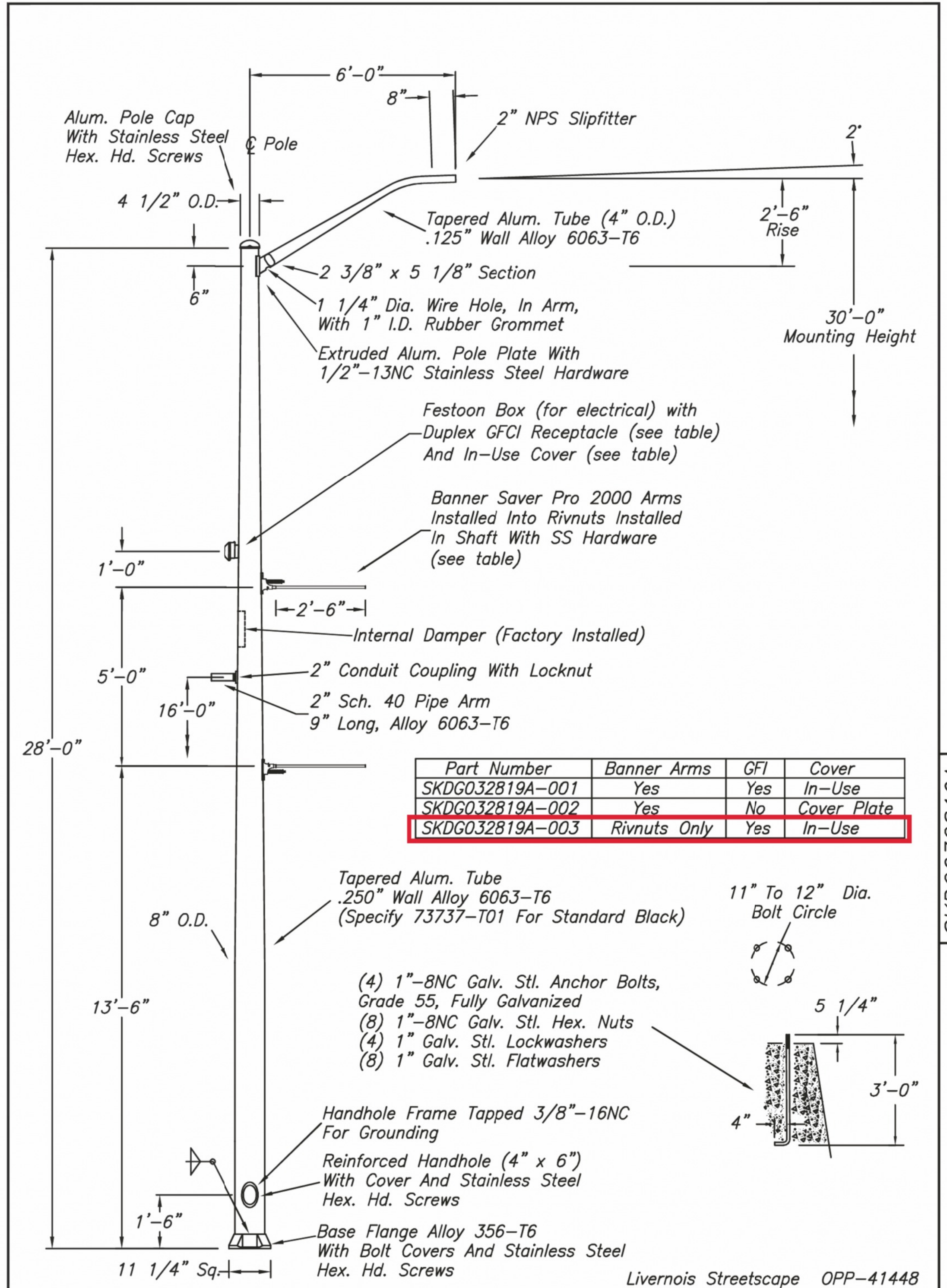


PLA STREETLIGHTING	
CONANT - DAVISON TO CARPENTER	
CITY OF DETROIT	
WAYNE COUNTY, MI	



SHEET INFORMATION	
<b>CON-06</b>	
TOTAL SHEETS	SHEET NO.
06	06

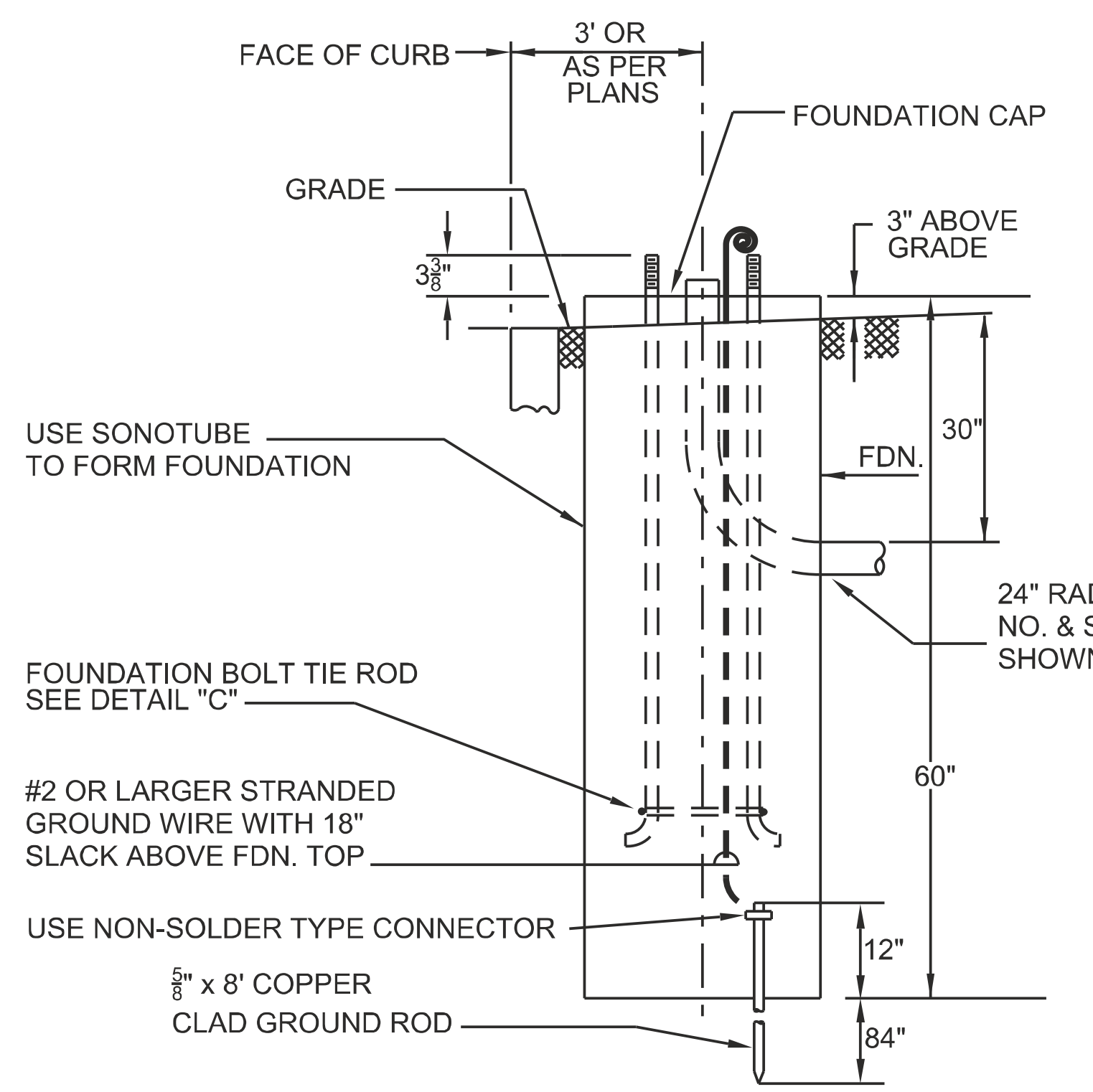




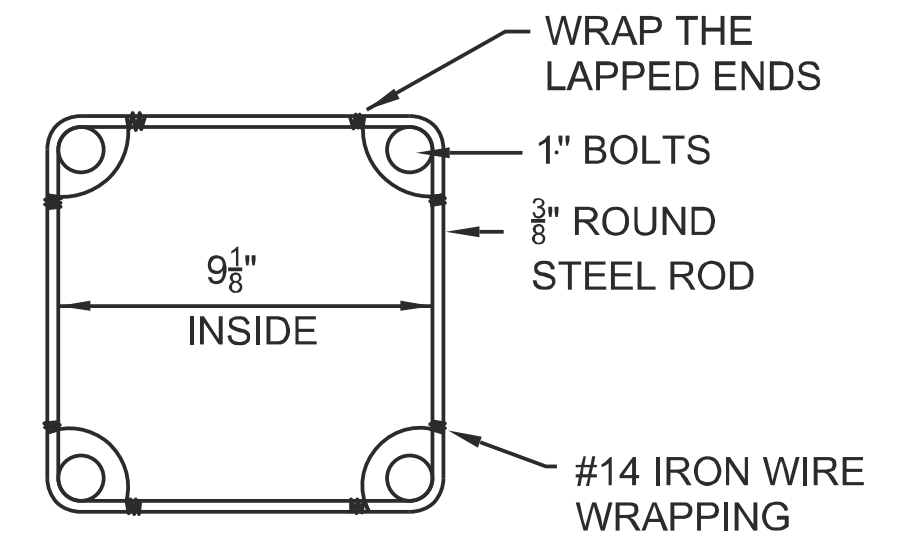
Part Number	Banner Arms	GFI	Cover
SKDGO32819A-001	Yes	Yes	In-Use
SKDGO32819A-002	Yes	No	Cover Plate
SKDGO32819A-003	Rivnuts Only	Yes	In-Use

SKDGO32819A

**ANCHOR BASE FOUNDATION PLAN**  
NOT TO SCALE

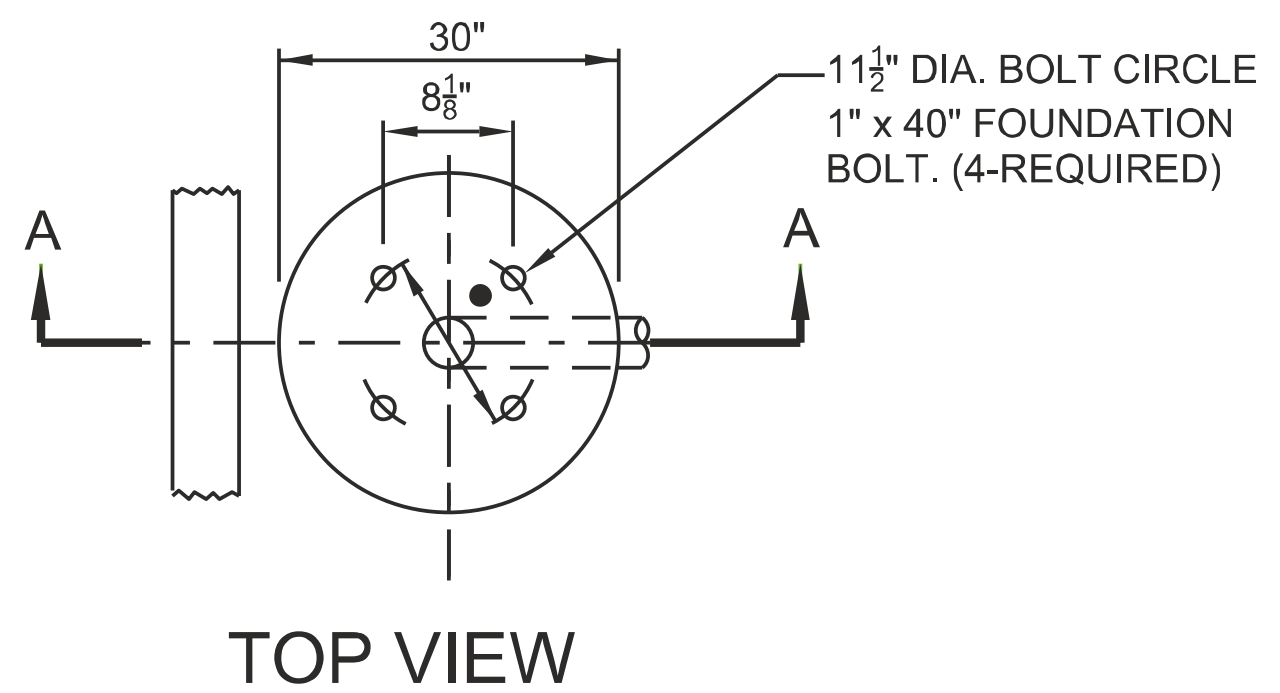


**SECTION A-A**



**DETAIL "C"**  
**ANCHOR BOLT TIE ROD**

ALL FOUNDATION CAPS SHALL HAVE A SMOOTH FINISH WITH BEVELED EDGES & SHALL BE SHAPED TO ALLOW COMPLETE DRAINAGE OF WATER. ANCHOR BOLT PROJECTIONS ABOVE CAP SHALL BE CLEANED OF ALL CONCRETE & FULLY USABLE THEIR FULL LENGTH.



**TOP VIEW**

NO.	REVISIONS	DATE
1	Add Table And Project Notes (DG)	5.19

**WARNING: DO NOT INSTALL LIGHTING POLES WITHOUT LUMINAIRES**

**hapco**  
Abingdon, Va.

TITLE 30' Light Pole  
CUSTOMER PLA - Detroit -ELUS  
SCALE NTS DATE 3.28.19  
BY RDG DWG. NO.  
CHK'D SKDGO32819A



PLA STREETLIGHTING	
MES JOB #:	N/A
DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	NOT TO SCALE
CHECKED BY:	ANURAG
PLOT DATE:	2/19/2020
DATE:	2/19/2020



ROUND TAPERED ALUMINUM STANDARD DETAILS	
STANDARD DETAIL	
CITY OF DETROIT	
WAYNE COUNTY, MI	

GRAPHIC SCALE  
NOT TO SCALE



SHEET INFORMATION	
<b>DT-01</b>	
TOTAL SHEETS	SHEET NO.
01	01



**GE Evolve®**  
LED Roadway Lighting  
ERL1-ERLH-ERL2



Project name \_\_\_\_\_  
Date \_\_\_\_\_  
Type \_\_\_\_\_

**Typical Specifications: ERL1-ERLH-ERL2**

- LED & Optical**
- **Output Range:** 1900 – 30000 lm
  - **Photometric Options:** Type II Narrow, Type II Wide, Type III, Type IV
  - **System Efficacy:** 100 - 145 LPW
  - **CCT:** 2700K, 3000K, 4000K; LEDs @ 70 CRI

**Lumen Maintenance Tables**  
Projected Lxx per IES TM-21 at 25°C for reference:

ERL1 LUMEN OUTPUT CODES	LXX(10K)@HOURS		
	25,000 HR	50,000 HR	60,000 HR
02,03,04,05,06	L96	L95	L94
07,08,09	L95	L91	L89
10	L89	L80	L76

ERLH LUMEN OUTPUT CODES	LXX(10K)@HOURS		
	25,000 HR	50,000 HR	60,000 HR
10,11	L97	L96	L96
13,14	L95	L93	L92
15,16	L94	L91	L91

ERL2 LUMEN OUTPUT CODES	LXX(10K)@HOURS		
	25,000 HR	50,000 HR	60,000 HR
16,18,19,21,23	L96	L94	L95
25,27,28	L95	L93	L92
30	L94	L91	L90

Note: Projected Lxx based on LM80 (10,000 hour testing). Accepted industry tolerances apply to initial luminous flux and lumen maintenance measurements.

- Electrical**
- **Input Voltage:** 120-277 volt and 347-480 volt
  - **Input Frequency:** 50/60Hz
  - **Power Factor (PF)\*:** >90%
  - **Total Harmonic Distortion (THD)\*:** <20%

\*Power factor and THD tolerance exceptions: ERL1 "02" Lumen output: PF and THD within tolerances above only at 120 volt. ERL1 "03" Lumen output: @120 volt PF~0.89, @ 480 volt THD~26% ERL1 "04" Lumen output: @480 volt THD~22%

- Ratings**
- **Surge Protection:** per ANSI C136.2-2015: (Driver Internal):
    - 6kV/3kA "Basic" (120 Strikes)" - Standard on ERL1 (02-06)
    - 10kV/5kA "Enhanced" (40 Strikes)" - Standard on ERL1 (07 - 10), ERLH, ERL2
  - **Additional Separate Secondary SPD**
    - 10kV/5kA "Enhanced" (40 Strikes) - Option "R"
    - 20kV/10kA "Elevated" (40 Strikes) - Option "T"
  - **Safety:** UL/cUL Listed. UL 1598 listed, suitable for wet locations (UL/cUL)
  - **Environmental:** Compliant with the materials restrictions of RoHS
  - **EMI:** Title 47 CFR Part 15 Class A
  - **Vibration:** 3G per ANSI C136.31-2010
  - LM-79 testing in accordance with IESNA Standards
  - Std. Optical enclosure rated per ANSI C136.25-2009:
    - ERL1/ERLH/ERL2 = IP65, Optional: IP66



**Operating Temperature:**

PRODUCT ID	LUMEN OUTPUT	AMBIENT READING
ERL1	02-10	-40°C to 50°C
ERLH	10-11, 13	-40°C to 50°C
ERLH	14-16	-40°C to 45°C
ERL2	16-28	-40°C to 50°C
ERL2	30	-40°C to 45°C

Delayed start may be experienced < -35°C

- Construction & Finish**
- **Housing:**
    - Die Cast Enclosure
    - Casting-integral heat sink for maximum heat transfer
  - **Lensing:** Impact resistant tempered glass, standard
  - **Paint:** Corrosion resistant polyester powder painted, minimum 2.0 mil. thickness.
    - Standard Colors: Dark Bronze, Black, & Gray
    - RAL & custom colors available
    - Optional coastal finish available.
  - **Weight:** 12.4lbs (5.6kg) – 24lbs (10.9kg)

- Warranty**
- **System Warranty:** 5 Year Standard, 10 Year Optional

- Controls**
- **Dimming:**
    - Standard: 0-10V; Optional: DALI (120-277V Only)
  - **Sensors:**
    - Photo electric sensors (PE) available.
  - LightGrid™ compatible

- Mounting**
- Slipfitter with +/- 5 degree of adjustment for leveling.
  - Integral die cast mounting pipe stop.
  - Adjustable for 1.25 in. or 2 in. mounting pipe.

- Suggested HID Replacement Lumen Levels**
- ~4,000–5,000 lumens to replace 100W HPS Cobra-head
  - ~7,000–8,800 lumens to replace 150W HPS Cobra-head
  - ~8,500–11,500 lumens to replace 200W HPS Cobra-head
  - ~11,500–14,000 lumens to replace 250W HPS Cobra-head
  - ~21,000–30,000 lumens to replace 400W HPS Cobra-head

Note: Actual replacement lumens may vary based upon mounting height, pole spacing, design criteria, etc.

PREVIOUS	DESCRIPTION	CURRENT	DESCRIPTION
A1, B1	Extra Narrow/Narrow Asymmetric	A3	Type II Narrow
C1, E1	Asymmetric Short/Medium	B3	Type II Wide
D1, G1	Asymmetric Forward/Extra Wide	C3	Type III
F1	Asymmetric Wide	D3	Type IV
		E3	Type II Enhanced Back Light

\*\*The information above is designed to provide a guideline to select the correct luminaire for a roadway application. The best and most accurate way to ensure the proper design is do a lighting layout Utilizing AGI.

**GE Evolve®**  
LED Roadway Lighting  
ERL1-ERLH-ERL2



Project name \_\_\_\_\_  
Date \_\_\_\_\_  
Type \_\_\_\_\_

**ERLH 10 B3 40 A BLCK LRY**

PROD. ID	VOLTAGE	LUMEN OUTPUT	DISTRIBUTION*	CCT	CONTROLS	COLOR	OPTIONS
E = Evolve	0 = 120-277V*	10	A3 = Type II Narrow	27 = 2700K<->	A = ANSI C136.41 7-pin	GRAY = Gray	A = 4 Bolt Slipfitter †
R = Roadway	1 = 120	11	B3 = Type II Wide	30 = 3000K<->	D = ANSI C136.41 7-pin with	BLCK = Black	F = Fusing
L = Local	2 = 208	13	C3 = Type III	40 = 4000K	Shorting Cap	DKBZ = Dark Bronze	G = Internal Bubble Level
H = High Output	3 = 240	14	D3 = Type IV	<- Select	E = ANSI C136.41 7-pin with		I = IP66 Optical
	4 = 277	15	E3 = Type II Enhanced	2700K or	non-Dimming PE Control.*		L = Tool-Less Entry
	5 = 480	16	Back Light	3000K CCT			R = Secondary 10kV/5kA SPD
	D = 347			for IESNA			T = Secondary 20kV/10kA SPD
	H = 347-480*#	See Table	See Table	approved			U = DALI Programmable +^
				units.			V1 = Variable Output via Field Adjustable Module**
				*Nominal IES Type			Y = Coastal Finish*
				classing subject to			XXX = Special Options
				typical variation,			† Contact manufacturer for Lead-Time.
				individual units			# "X" option provides single pack box per
				may differ.			fixture. Std Packaging = 20 units per Magna
							pak container.
							* Recommended for installations within
							750 ft. from the coast. Contact Factory for
							Lead-Time.
							+ Compatible with LightGrid 2.0 nodes.
							^ Not available in 347V, 480V or 347-480V.
							** Not available with DALI IU option.



LUMEN OUTPUT	DISTRIBUTION	TYPICAL INITIAL LUMENS			TYPICAL SYSTEM WATTAGE			BUG RATING			IES FILE NUMBER						
		4000K	3000K	2700K	120-277V	347-480V	4000K	3000K	2700K	4000K	3000K	2700K					
10	A3								B2-U0-G2	B2-U0-G2	B2-U0-G2	ERLH_10A340	IES	ERLH_10A330	IES	ERLH_10A327	IES
	B3								B2-U0-G2	B2-U0-G2	B2-U0-G2	ERLH_10B340	IES	ERLH_10B330	IES	ERLH_10B327	IES
	C3	10000	9600	9300	82				B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_10C340	IES	ERLH_10C330	IES	ERLH_10C327	IES
	D3								B1-U0-G2	B1-U0-G2	B1-U0-G2	ERLH_10D340	IES	ERLH_10D330	IES	ERLH_10D327	IES
11	A3								B3-U0-G3	B3-U0-G3	B3-U0-G3	ERLH_11A340	IES	ERLH_11A330	IES	ERLH_11A327	IES
	B3								B3-U0-G3	B2-U0-G2	B2-U0-G2	ERLH_11B340	IES	ERLH_11B330	IES	ERLH_11B327	IES
	C3	11500	11000	10700	98				B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_11C340	IES	ERLH_11C330	IES	ERLH_11C327	IES
	D3								B1-U0-G2	B1-U0-G2	B1-U0-G2	ERLH_11D340	IES	ERLH_11D330	IES	ERLH_11D327	IES
13	A3								B3-U0-G3	B3-U0-G3	B3-U0-G3	ERLH_13A340	IES	ERLH_13A330	IES	ERLH_13A327	IES
	B3								B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_13B340	IES	ERLH_13B330	IES	ERLH_13B327	IES
	C3	13000	12500	12100	111				B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_13C340	IES	ERLH_13C330	IES	ERLH_13C327	IES
	D3								B3-U0-G3	B3-U0-G3	B3-U0-G3	ERLH_13D340	IES	ERLH_13D330	IES	ERLH_13D327	IES
14	A3								B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_14A340	IES	ERLH_14A330	IES	ERLH_14A327	IES
	B3								B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_14B340	IES	ERLH_14B330	IES	ERLH_14B327	IES
	C3	14000	13400	13000	122				B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_14C340	IES	ERLH_14C330	IES	ERLH_14C327	IES
	D3								B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_14D340	IES	ERLH_14D330	IES	ERLH_14D327	IES
15	A3								B3-U0-G3	B3-U0-G3	B3-U0-G3	ERLH_15A340	IES	ERLH_15A330	IES	ERLH_15A327	IES
	B3								B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_15B340	IES	ERLH_15B330	IES	ERLH_15B327	IES
	C3	15000	14400	13900	136				B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_15C340	IES	ERLH_15C330	IES	ERLH_15C327	IES
	D3								B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_15D340	IES	ERLH_15D330	IES	ERLH_15D327	IES
16	A3								B3-U0-G3	B3-U0-G3	B3-U0-G3	ERLH_16A340	IES	ERLH_16A330	IES	ERLH_16A327	IES
	B3								B3-U0-G3	B3-U0-G3	B3-U0-G3	ERLH_16B340	IES	ERLH_16B330	IES	ERLH_16B327	IES
	C3	16000	15300	14900	149				B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_16C340	IES	ERLH_16C330	IES	ERLH_16C327	IES
	D3								B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_16D340	IES	ERLH_16D330	IES	ERLH_16D327	IES
	E3							B3-U0-G3	B3-U0-G3	B3-U0-G3	ERLH_16E340	IES	ERLH_16E330	IES	ERLH_16E327	IES	



PLA STREETLIGHTING			
MES JOB #:	N/A	DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	NOT TO SCALE	CHECKED BY:	ANURAG
PLOT DATE:	2/19/2020	DATE:	2/19/2020



111 W STREET LUMINAIRE DETAILS	
STANDARD DETAIL	
CITY OF DETROIT	
WAYNE COUNTY, MI	

GRAPHIC SCALE  
NOT TO SCALE



SHEET INFORMATION	
DT-02	
TOTAL SHEETS	01
SHEET NO.	01



Conductor		Stock Numbers			
Size (AWG or kcmil)	No. of strands				
14*	1	SIMpull THHN® CU Stock #: BK:580285, WE:580294, WE/RD:580622, RD:580293, BE:580287, GN:580291, YW:580295, OE:580292, BN:580288, PE:580286, GY:580289 Standard THHN CU Stock #: BK:115790, WE:115808, RD:115816, BE:115824, GN:115832, YW:115840, OE:115857, BN:115865, PE:211243, GY:214668, TN:302539, PK:255331			
12*	1	SIMpull THHN® CU Stock #: BK:580265, WE:580275, WE/BK:580280, WE/BE:580281, WE/RD:580283 RD:580273, GN:580271, GN/YW:584566, BE:580267, PE:580264, YW:580276, OE:580272, BN:580268, GY:580269, GY/BN:580277 GY/OE:580278, GY/PE:580263, GY/YW:580279, PK:581931 Standard THHN CU Stock #: BK:115873, WE:115881, WE/BK:565284, WE/BE:611410, WE/RD:565285, Red:115899, GN:115915, GN/YW:401000, BE:115907, PE:212043, YW:115923 OE:115931, BN:115949, GY:228700, GY/BN:575303, GY/OE:575304 GY/YW:575305, PK:256479, TN:320127			
10*	1	SIMpull THHN® CU Stock #: BK:580203, WE:580215, WE/BK:580216, WE/BE:580218, WE/RD:580219, RD:580214, GN:580211, Gn/YW:580212, BE:580204, PE:580202, YW:580220, OE:580213, BN:580205, GY:580206, GY/BN:580226, GY/OE:580208, GY/PE:580201, GY/YW:580210 Standard THHN CU Stock #: BK:115956 WE:115964, WE/BK:551545, WE/BE:551547, WE/RD:551546, RD:115972, GN:115998, GN/YW:611757, BE:115980, YW:116004, OE:116012, BN:116020, GY:229823, GY/BN:575300, GY/OE:575301, GY/YW:575302, PK:258384, PE:253336			
14*	19	SIMpull THHN® CU Stock #: BK:585485, WE:580180, WE/BK:585484, WE/BE:581899, RD:585494, BE:585486, BE/WE:592686, GN:585490, YW:580181, OE:580177, BN:580172, BN/RD:592685, PE:580178, GY:580173, PK:581933 Standard THHN CU Stock #: BK:229559 WE:229567, RD:229575, RD/BK:662817, BE:229583, GN:229591, YW:229609, OE:229617, BN:229625, PE:239566, GY:229633, PK:244863, TN:320150			
12*	19	SIMpull THHN® CU Stock #: BK:580182, WE:580199, WE/BK:580192, WE/BE:580193, WE/RD:580194, RD:580198, BE:580222, GN:580195, GN/YW:583863, YW:580200, OE:580196, BN:585461, PE:580197, GY:580250, GY/BN:580207, GY/OE:580189, GY/PE:580188, GY/YW:580190, PK:581932 Standard THHN CU Stock #: BK:229641 WE:229658, WE/BK:311514, WE/BE:566441, WE/RD:566440, RD:229666, BE:229674, BE/WE:662981, GN:229682, GN/YW:663013, YW:229690, OE:229708, BN:229716, PE:232124, GY:229724, GY/BN:575307, GY/OE:575309, GY/YW:575310, TN:320168, PK:242503			
10*	19	SIMpull THHN® CU Stock #: BK:580221 WE:580255, WE/BK:580260, WE/BE:580261, WE/RD:580262, RD:580254, BE:580222, GN:585464, GN/YW:584567, YW:585470, OE:585465, BN:580223, PE:580253, GY:580250, GY/BN:580207, GY/OE:580257, GY/PE:580227, GY/YW:580259, PK:581930 Standard THHN CU Stock #: BK:229732, WE:229740, WE/BK:610028, WE/BE:556199, WE/RD:556198, RD:229757, RD/WE:663039, BE:229765, GN:229773, GN/YW:663112, PE:256594, YW:229781, OE:229799, BN:229807, GY:229815, GY/BN:575297, GY/OE:575298, GY/YW:575299, PK:260539, TN:320176			
Color Abbreviations					
BK-Black	WE-White	RD-Red	BE-Blue	GN-Green	YW-Yellow
OE-Orange	BN-Brown	GY-Grey	PK-Pink	PE-Purple	TN-Tan

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One Southwire Drive, Carrollton, GA 30119, USA

Conductor		Stock Numbers			
Size (AWG or kcmil)	No. of strands				
8	19	SIMpull THHN® CU Stock #: BK:204883, WE:204891, RD:204909, BE:204917, GN:204925, YW:238485, OE:238493, BN:238477, GY:238501, PK:577515, PE:256586			
6	19	SIMpull THHN® CU Stock #: BK:204933, WE:204941, RD:204958, BE:204966, GN:204974, YW:260687, OE:260679, BN:260695, GY:254649, PE:485607			
4	19	SIMpull THHN® CU Stock #: BK:204990, WE:205005, RD:204982, BE:205633, GN:251728, YW:411694, OE:411710, BN:411702, GY:611778, PE:552486			
3	19	SIMpull THHN® CU Stock #: BK:243469, WE:243477, RD:243485, BE:372763, GN:601971, YW:551080, OE:551079, BN:551078, GY:551081, PE:552533			
2	19	SIMpull THHN® CU Stock #: BK:205021, WE:205039, RD:205013, BE:315812, GN:295832, YW:420653, OE:610171, BN:610169, GY:610172, PE:552534			
1	19	SIMpull THHN® CU Stock #: BK:205047, WE:344580, RD:344598, BE:481945, GN:400192, YW:550887, OE:550888, BN:550890, GY:550891, PE:552488			
1/0	19	SIMpull THHN® CU Stock #: BK:205054, WE:558771, RD:558773, BE:558774, GN:556315, YW:558777, OE:558779, BN:558778, GY:558781, PE:551539			
2/0	19	SIMpull THHN® CU Stock #: BK:205062 WE:556111, RD:556113, BE:556114, GN:556115, YW:556116, OE:556117, BN:556119, GY:558784, PE:552535			
3/0	19	SIMpull THHN® CU Stock #: BK:205070, WE:556120, RD:556121, BE:556122, GN:556123, YW:556124, OE:556125, BN:556127, GY:556698, PE:551541			
4/0	19	SIMpull THHN® CU Stock #: BK:205088, WE:556128, RD:556129, BE:556130, GN:556131, YW:556132, OE:556133, BN:556135, GY:556697, PE:551540			
250	37	SIMpull THHN® CU Stock #: BK:205096, WE:556136, YW:556140, OE:556141, BN:556143, GY:556552, BE:556138, GN:556139, PK:592681, PE:551025, RD:556137, TN:592682			
300	37	SIMpull THHN® CU Stock #: BK:205104, WE:556144, RD:556145, BE:556146, GN:556147, YW:556148, OE:556149, BN:556150, GY:556551, PE:551026			
350	37	SIMpull THHN® CU Stock #: BK:205112, WE:556151, RD:556152, BE:556153, GN:556154, YW:556155, OE:556156, BN:556157, GY:556707, PE:551027			
400	37	SIMpull THHN® CU Stock #: BK:205120, WE:556158, RD:556160, BE:556161, GN:556162, YW:556163, OE:556164, BN:556165, GY:556550, PK:581797, PE:551029, TN:581798			
500	37	SIMpull THHN® CU Stock #: BK:205138, WE:556166, RD:556168, BE:556169, GN:556170, YW:556171, OE:556172, BN:556173, GY:556549, PK:581782, PE:551599, TN:581783			
600	61	SIMpull THHN® CU Stock #: BK:321471, WE:556174, RD:556176, BE:556177, GN:556178, YW:556179, OE:556180, BN:556181, GY:558859, PE:552485			
750	61	SIMpull THHN® CU Stock #: BK:320994, WE:564945, RD:564946, BE:564944, GN:551700, YW:550907, OE:550908, BN:550909, GY:550910, PE:552536			
1000	61	SIMpull THHN® CU Stock #: BK:289710, BN:552644, OE:552645, YW:552647			
Color Abbreviations					
BK-Black	WE-White	RD-Red	BE-Blue	GN-Green	YW-Yellow
OE-Orange	BN-Brown	GY-Grey	PK-Pink	PE-Purple	TN-Tan

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One Southwire Drive, Carrollton, GA 30119, USA



PLA STREETLIGHTING	
MES JOB #:	N/A
DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	NOT TO SCALE
CHECKED BY:	ANURAG
PLOT DATE:	2/19/2020
DATE:	2/19/2020



FILL OUT DETAIL SHEET NAME	
STANDARD DETAIL	
CITY OF DETROIT	
WAYNE COUNTY, MI	

GRAPHIC SCALE  
NOT TO SCALE



SHEET INFORMATION	
DT-02.2	
TOTAL SHEETS	02
SHEET NO.	02



**GE Evolve®**  
LED Roadway Lighting  
ERL1-ERLH-ERL2



Project name \_\_\_\_\_  
Date \_\_\_\_\_  
Type \_\_\_\_\_

**Typical Specifications: ERL1-ERLH-ERL2**

**LED & Optical**

- **Output Range:** 1900 – 30000 lm
- **Photometric Options:** Type II Narrow, Type II Wide, Type III, Type IV
- **System Efficacy:** 100 - 145 LPW
- **CCT:** 2700K, 3000K, 4000K; LEDs @ 70 CRI

**Lumen Maintenance Tables**

Projected Lxx per IES TM-21 at 25°C for reference:

ERL1 LUMEN OUTPUT CODES	LXX@10KI@HOURS		
	25,000 HR	50,000 HR	60,000 HR
02,03,04,05,06	L96	L95	L94
07,08,09	L95	L91	L89
10	L89	L80	L76

ERLH LUMEN OUTPUT CODES	LXX@10KI@HOURS		
	25,000 HR	50,000 HR	60,000 HR
10, 11	L97	L96	L96
13, 14	L95	L93	L92
15, 16	L94	L91	L91

ERL2 LUMEN OUTPUT CODES	LXX@10KI@HOURS		
	25,000 HR	50,000 HR	60,000 HR
16, 18, 19, 21, 23	L96	L94	L95
25, 27, 28	L95	L93	L92
30	L94	L91	L90

Note: Projected Lxx based on LM80 (10,000 hour testing). Accepted industry tolerances apply to initial luminous flux and lumen maintenance measurements.

**Electrical**

- **Input Voltage:** 120-277 volt and 347-480 volt
- **Input Frequency:** 50/60Hz
- **Power Factor (PF)\*:** >90%
- **Total Harmonic Distortion (THD)\*:** <20%

\*Power factor and THD tolerance exceptions: ERL1 "02" Lumen output: PF and THD within tolerances above only at 120 volt. ERL1 "03" Lumen output: @120 volt PF=0.89; @480 volt THD=26% ERL1 "04" Lumen output: @480 volt THD=22%

**Ratings**

- **Surge Protection:** per ANSI C136.2-2015: (Driver Internal):
  - 6kV/3kA "Basic: (120 Strikes)" - Standard on ERL1 (02-06)
  - 10kV/5kA "Enhanced: (40 Strikes)" - Standard on ERL1 (07 - 10), ERLH, ERL2
- **(Additional Separate Secondary SPD)**
  - 10kV/5kA "Enhanced: (40 Strikes) - Option "R"
  - 20kV/10kA "Elevated" (40 Strikes) - Option "T"
- **Safety:** UL/cUL Listed. UL 1598 listed, suitable for wet locations (UL/cUL)
- **Environmental:** Compliant with the materials restrictions of RoHS
- **EMI:** Title 47 CFR Part 15 Class A
- **Vibration:** 3G per ANSI C136.31-2010
- **LM-79 testing** in accordance with IESNA Standards
- **Std. Optical enclosure** rated per ANSI C136.25-2009:
  - ERL1/ERLH/ERL2 = IP65, Optional: IP66

International Dark Sky Association listed. 2700K or 3000K must be selected to meet IDA certification and approval.

**Operating Temperature:**

PRODUCT ID	LUMEN OUTPUT	AMBIENT READING
ERL1	02-10	-40°C to 50°C
ERLH	10-11, 13	-40°C to 50°C
ERLH	14-16	-40°C to 45°C
ERL2	16-28	-40°C to 50°C
ERL2	30	-40°C to 45°C

Delayed start may be experienced < -35°C

**Construction & Finish**

- **Housing:**
  - Die Cast Enclosure
  - Casting-integral heat sink for maximum heat transfer
- **Lensing:** Impact resistant tempered glass, standard
- **Paint:** Corrosion resistant polyester powder painted, minimum 2.0 mil. thickness.
  - Standard Colors: Dark Bronze, Black, & Gray
  - RAL & custom colors available
  - Optional coastal finish available.
- **Weight:** 12.4lbs (5.6kg) – 24lbs (10.9kg)

**Warranty**

- **System Warranty:** 5 Year Standard, 10 Year Optional

**Controls**

- **Dimming:**
  - Standard: 0-10V; Optional: DALI (120-277V Only)
- **Sensors:**
  - Photo electric sensors (PE) available.
- LightGrid™ compatible

**Mounting**

- Slipfitter with +/- 5 degree of adjustment for leveling.
- Integral die cast mounting pipe stop.
- Adjustable for 1.25 in. or 2 in. mounting pipe.

**Suggested HID Replacement Lumen Levels**

- ~4,000–5,000 lumens to replace 100W HPS Cobra-head
- ~7,000–8,800 lumens to replace 150W HPS Cobra-head
- ~8,500–11,500 lumens to replace 200W HPS Cobra-head
- ~11,500–14,000 lumens to replace 250W HPS Cobra-head
- ~21,000–30,000 lumens to replace 400W HPS Cobra-head

Note: Actual replacement lumens may vary based upon mounting height, pole spacing, design criteria, etc.

PREVIOUS	DESCRIPTION	CURRENT	DESCRIPTION
A1, B1	Extra Narrow/Narrow Asymmetric	A3	Type II Narrow
C1, E1	Asymmetric Short/Medium	B3	Type II Wide
D1, G1	Asymmetric Forward/Extra Wide	C3	Type III
F1	Asymmetric Wide	D3	Type IV
		E3	Type II Enhanced Back Light

\*\*The information above is designed to provide a guideline to select the correct luminaire for a roadway application. The best and most accurate way to ensure the proper design is to do a lighting layout Utilizing AGI.

**GE Evolve®**  
LED Roadway Lighting  
ERL1-ERLH-ERL2



Project name \_\_\_\_\_  
Date \_\_\_\_\_  
Type \_\_\_\_\_

ERLH 0 10 B3 40 A BLCK LRY

PROD. ID	VOLTAGE	LUMEN OUTPUT	DISTRIBUTION*	CCT	CONTROLS	COLOR	OPTIONS
E = Evolve	0 = 120-277V*	10	A3 = Type II Narrow	27 = 2700K	A = ANSI C136.41 7-pin	GRAY = Gray	A = 4 Bolt Slipfitter †
R = Roadway	1 = 120	11	B3 = Type II Wide	30 = 3000K	D = ANSI C136.41 7-pin with Shorting Cap	BLCK = Black	F = Fusing
L = Local	2 = 208	13	C3 = Type III	40 = 4000K	E = ANSI C136.41 7-pin with non-Dimming PE Control.*	DKBZ = Dark Bronze	G = Internal Bubble Level
H = High Output	3 = 240	14	D3 = Type IV	<> Select 2700K or 3000K CCT for IDA approved units.	*PE Control Only available for 120-277V or 480V Discrete. Not available for 347-480V or 347V Discrete.		I = IP66 Optical
	4 = 277	15	E3 = Type II Enhanced Back Light	See Table			L = Tool-Less Entry
	5 = 480	16					R = Secondary 10kV/5kA SPD
	D = 347						T = Secondary 20kV/10kA SPD
	H = 347-480*#						U = DALI Programmable**
							V1 = Variable Output via Field Adjustable Module**
							Y = Coastal Finish*
							XXX = Special Options
							† Contact manufacturer for Lead-Time.
							# "X" option provides single pack box per fixture. Std Packaging = 20 units per Magna pak container.
							* Recommended for installations within 750 ft. from the coast. Contact Factory for Lead-Time.
							+ Compatible with LightGrid 2.0 nodes.
							^ Not available in 347V, 480V or 347-480V.
							** Not available with DALI (U) option.

LUMEN OUTPUT	DISTRIBUTION	TYPICAL INITIAL LUMENS			TYPICAL SYSTEM WATTAGE			BUG RATING			IES FILE NUMBER			
		4000K	3000K	2700K	120-277V	347-480V	2700K	4000K	3000K	2700K	3000K	2700K		
10	A3	10000	9600	9300	82	B2-U0-G2	B2-U0-G2	B2-U0-G2	ERLH_10A340	JES	ERLH_10A330	JES	ERLH_10A327	JES
	B3					B2-U0-G2	B2-U0-G2	B2-U0-G2	ERLH_10B340	JES	ERLH_10B330	JES	ERLH_10B327	JES
	C3					B2-U0-G2	B2-U0-G2	B2-U0-G2	ERLH_10C340	JES	ERLH_10C330	JES	ERLH_10C327	JES
	D3					B1-U0-G3	B1-U0-G2	B1-U0-G2	ERLH_10D340	JES	ERLH_10D330	JES	ERLH_10D327	JES
11	A3	11500	11000	10700	98	B3-U0-G3	B3-U0-G3	B3-U0-G3	ERLH_11A340	JES	ERLH_11A330	JES	ERLH_11A327	JES
	B3					B3-U0-G3	B2-U0-G2	B2-U0-G2	ERLH_11B340	JES	ERLH_11B330	JES	ERLH_11B327	JES
	C3					B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_11C340	JES	ERLH_11C330	JES	ERLH_11C327	JES
	D3					B1-U0-G3	B1-U0-G2	B1-U0-G2	ERLH_11D340	JES	ERLH_11D330	JES	ERLH_11D327	JES
13	A3	13000	12500	12100	111	B3-U0-G3	B3-U0-G3	B3-U0-G3	ERLH_13A340	JES	ERLH_13A330	JES	ERLH_13A327	JES
	B3					B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_13B340	JES	ERLH_13B330	JES	ERLH_13B327	JES
	C3					B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_13C340	JES	ERLH_13C330	JES	ERLH_13C327	JES
	D3					B2-U0-G3	B2-U0-G3	B1-U0-G3	ERLH_13D340	JES	ERLH_13D330	JES	ERLH_13D327	JES
14	A3	14000	13400	13000	122	B3-U0-G3	B3-U0-G3	B3-U0-G3	ERLH_14A340	JES	ERLH_14A330	JES	ERLH_14A327	JES
	B3					B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_14B340	JES	ERLH_14B330	JES	ERLH_14B327	JES
	C3					B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_14C340	JES	ERLH_14C330	JES	ERLH_14C327	JES
	D3					B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_14D340	JES	ERLH_14D330	JES	ERLH_14D327	JES
15	A3	15000	14400	13900	136	B3-U0-G3	B3-U0-G3	B3-U0-G3	ERLH_15A340	JES	ERLH_15A330	JES	ERLH_15A327	JES
	B3					B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_15B340	JES	ERLH_15B330	JES	ERLH_15B327	JES
	C3					B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_15C340	JES	ERLH_15C330	JES	ERLH_15C327	JES
	D3					B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_15D340	JES	ERLH_15D330	JES	ERLH_15D327	JES
16	A3	16000	15300	14900	149	B3-U0-G3	B3-U0-G3	B3-U0-G3	ERLH_16A340	JES	ERLH_16A330	JES	ERLH_16A327	JES
	B3					B3-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_16B340	JES	ERLH_16B330	JES	ERLH_16B327	JES
	C3					B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_16C340	JES	ERLH_16C330	JES	ERLH_16C327	JES
	D3					B2-U0-G3	B2-U0-G3	B2-U0-G3	ERLH_16D340	JES	ERLH_16D330	JES	ERLH_16D327	JES
E3					B3-U0-G3	B3-U0-G3	B3-U0-G3	ERLH_16E340	JES	ERLH_16E330	JES	ERLH_16E327	JES	



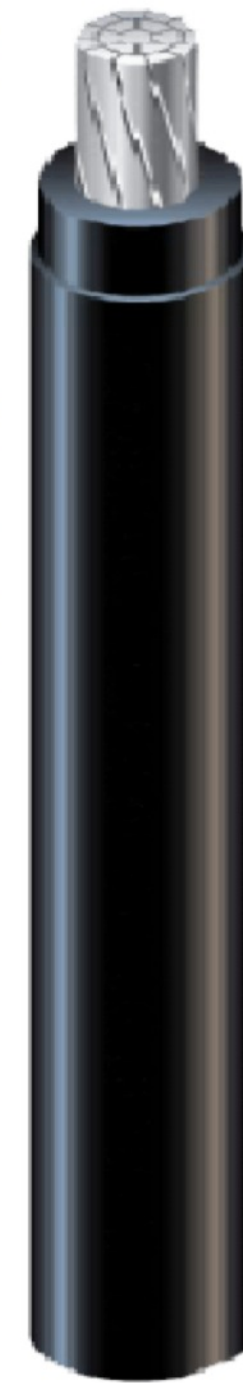
# SIMpull THHN® Aluminum THHN Wire & Cable with Alumaflex® Brand Conductors



600 Volt Alumaflex® Brand Aluminum Alloy (AA-8176) Conductor. Thermoplastic Insulation/SIM Nylon Sheath. Heat, Moisture, Gasoline, Oil, and Sunlight Resistant. Also Rated THWN-2. SIMpull® Technology for Easier Pulling

## APPLICATIONS

Southwire SIMpull THHN® Aluminum THHN Wire & Cable with Alumaflex® Brand conductors are primarily used in conduit and cable trays for services, feeders and branch circuits in commercial or industrial applications as specified in the 2011 National Electrical Code. When used as Type THHN or T90 Nylon conductor is suitable for use in dry locations at temperatures not to exceed 90°C. When used as Type THWN-2 or TWN75, conductor is suitable for use in wet or dry locations at temperatures not to exceed 90°C or not to exceed 75°C when exposed to oil or coolant. Voltage for all applications is 600 volts. This cable should be installed without application of pulling lubricant.



## STANDARDS & REFERENCES

Southwire Aluminum SIMpull THHN® conductors comply with the following:

- ASTM B-800 and either B-801 or B836 (SIW)
- UL Standard 83
- CSA Standard C22.2 75
- Federal Specification A-A-59544
- VW-1 – Sizes 4 through 1 AWG
- CT - Sizes 1/0 AWG and larger Sizes Rated for CT use
- FT1 - Sizes 4 AWG through 750 kcmil
- T90 Nylon – Sizes 4 AWG through 750 kcmil
- TWN 75 – Sizes 8 AWG through 750 kcmil
- National Electrical Code, NFPA 70
- NEMA WC-70 Construction Requirements
- Gas & Oil Resistant II - All Sizes
- Sunlight Resistant – Sizes 6 AWG and larger
- RoHS/Reach Compliant

## CONSTRUCTION

Southwire SIMpull THHN® conductors are AlumaFlex® Brand AA-8000 series aluminum alloy, compact stranded. Insulated with a tough heat and moisture-resistant polyvinyl chloride (PVC), over which a SIM nylon (polyamide) or UL-listed equal jacket is applied. Conductor sizes 1/0 AWG and larger are listed and marked sunlight resistant in colors. Available in black, white, red, blue, purple, green, yellow, orange, brown, and gray. Also available in striped configurations. Some colors are subject to economic order quantity.

Conductor		Insulation Thickness (mils)	Jacket Thickness (mils)	Nominal O.D. (mils)	Net Wt. Per 1000' (lbs.)	Allowable Ampacities+			Standard Package
Size (AWG or kcmil)	No. of strands					60°C	75°C	90°C	
8	7	30	5	204	27	35	40	45	B
6	7	30	5	239	38	40	50	60	C
4	7	40	6	305	62	55	65	75	BCD
2	6	40	6	360	91	75	90	100	BC
1	8	50	7	413	117	85	100	115	BC
1/0	10	50	7	450	141	100	120	135	BCD
2/0	12	50	7	490	172	115	135	150	BCD
3/0	16	50	7	537	210	130	155	175	BCD
4/0	19	50	7	589	257	150	180	205	BCD
250	22	60	8	656	311	170	205	230	ABC
300	35	60	8	706	365	190	230	255	BC
350	35	60	8	752	418	210	250	280	BC
400	35	60	8	795	471	225	270	305	BC
500	35	60	8	872	576	260	310	350	BC
600	58	70	9	971	700	285	340	385	BC
700	58	70	9	1035	804	310	375	420	C
750	58	70	9	1066	856	320	385	435	ABC
900	58	70	9	1139	1013	355	425	480	N/A
1000	58	70	9	1218	1117	375	445	500	N/A

+ Allowable Ampacities shown are for general use as specified by the National Electrical Code, Sections 310.15 and 240.4(D). Unless the equipment is marked for use at higher temperatures, the conductor ampacities shall be limited to the following per NEC 110.14(C): 60°C - When terminated to equipment for circuits rated 100 amperes or less marked for 14 through 1 AWG conductors. 75°C - When terminated to equipment for circuits rated over 100 amperes or marked for conductors larger than 1 AWG. 90°C - THHN dry locations and THWN wet or dry locations for ampacity adjustment purposes using NEC section 310.15.H17

Package Codes  
A-500'  
B-2,500'  
C-1,000'  
D-5,000'

## RECOMMENDED SAMPLE SPECIFICATIONS:

Conductors shall be UL-listed Type THHN and THWN-2, suitable for operation at 600 volts, as specified in the National Electrical Code. Sizes 8 through 1 AWG shall be rated VW-1, larger sizes shall be rated for CT Use. Conductors shall be AlumaFlex aluminum alloy, insulated with high-heat and moisture resistant PVC, jacketed with abrasion, moisture, gasoline, and oil resistant nylon or UL-listed equivalent as manufactured by Southwire Company or approved equal.

Revised Dec 3, 2019

The Power of Connections.™



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Revised Dec 3, 2019

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PLA STREETLIGHTING	
MES JOB #:	N/A
DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	NOT TO SCALE
CHECKED BY:	ANURAG
PLOT DATE:	2/19/2020
DATE:	2/19/2020



UNDERGROUND ALUMINUM 600V THHN CABLE DETAILS	
STANDARD DETAIL	
CITY OF DETROIT	
WAYNE COUNTY, MI	

GRAPHIC SCALE  
NOT TO SCALE



SHEET INFORMATION	
<b>DT-04.1</b>	TOTAL SHEETS: 02
	SHEET NO.: 01



Conductor		
Size (AWG or kcmil)	No. of strands	Stock Numbers
8	7	Stock #: N/A
6	7	Stock #: BK:563768, RD:573834, BE:573835, WE:578332, GN:566358
4	7	Stock #: BK:563769, RD:573544, BE:573833, WE:577628, GN:562211
2	7	Stock #: BK:563770, RD:573541, BE:573542, WE:563493, BN:587026, OE:587027, YW:587028, GY:578329, GN:562745
1	18	Stock #: BK:563771, RD:583155, BE:583156, WE:578328, BN:587023, OE:587024, YW:587025, GY:578327, GN:562746
1/0	18	Stock #: BK:562747, RD:562748, BE:562749, WE:562750, BN:562753, OE:562754, YW:562752, GY:562755, GN:562756, PE:573380
2/0	18	Stock #: BK:562212, RD:562214, BE:562621, WE:562213, BN:562758, OE:562759, YW:562757, GY:562760, GN:562761, PE:573370
3/0	18	Stock #: BK:562663, RD:562665, BE:562666, WE:562664, BN:562763, OE:562764, YW:562762, GY:562765, GN:562766, PE:573371
4/0	18	Stock #: BK:562671, RD:562673, BE:562674, WE:562672, BN:561805, OE:561806, YW:561807, GY:562767, GN:562768, PE:573372
250	22	Stock #: BK:560444, RD:562626, BE:562627, WE:562625, BN:561863, OE:561864, YW:561865, GY:561866, GN:561867, PE:573373
300	35	Stock #: BK:562667, RD:562669, BE:562670, WE:562668, BN:562771, OE:562772, YW:562770, GY:562773, GN:562774, PE:573374
350	35	Stock #: BK:560443, RD:562623, BE:562624, WE:562622, BN:561858, OE:561859, YW:561861, GY:561862, GN:562775, PE:573375
400	35	Stock #: BK:562677, RD:562776, BE:562778, WE:562779, BN:562781, OE:562782, YW:562780, GY:562783, GN:562699, PE:573376
500	35	Stock #: BK:560442, RD:562696, BE:562697, WE:562698, BN:561853, OE:561854, YW:561855, GY:561856, GN:561857, PE:573377
600	58	Stock #: BK:560441, RD:562630, BE:562631, WE:562628, BN:561847, OE:561848, YW:561849, GY:561850, GN:561851, PE:573379
700	58	Stock #: BK:562689, RD:562690, BE:562691, WE:562692, BN:561843, OE:561844, YW:561846, GY:562693
750	58	Stock #: BK:562632, RD:562634, BE:562635, WE:562633, BN:561838, OE:561839, YW:561840, GY:561841, GN:561842, PE:573481
900	58	Stock #: BK:562679, RD:562681, BE:562682, WE:562683, BN:561782, OE:561783, YW:561785, GY:561786, GN:562684
1000	58	Stock #: BK:562680, BN:564280, OE:564281, YW:564282, GY:564283
<b>Color Abbreviations</b> BK-Black      RD-Red      BE-Blue      WE-White      BN-Brown OE-Orange      YW-Yellow      GY-Grey      GN-Green		

Revised Dec 3, 2019

The Power of Connections.™



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One Southwire Drive, Carrollton, GA 30119, USA



PLA STREETLIGHTING	
MES JOB #:	N/A
DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	NOT TO SCALE
CHECKED BY:	ANURAG
PLOT DATE:	2/19/2020
DATE:	2/19/2020



UNDERGROUND ALUMINUM 600V THHN CABLE DETAILS	
STANDARD DETAIL	
CITY OF DETROIT	
WAYNE COUNTY, MI	

GRAPHIC SCALE  
NOT TO SCALE

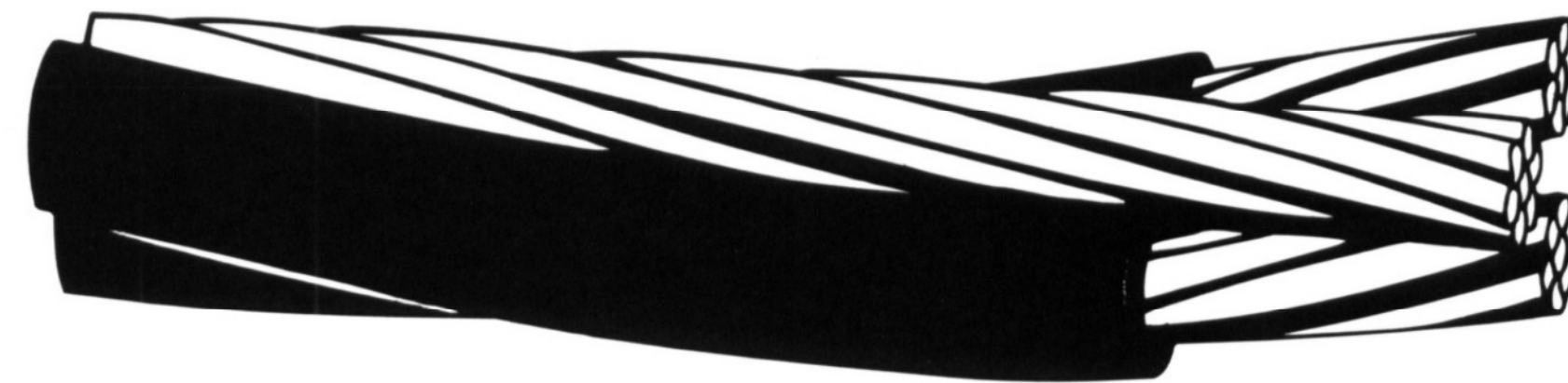


SHEET INFORMATION		
<b>DT-04.2</b>	TOTAL SHEETS	SHEET NO.
	02	02



# Triplex Service Drop

Aluminum Conductors. Polyethylene or Crosslinked Polyethylene Insulation.



## APPLICATIONS

Used to supply power, usually from a pole-mounted transformer, to the user's service head where connection to the service entrance cable is made. To be used at voltages of 600 volts phase-to-phase or less and at conductor temperatures not to exceed 75°C for polyethylene insulated conductors or 90°C for crosslinked polyethylene (XLP) insulated conductors.

## SPECIFICATIONS

Southwire's triplex service drop cable meets or exceeds the following ASTM specifications:

- B-230 Aluminum Wire, 1350-H19 for Electrical Purposes.
- B-231 Aluminum Conductors, Concentric-Lay-Stranded.
- B-232 Aluminum Conductors, Concentric-Lay-Stranded, Coated Steel Reinforced(ACSR).
- B-399 Stranded 6201-T81 Aluminum Alloy Conductors.
- B-901 Compressed Round Stranded Aluminum Conductors Using Single Input Wire.

Southwire's triplex service drop cable meets or exceeds all applicable requirements of ANSI/ICEA S-76-474.

## CONSTRUCTION

Conductors are concentrically stranded, compressed 1350-H19 aluminum. Insulated with either polyethylene or crosslinked polyethylene (XLP). Neutral messengers are concentrically stranded 6201, AAC, or ACSR.



MADE IN THE USA

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Mon Jan 30 13:32:05 EST 2012

Page 1 of 4

## Triplex Service Drop

Code* Word	Phase Conductor			Bare Neutral Messenger				Weight Per 1000 ft.(lbs.)		Allowable Ampacities+	
	Size (AWG)	Strand- ing	Insul. Thick. (mils)	Equiv. Dia. (AWG)++	Size++ (kcmil)	Strand- ing	Rated Strength (lbs.)	XLP	POLY	XLP	POLY
<b>6201 ALLOY NEUTRAL-MESSENGER</b>											
Minex	6	1	45	6	30.58	7	1110	101	101	85	70
Hippa	6	7	45	6	30.58	7	1110	107	107	85	70
Prawn	4	1	45	4	48.69	7	1760	152	152	115	90
Barnacle	4	7	45	4	48.69	7	1760	160	160	115	90
Shrimp	2	7	45	2	77.47	7	2800	243	243	150	120
Gammarus	1/0	7	60	1/0	123.3	7	4460	390	390	205	160
Leda	1/0	9	60	1/0	123.3	7	4460	384	384	205	160
Dungenese	2/0	7	60	2/0	155.4	7	5390	483	483	235	185
Cyclops	2/0	11	60	2/0	155.4	7	5390	474	474	235	185
Flustra	3/0	17	60	3/0	195.7	7	6790	587	587	275	215
Lepas	4/0	18	60	4/0	246.9	7	8560	728	728	315	245

\*Code words for XLP insulated products are formed by adding "XLP" to the conventional code words above (e.g.-Haitois/XLP).  
+Conductor temperature of 90°C for XLP, 75°C for Poly; ambient temperature of 40°C; emissivity 0.9; 2 ft./sec. wind in sun.  
++Designated sizes are: ACSR 6/1 diameter equivalent and AAC with equivalent resistivity per ASTM B-399 for 6201.

Code* Word	Phase Conductor			Bare Neutral Messenger				Weight Per 1000 ft. (lbs.)		Allowable Ampacities+	
	Size (AWG)	Strand- ing	Insul. Thick. (mils)	Equiv. Dia. (AWG)++	Size (kcmil)	Strand- ing	Rated Strength (lbs.)	XLP	POLY	XLP	POLY
<b>6201 ALLOY REDUCED NEUTRAL-MESSENGER</b>											
Artemia	4	1	45	6	30.58	7	1110	135	135	115	90
Crab	4	7	45	6	30.58	7	1110	143	143	115	90
Solaster	2	7	45	4	48.69	7	1760	216	216	150	120
Sandcrab	1/0	7	60	2	77.47	7	2800	347	347	205	160
Echinus	1/0	9	60	2	77.47	7	2800	341	341	205	160
Fulgar	3/0	17	60	1/0	123.3	7	4460	519	519	275	215
Arca	4/0	18	60	2/0	155.4	7	5390	643	643	315	245

\*Code words for XLP insulated products are formed by adding "XLP" to the conventional code words above (e.g.-Haitois/XLP).  
+Conductor temperature of 90°C for XLP, 75°C for Poly; ambient temperature of 40°C; emissivity 0.9; 2 ft./sec. wind in sun.  
++Designated sizes are: ACSR 6/1 diameter equivalent and AAC with equivalent resistivity per ASTM B-399 for 6201.



MADE IN THE USA

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Page 2 of 4



PLA STREETLIGHTING			
MES JOB #:	N/A	DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	NOT TO SCALE	CHECKED BY:	ANURAG
PLOT DATE:	2/19/2020	DATE:	2/19/2020



OVERHEAD ALUMINUM 2 AWG 600V TRIPLEX CABLE DETAILS	
STANDARD DETAIL	
CITY OF DETROIT	
WAYNE COUNTY, MI	

GRAPHIC SCALE  
NOT TO SCALE



SHEET INFORMATION	
<b>DT-05.1</b>	TOTAL SHEETS
02	SHEET NO.
01	01



## Triplex Service Drop

Code* Word	Phase Conductor			Bare Neutral Messenger			Weight Per 1000 ft. (lbs.)		Allowable Ampacities+	
	Size (AWG or kcmil)	Strand-ing	Insul. Thick. (mils)	Size (AWG or kcmil)	Strand-ing	Rated Strength (lbs.)	XLP	POLY	XLP	POLY
<b>AAC NEUTRAL-MESSENGER</b>										
Patella	6	7	45	6	7	563	103	103	85	70
Oyster	4	7	45	4	7	881	154	154	115	90
Clam	2	7	45	2	7	1350	233	233	150	120
Murex	1/0	7	60	1/0	7	1990	374	374	205	160
Purpura	1/0	9	60	1/0	7	1990	368	368	205	160
Nassa	2/0	7	60	2/0	7	2510	462	462	235	185
Melita	3/0	17	60	3/0	19	3310	562	562	275	215
Portunus	4/0	18	60	4/0	19	4020	696	696	315	245
Nannynose	336.4	19	80	336.4	19	6146	1118	1118	420	325

\* Code words for XLP insulated products are formed by adding "/XLP" to the conventional code words above (e.g. -Haiotis/XLP).  
 + Conductor temperature of 90°C for XLP, 75°C for Poly; ambient temperature of 40°C; emissivity 0.9; 2 ft./sec. wind in sun.

Code* Word	Phase Conductor			Bare Neutral Messenger			Weight Per 1000 ft. (lbs.)		Allowable Ampacities+	
	Size (AWG or kcmil)	Strand-ing	Insul. Thick. (mils)	Size (AWG or kcmil)	Strand-ing	Rated Strength (lbs.)	XLP	POLY	XLP	POLY
<b>ACSR NEUTRAL-MESSENGER</b>										
Paludina	6	1	45	6	6/1	1190	109	109	85	70
Voluta	6	7	45	6	6/1	1190	114	114	85	70
Whelk	4	1	45	4	6/1	1860	--	164	115	90
Periwinkle	4	7	45	4	6/1	1860	172	172	115	90
Conch	2	7	45	2	6/1	2850	262	262	150	120
Neritina	1/0	7	60	1/0	6/1	4380	420	420	205	160
Cenia	1/0	9	60	1/0	6/1	4380	414	414	205	160
Runcina	2/0	7	60	2/0	6/1	5310	520	520	235	185
Triton	2/0	11	60	2/0	6/1	5310	512	512	235	185
Mursia	3/0	17	60	3/0	6/1	6620	635	635	275	215
Zuzara	4/0	18	60	4/0	6/1	8350	789	789	315	245
Limpet	336.4	19	80	336.4	18/1	8680	1167	1167	420	325

\* Code words for XLP insulated products are formed by adding "/XLP" to the conventional code words above (e.g. -Haiotis/XLP).  
 + Conductor temperature of 90°C for XLP, 75°C for Poly; ambient temperature of 40°C; emissivity 0.9; 2 ft./sec. wind in sun.



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Mon Jan 30 13:32:05 EST 2012

Page 3 of 4

## Triplex Service Drop

Code* Word	Phase Conductor			Bare Neutral Messenger			Weight Per 1000 ft. (lbs.)		Allowable Ampacities+	
	Size (AWG)	Strand-ing	Insul. Thick. (mils)	Size (AWG)	Strand-ing	Rated Strength (lbs.)	XLP	POLY	XLP	POLY
<b>ACSR REDUCED NEUTRAL-MESSENGER</b>										
Scallop	4	1	45	6	6/1	1190	--	142	115	90
Strombus	4	7	45	6	6/1	1190	151	151	115	90
Cockle	2	7	45	4	6/1	1860	228	228	150	120
Janthina	1/0	7	60	2	6/1	2853	366	366	205	160
Ranella	1/0	9	60	2	6/1	2853	360	360	205	160
Cavolinia	2/0	7	60	1	6/1	3550	453	453	235	185
Clio	2/0	11	60	1	6/1	3550	444	444	235	185
Aega	3/0	17	60	1/0	6/1	4380	549	549	275	215
Cerapus	4/0	18	60	2/0	6/1	5310	681	681	315	245

\* Code words for XLP insulated products are formed by adding "/XLP" to the conventional code words above (e.g. -Haiotis/XLP).  
 + Conductor temperature of 90°C for XLP, 75°C for Poly; ambient temperature of 40°C; emissivity 0.9; 2 ft./sec. wind in sun.



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Page 4 of 4



PLA STREETLIGHTING			
MES JOB #:	N/A	DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	NOT TO SCALE	CHECKED BY:	ANURAG
PLOT DATE:	2/19/2020	DATE:	2/19/2020



OVERHEAD ALUMINUM 2 AWG 600V TRIPLEX CABLE DETAILS	
STANDARD DETAIL	
CITY OF DETROIT	
WAYNE COUNTY, MI	

GRAPHIC SCALE  
NOT TO SCALE



SHEET INFORMATION	
<b>DT-05.2</b>	TOTAL SHEETS
	SHEET NO.
	02

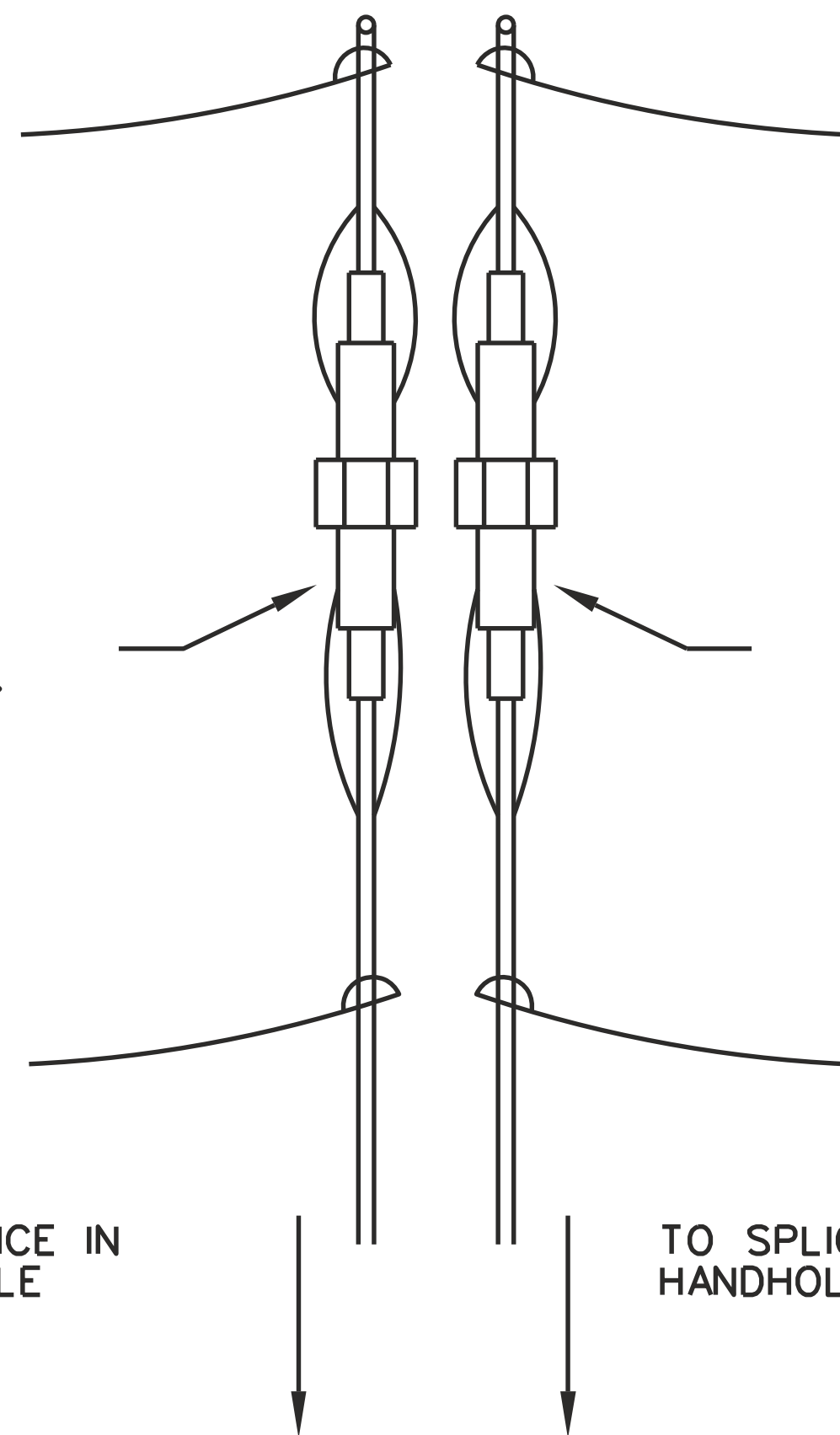


LAMP CORD  
120V FEED  
BLACK INSULATED  
MINIMUM SIZE:  
ALUMINUM 12 AWG  
COPPER 14 AWG

LAMP CORD  
INSTALL TRON-HEB FUSE  
HOLDER WITH 5A FUSE.  
FUSE TO BE CAPTIVE ON  
LOAD END (LUMINAIRE).  
INSULATE ENDS CAREFULLY.

STREET LIGHTING CIRCUIT  
120V FEED  
BLACK INSULATED  
MINIMUM SIZE:  
ALUMINUM 12 AWG  
COPPER 14 AWG

TO SPLICE IN  
HANDHOLE



RECEPTACLE CORD  
120V FEED  
BLACK INSULATED  
MINIMUM SIZE 12 AWG  
COPPER ONLY

RECEPTACLE CORD  
INSTALL TRON-HEB FUSE  
HOLDER WITH 3A FUSE.  
FUSE TO BE CAPTIVE ON  
LOAD END (RECEPTACLE).  
INSULATE ENDS CAREFULLY.

RECEPTACLE CIRCUIT  
120V FEED  
BLACK INSULATED  
MINIMUM SIZE:  
ALUMINUM 10 AWG  
COPPER 12 AWG

TO SPLICE IN  
HANDHOLE

\*\* ALL CABLES TO BE SIZED AT MINIMUM SIZE OR AS INDICATED ON PLANS  
\*\* ADDITIONAL LUMINAIRES REQUIRE ADDITIONAL FUSE HOLDERS

## LUMINAIRE AND RECEPTACLE 120V POWER FEED POLE BASE CONNECTION

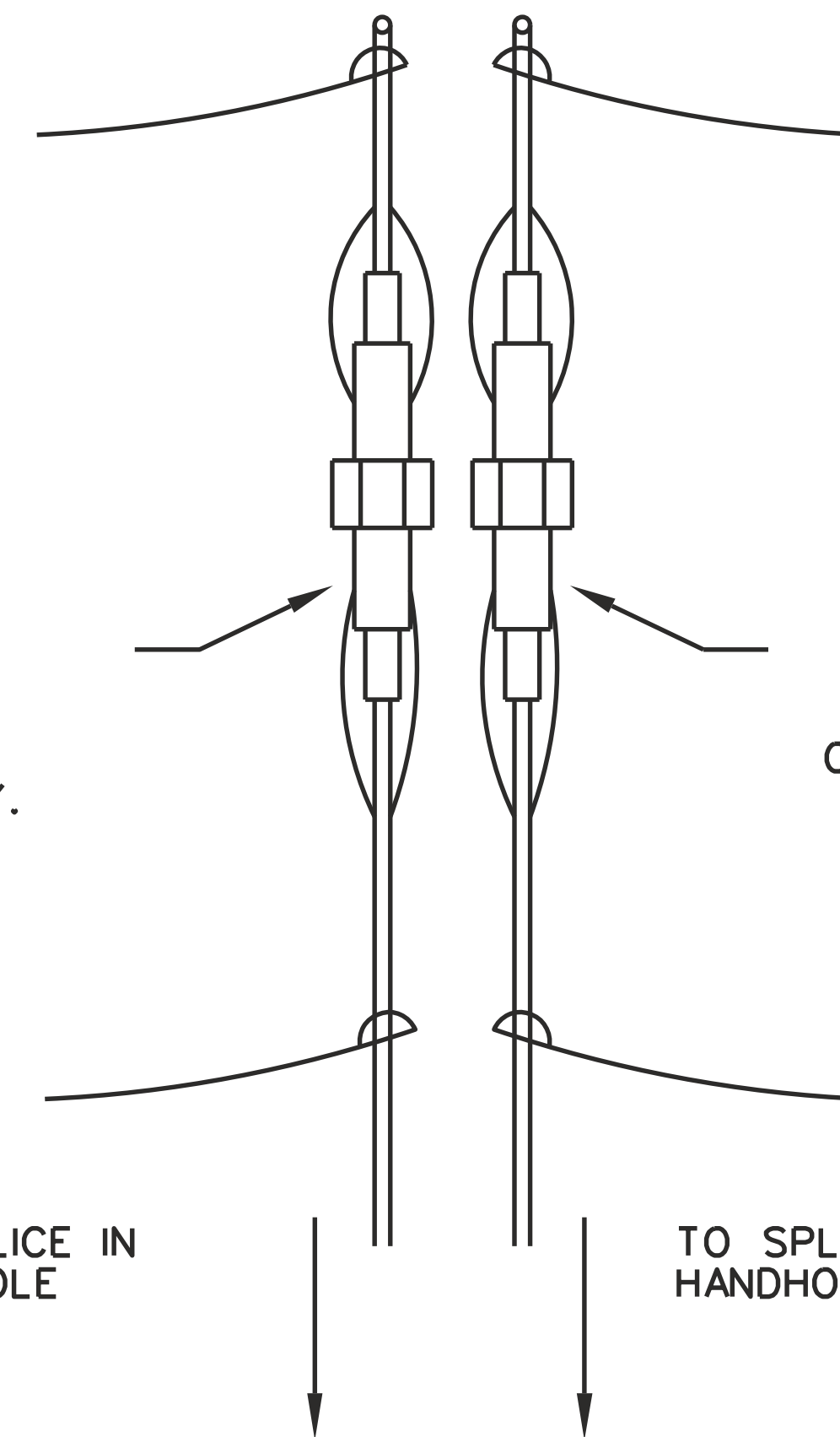
NOT TO SCALE

LAMP CORD  
NEUTRAL  
WHITE INSULATED  
MINIMUM SIZE:  
ALUMINUM 12 AWG  
COPPER 14 AWG

LAMP CORD  
INSTALL TRON-HEB FUSE  
HOLDER WITH A DUMMY  
"NEUTRAL". THE DUMMY  
"NEUTRAL" TO BE CAPTIVE  
ON LOAD END (LUMINAIRE).  
INSULATE ENDS CAREFULLY.

STREET LIGHTING CIRCUIT  
NEUTRAL  
WHITE INSULATED  
MINIMUM SIZE:  
ALUMINUM 12 AWG  
COPPER 14 AWG

TO SPLICE IN  
HANDHOLE



RECEPTACLE CORD  
NEUTRAL  
WHITE INSULATED  
MINIMUM SIZE 12 AWG  
COPPER ONLY

RECEPTACLE CORD  
INSTALL TRON-HEB FUSE  
HOLDER WITH A DUMMY  
NEUTRAL. THE DUMMY  
NEUTRAL TO BE CAPTIVE  
ON LOAD END (RECEPTACLE).  
INSULATE ENDS CAREFULLY.

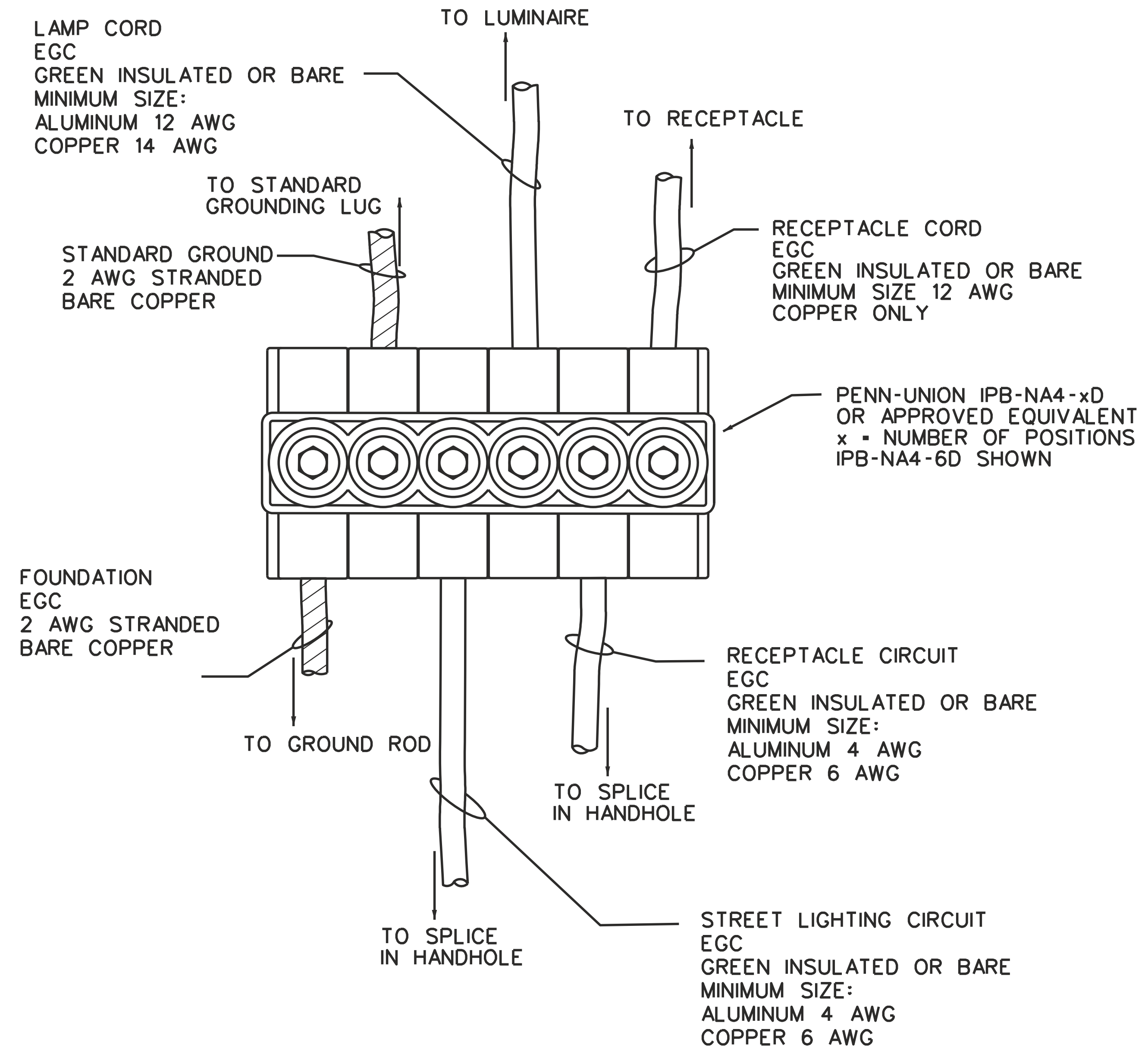
RECEPTACLE CIRCUIT  
NEUTRAL  
WHITE INSULATED  
MINIMUM SIZE:  
ALUMINUM 10 AWG  
COPPER 12 AWG

TO SPLICE IN  
HANDHOLE

\*\* ALL CABLES TO BE SIZED AT MINIMUM SIZE OR AS INDICATED ON PLANS  
\*\* ADDITIONAL LUMINAIRES REQUIRE ADDITIONAL FUSE HOLDERS

## LUMINAIRE AND RECEPTACLE 120V NEUTRAL POLE BASE CONNECTION

NOT TO SCALE



\*\* ALL CABLES TO BE SIZED AT MINIMUM SIZE OR AS INDICATED ON PLANS  
 \*\* SIZE THE POWER BAR AS NEEDED FOR LUMINAIRES AND RECEPTACLE

## EQUIPMENT GROUND CONDUCTOR (EGC) POLE BASE CONNECTION

NOT TO SCALE



# SIMpull THHN®

## Copper THHN Wire & Cable



600 Volts. Copper Conductor. Thermoplastic Insulation/Nylon Sheath, Heat, Moisture, Gasoline and Oil Resistant II. All Sizes Rated Both THHN and either THWN (sizes 14, 12, and 10 AWG) or THWN-2 (sizes 8 AWG and larger). Also Rated MTW and AWM (See Below). SIMpull® Technology for Easier Pulling.

### APPLICATIONS

Southwire® SIMpull THHN® copper conductors are primarily used in conduit and cable trays for services, feeders and branch circuits in commercial or industrial applications as specified in the National Electrical Code. Voltage for all applications is 600 volts. SIMpull THHN® copper conductors are designed to be installed without application of a pulling lubricant.

These conductors have multiple ratings. Depending upon the product application, allowable temperatures are as follows:

- THHN or T90 Nylon- Dry locations not to exceed 90° C
- THWN-2- Wet or dry locations not to exceed 90° C or locations not to exceed 75° C when exposed to oil
- THWN- Wet locations not to exceed 75° C or dry locations not to exceed 90° C or locations not to exceed 75° C when exposed to oil
- TWN75- Wet locations not to exceed 75° C
- MTW- Wet locations or when exposed to oil at temperatures not to exceed 60° C or dry locations not to exceed 90° C (with ampacity limited to that for 75° C conductor temperature per NFPA 79)
- AWM- Dry locations not to exceed 105° C only when rated and used as appliance wiring material

### STANDARDS & REFERENCES

Southwire® SIMpull THHN® copper conductors comply with the following:

- ASTM - B3, B8, and B787 (19 Wire Combination Unilay-Stranded)
- UL Standards 83, 758, 1063, and 1581
- CSA C22.2 No. 75, T90 Nylon/TWN75 Sizes through 1000 kcmil
- NOM-ANCE 90° C
- Federal Specification A-A-59544
- NEMA WC-70 (ICEA S-95-658) Construction Requirements
- National Electrical Code, NFPA 70
- CT Rated in Sizes 1/0 AWG and larger
- VW-1 - Sizes 14 through 1 AWG
- FT1 - All Sizes
- Sunlight Resistant - Sizes 2 AWG and larger
- AWM - Sizes 14 through 6 AWG
- MTW - Stranded Constructions Only
- RoHS/REACH Compliant

### CONSTRUCTION

Southwire® SIMpull THHN® copper conductors are made with soft drawn copper. Sizes 14 through 4/0 AWG use a combination-unilay stranding while 250 kcmil and larger sizes use a compressed copper stranding. The wire is covered with a tough heat and moisture resistant PVC insulation with an overall nylon jacket utilizing SIMpull® Technology. Available in black, white, red, blue, purple, green, yellow, orange, brown, and gray. Also available in striped configurations. Some colors are subject to economic order quantity. Marked as THHN in all sizes. Also marked as THWN-2 in sizes 8 AWG and larger or marked as THWN in sizes 14, 12, and 10 AWG. Marked sunlight resistant in sizes 2 AWG and larger. Sizes 14, 12, and 10 AWG are available with SIMpull® Technology only in SIMpull BARREL™ cable drum or SIMpull® CoilPAK™ configurations.



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Conductor		Insulation Thickness (mils)	Jacket Thickness (mils)	Nominal O.D. (mils)	Approx. Net Wt. Per 1000' (lbs.)	Allowable Ampacities+			Standard Package
Size (AWG or kcmil)	No. of strands					60° C	75° C	90° C	
14*	1	15	4	102	15	15	15	AC	
12*	1	15	4	119	23	20	20	AC	
10*	1	20	4	150	36	30	30	AC	
14*	19	15	4	109	16	15	15	AC	
12*	19	15	4	128	24	20	20	AC	
10*	19	20	4	161	38	30	30	AC	
8	19	30	5	213	63	40	50	ABCD	
6	19	30	5	249	95	55	65	ABCD	
4	19	40	6	318	152	70	85	ABCD	
3	19	40	6	346	189	85	100	ABCD	
2	19	40	6	378	234	95	115	ABCD	
1	19	50	7	435	299	110	130	ABCD	
1/0	19	50	7	474	372	125	150	ABCD	
2/0	19	50	7	518	462	145	175	ABCD	
3/0	19	50	7	568	575	165	200	ABCD	
4/0	19	50	7	624	718	195	230	ABCD	
250	37	60	8	694	851	215	255	ABCD	
300	37	60	8	747	1012	240	285	ABC	
350	37	60	8	797	1174	260	310	ABC	
400	37	60	8	842	1334	280	335	ABC	
500	37	60	8	926	1655	320	380	ABCD	
600	61	70	9	1024	1987	350	420	ABC	
750	61	70	9	1126	2464	400	475	BC	
1000	61	70	9	1275	3257	455	545	C	

\* Sizes 14, 12, and 10 AWG are available with SIMpull® Technology only in SIMpull® Barrel or CoilPAK® configurations. Standard put ups vary from the ones shown on this chart for standard 14-10 AWG THHN.  
 +Allowable ampacities shown are for general use as specified by the 2014 Edition of the National Electrical Code Sections 310.15 and 240.4(D).  
 Unless the equipment is marked for use at higher temperatures the conductor shall be limited to the following per NEC 110.14(C):  
 60° C - When terminated to equipment for circuits rated 100 amperes or less or marked for 14 - 1 AWG conductors.  
 75° C - When terminated to equipment for circuits rated over 100 amperes or marked for conductors larger than 1 AWG.  
 90° C - THHN dry locations and THWN-2 wet or dry locations for ampacity adjustment purposes using NEC section 310.15.

Package Codes:  
 A - 2500' Reel  
 B - 1000' Reel  
 C - 500' Spool  
 D - 5000' Reel

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<p>METRO ENGINEERING SOLUTIONS          2021 S. SCHAEFER HWY.          DETROIT, MICHIGAN 48217          PHONE: 734.483.1427 FAX: 734.483.3431          www.mesos.com</p>	PLA STREETLIGHTING		<p>PUBLIC LIGHTING AUTHORITY OF DETROIT</p>	LAMP CORD CABLE DETAILS		<p>GRAPHIC SCALE NOT TO SCALE</p>	<p>Know what's below. Call before you dig.</p>	SHEET INFORMATION	
	MES JOB #: N/A	DRAWN BY: RYAN JALYNSKI		STANDARD DETAIL	CITY OF DETROIT			DT-07.1	TOTAL SHEETS: 02



Conductor		Stock Numbers
Size (AWG or kcmil)	No. of strands	
14*	1	SIMpull THHN® CU Stock #: BK:580285, WE:580294, WE/RD:580622, RD:580293, BE:580287, GN:580291, YW:580295, OE:580292, BN:580288, PE:580286, GY:580289 Standard THHN CU Stock #: BK:115790, WE:115808, RD:115816, BE:115824, GN:115832, YW:115840, OE:115857, BN:115865, PE:211243, GY:214668, TN:302539, PK:255331
12*	1	SIMpull THHN® CU Stock #: BK:580265, WE:580275, WE/BK:580280, WE/BE:580281, WE/RD:580283, RD:580273, GN:580271, GN/YW:584566, BE:580267, PE:580264, YW:580276, OE:580272, BN:580268, GY:580269, GY/BN:580277, GY/OE:580278, GY/PE:580263, GY/YW:580279, PK:581931 Standard THHN CU Stock #: BK:115873, WE:115881, WE/BK:565284, WE/BE:611410, WE/RD:565285, Red:115899, GN:115915, GN/YW:401000, BE:115907, PE:212043, YW:115923, OE:115931, BN:115949, GY:228700, GY/BN:575303, GY/OE:575304, GY/YW:575305, PK:256479, TN:320127
10*	1	SIMpull THHN® CU Stock #: BK:580203, WE:580215, WE/BK:580216, WE/BE:580218, WE/RD:580219, RD:580214, GN:580211, Gn/YW:580212, BE:580204, PE:580202, YW:580220, OE:580213, BN:580205, GY:580206, GY/BN:580226, GY/OE:580208, GY/PE:580201, GY/YW:580210 Standard THHN CU Stock #: BK:115956, WE:115964, WE/BK:551545, WE/BE:551547, WE/RD:551546, RD:115972, GN:115998, GN/YW:611757, BE:115980, YW:116004, OE:116012, BN:116020, GY:229823, GY/BN:575300, GY/OE:575301, GY/YW:575302, PK:258384, PE:253336
14*	19	SIMpull THHN® CU Stock #: BK:585485, WE:580180, WE/BK:585484, WE/BE:581899, RD:585494, BE:585486, BE/WE:592686, GN:585490, YW:580181, OE:580177, BN:580172, BN/RD:592685, PE:580178, GY:580173, PK:581933 Standard THHN CU Stock #: BK:229559, WE:229567, RD:229575, RD/BK:662817, BE:229583, GN:229591, YW:229609, OE:229617, BN:229625, PE:239566, GY:229633, PK:244863, TN:320150
12*	19	SIMpull THHN® CU Stock #: BK:580182, WE:580199, WE/BK:580192, WE/BE:580193, WE/RD:580194, RD:580198, BE:580222, GN:580195, GN/YW:583863, YW:580200, OE:580196, BN:585461, PE:580197, GY:580250, GY/BN:580207, GY/OE:580189, GY/PE:580188, GY/YW:580190, PK:581932 Standard THHN CU Stock #: BK:229641, WE:229658, WE/BK:311514, WE/BE:566441, WE/RD:566440, RD:229666, BE:229674, BE/WE:662981, GN:229682, GN/YW:663013, YW:229690, OE:229708, BN:229716, PE:232124, GY:229724, GY/BN:575307, GY/OE:575309, GY/YW:575310, TN:320168, PK:242503
10*	19	SIMpull THHN® CU Stock #: BK:580221, WE:580255, WE/BK:580260, WE/BE:580261, WE/RD:580262, RD:580254, BE:580222, GN:585464, GN/YW:584567, YW:585470, OE:585465, BN:580223, PE:580253, GY:580250, GY/BN:580207, GY/OE:580257, GY/PE:580227, GY/YW:580259, PK:581930 Standard THHN CU Stock #: BK:229732, WE:229740, WE/BK:610028, WE/BE:556199, WE/RD:556198, RD:229757, RD/WE:663039, BE:229765, GN:229773, GN/YW:663112, PE:256594, YW:229781, OE:229799, BN:229807, GY:229815, GY/BN:575297, GY/OE:575298, GY/YW:575299, PK:260539, TN:320176
<b>Color Abbreviations</b> BK-Black    WE-White    RD-Red    BE-Blue    GN-Green    YW-Yellow OE-Orange    BN-Brown    GY-Grey    PK-Pink    PE-Purple    TN-Tan		

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Conductor		Stock Numbers
Size (AWG or kcmil)	No. of strands	
8	19	SIMpull THHN® CU Stock #: BK:204883, WE:204891, RD:204909, BE:204917, GN:204925, YW:238485, OE:238493, BN:238477, GY:238501, PK:577515, PE:256586
6	19	SIMpull THHN® CU Stock #: BK:204933, WE:204941, RD:204958, BE:204966, GN:204974, YW:260687, OE:260679, BN:260695, GY:254649, PE:485607
4	19	SIMpull THHN® CU Stock #: BK:204990, WE:205005, RD:204982, BE:205633, GN:251728, YW:411694, OE:411710, BN:411702, GY:611778, PE:552486
3	19	SIMpull THHN® CU Stock #: BK:243469, WE:243477, RD:243485, BE:372763, GN:601971, YW:551080, OE:551079, BN:551078, GY:551081, PE:552533
2	19	SIMpull THHN® CU Stock #: BK:205021, WE:205039, RD:205013, BE:315812, GN:295832, YW:420653, OE:610171, BN:610169, GY:610172, PE:552534
1	19	SIMpull THHN® CU Stock #: BK:205047, WE:344580, RD:344598, BE:481945, GN:400192, YW:550887, OE:550888, BN:550890, GY:550891, PE:552488
1/0	19	SIMpull THHN® CU Stock #: BK:205054, WE:558771, RD:558773, BE:558774, GN:556315, YW:558777, OE:558779, BN:558778, GY:558781, PE:551539
2/0	19	SIMpull THHN® CU Stock #: BK:205062, WE:556111, RD:556113, BE:556114, GN:556115, YW:556116, OE:556117, BN:556119, GY:558784, PE:552535
3/0	19	SIMpull THHN® CU Stock #: BK:205070, WE:556120, RD:556121, BE:556122, GN:556123, YW:556124, OE:556125, BN:556127, GY:556698, PE:551541
4/0	19	SIMpull THHN® CU Stock #: BK:205088, WE:556128, RD:556129, BE:556130, GN:556131, YW:556132, OE:556133, BN:556135, GY:556697, PE:551540
250	37	SIMpull THHN® CU Stock #: BK:205096, WE:556136, YW:556140, OE:556141, BN:556143, GY:556552, BE:556138, GN:556139, PK:592681, PE:551025, RD:556137, TN:592682
300	37	SIMpull THHN® CU Stock #: BK:205104, WE:556144, RD:556145, BE:556146, GN:556147, YW:556148, OE:556149, BN:556150, GY:556551, PE:551026
350	37	SIMpull THHN® CU Stock #: BK:205112, WE:556151, RD:556152, BE:556153, GN:556154, YW:556155, OE:556156, BN:556157, GY:556707, PE:551027
400	37	SIMpull THHN® CU Stock #: BK:205120, WE:556158, RD:556160, BE:556161, GN:556162, YW:556163, OE:556164, BN:556165, GY:556550, PK:581797, PE:551029, TN:581798
500	37	SIMpull THHN® CU Stock #: BK:205138, WE:556166, RD:556168, BE:556169, GN:556170, YW:556171, OE:556172, BN:556173, GY:556549, PK:581782, PE:551599, TN:581783
600	61	SIMpull THHN® CU Stock #: BK:321471, WE:556174, RD:556176, BE:556177, GN:556178, YW:556179, OE:556180, BN:556181, GY:558859, PE:552485
750	61	SIMpull THHN® CU Stock #: BK:320994, WE:564945, RD:564946, BE:564944, GN:551700, YW:550907, OE:550908, BN:550909, GY:550910, PE:552536
1000	61	SIMpull THHN® CU Stock #: BK:289710, BN:552644, OE:552645, YW:552647
<b>Color Abbreviations</b> BK-Black    WE-White    RD-Red    BE-Blue    GN-Green    YW-Yellow OE-Orange    BN-Brown    GY-Grey    PK-Pink    PE-Purple    TN-Tan		

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PLA STREETLIGHTING	
MES JOB #:	N/A
DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	NOT TO SCALE
CHECKED BY:	ANURAG
PLOT DATE:	2/19/2020
DATE:	2/19/2020



LAMP CORD CABLE DETAILS	
STANDARD DETAIL	
CITY OF DETROIT	
WAYNE COUNTY, MI	

GRAPHIC SCALE  
NOT TO SCALE



SHEET INFORMATION	
DT-07.2	TOTAL SHEETS
	SHEET NO.
	02



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### APPLICATIONS

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- THWN- Wet locations not to exceed 75° C or dry locations not to exceed 90° C or locations not to exceed 75° C when exposed to oil
- TWN75- Wet locations not to exceed 75° C
- MTW- Wet locations or when exposed to oil at temperatures not to exceed 60° C or dry locations not to exceed 90° C (with ampacity limited to that for 75° C conductor temperature per NFPA 79)
- AWM- Dry locations not to exceed 105° C only when rated and used as appliance wiring material

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- VW-1 - Sizes 14 through 1 AWG
- FT1 - All Sizes
- Sunlight Resistant – Sizes 2 AWG and larger
- AWM - Sizes 14 through 6 AWG
- MTW - Stranded Constructions Only
- RoHS/REACH Compliant



### CONSTRUCTION

Southwire® SIMpull THHN® copper conductors are made with soft drawn copper. Sizes 14 through 4/0 AWG use a combination-unilay stranding while 250 kcmil and larger sizes use a compressed copper stranding. The wire is covered with a tough heat and moisture resistant PVC insulation with an overall nylon jacket utilizing SIMpull® Technology. Available in black, white, red, blue, purple, green, yellow, orange, brown, and gray. Also available in striped configurations. Some colors are subject to economic order quantity. Marked as THHN in all sizes. Also marked as THWN-2 in sizes 8 AWG and larger or marked as THWN in sizes 14, 12, and 10 AWG. Marked sunlight resistant in sizes 2 AWG and larger. Sizes 14, 12, and 10 AWG are available with SIMpull® Technology only in SIMpull BARREL™ cable drum or SIMpull® CoilPAK™ configurations.

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Conductor		Insulation Thickness (mils)	Jacket Thickness (mils)	Nominal O.D. (mils)	Approx. Net Wt. Per 1000' (lbs.)	Allowable Ampacities+			Standard Package
Size (AWG or kcmil)	No. of strands					60° C	75° C	90° C	
14*	1	15	4	102	15	15	15	AC	
12*	1	15	4	119	23	20	20	AC	
10*	1	20	4	150	36	30	30	AC	
14*	19	15	4	109	16	15	15	AC	
12*	19	15	4	128	24	20	20	AC	
10*	19	20	4	161	38	30	30	AC	
8	19	30	5	213	63	40	50	ABCD	
6	19	30	5	249	95	55	65	ABCD	
4	19	40	6	318	152	70	85	ABCD	
3	19	40	6	346	189	85	100	ABCD	
2	19	40	6	378	234	95	115	ABCD	
1	19	50	7	435	299	110	130	ABCD	
1/0	19	50	7	474	372	125	150	ABCD	
2/0	19	50	7	518	462	145	175	ABCD	
3/0	19	50	7	568	575	165	200	ABCD	
4/0	19	50	7	624	718	195	230	ABCD	
250	37	60	8	694	851	215	255	ABCD	
300	37	60	8	747	1012	240	285	ABC	
350	37	60	8	797	1174	260	310	ABC	
400	37	60	8	842	1334	280	335	ABC	
500	37	60	8	926	1655	320	380	ABCD	
600	61	70	9	1024	1987	350	420	ABC	
750	61	70	9	1126	2464	400	475	BC	
1000	61	70	9	1275	3257	455	545	C	

\* Sizes 14, 12, and 10 AWG are available with SIMpull® Technology only in SIMpull® Barrel or CoilPAK® configurations. Standard put ups vary from the ones shown on this chart for standard 14-10 AWG THHN.  
 +Allowable ampacities shown are for general use as specified by the 2014 Edition of the National Electrical Code Sections 310.15 and 240.4(D).  
 Unless the equipment is marked for use at higher temperatures the conductor shall be limited to the following per NEC 110.14(C):  
 60° C - When terminated to equipment for circuits rated 100 amperes or less or marked for 14 - 1 AWG conductors.  
 75° C - When terminated to equipment for circuits rated over 100 amperes or marked for conductors larger than 1 AWG.  
 90° C - THHN dry locations and THWN-2 wet or dry locations for ampacity adjustment purposes using NEC section 310.15.

Package Codes:  
 A - 2500' Reel  
 B - 1000' Reel  
 C - 500' Spool  
 D - 5000' Reel

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<p>METRO ENGINEERING SOLUTIONS          2021 S. SCHAEFER HWY.          DETROIT, MICHIGAN 48217          PHONE: 734.483.1427 FAX: 734.483.3431          WWW.MESDESIGN.COM</p>	PLA STREETLIGHTING		<p>PUBLIC LIGHTING          AUTHORITY          OF DETROIT</p>	RECEPTACLE CORD CABLE DETAILS		<p>GRAPHIC SCALE          NOT TO SCALE</p>	<p>Know what's below.          Call before you dig.</p>	SHEET INFORMATION	
	MES JOB #: N/A	DRAWN BY: RYAN JALYNSKI		STANDARD DETAIL	CITY OF DETROIT			WAYNE COUNTY, MI	DT-08.1



Conductor		Stock Numbers
Size (AWG or kcmil)	No. of strands	
14*	1	SIMpull THHN® CU Stock #: BK:580285, WE:580294, WE/RD:580622, RD:580293, BE:580287, GN:580291, YW:580295, OE:580292, BN:580288, PE:580286, GY:580289 Standard THHN CU Stock #: BK:115790, WE:115808, RD:115816, BE:115824, GN:115832, YW:115840, OE:115857, BN:115865, PE:211243, GY:214668, TN:302539, PK:255331
12*	1	SIMpull THHN® CU Stock #: BK:580265, WE:580275, WE/BK:580280, WE/BE:580281, WE/RD:580283, RD:580273, GN:580271, GN/YW:584566, BE:580267, PE:580264, YW:580276, OE:580272, BN:580268, GY:580269, GY/BN:580277, GY/OE:580278, GY/PE:580263, GY/YW:580279, PK:581931 Standard THHN CU Stock #: BK:115873, WE:115881, WE/BK:565284, WE/BE:611410, WE/RD:565285, Red:115899, GN:115915, GN/YW:401000, BE:115907, PE:212043, YW:115923, OE:115931, BN:115949, GY:228700, GY/BN:575303, GY/OE:575304, GY/YW:575305, PK:256479, TN:320127
10*	1	SIMpull THHN® CU Stock #: BK:580203, WE:580215, WE/BK:580216, WE/BE:580218, WE/RD:580219, RD:580214, GN:580211, Gn/YW:580212, BE:580204, PE:580202, YW:580220, OE:580213, BN:580205, GY:580206, GY/BN:580226, GY/OE:580208, GY/PE:580201, GY/YW:580210 Standard THHN CU Stock #: BK:115956, WE:115964, WE/BK:551545, WE/BE:551547, WE/RD:551546, RD:115972, GN:115998, GN/YW:611757, BE:115980, YW:116004, OE:116012, BN:116020, GY:229823, GY/BN:575300, GY/OE:575301, GY/YW:575302, PK:258384, PE:253336
14*	19	SIMpull THHN® CU Stock #: BK:585485, WE:580180, WE/BK:585484, WE/BE:581899, RD:585494, BE:585486, BE/WE:592686, GN:585490, YW:580181, OE:580177, BN:580172, BN/RD:592685, PE:580178, GY:580173, PK:581933 Standard THHN CU Stock #: BK:229559, WE:229567, RD:229575, RD/BK:662817, BE:229583, GN:229591, YW:229609, OE:229617, BN:229625, PE:239566, GY:229633, PK:244863, TN:320150
12*	19	SIMpull THHN® CU Stock #: BK:580182, WE:580199, WE/BK:580192, WE/BE:580193, WE/RD:580194, RD:580198, BE:580222, GN:580195, GN/YW:583863, YW:580200, OE:580196, BN:585461, PE:580197, GY:580250, GY/BN:580207, GY/OE:580189, GY/PE:580188, GY/YW:580190, PK:581932 Standard THHN CU Stock #: BK:229641, WE:229658, WE/BK:311514, WE/BE:566441, WE/RD:566440, RD:229666, BE:229674, BE/WE:662981, GN:229682, GN/YW:663013, YW:229690, OE:229708, BN:229716, PE:232124, GY:229724, GY/BN:575307, GY/OE:575309, GY/YW:575310, TN:320168, PK:242503
10*	19	SIMpull THHN® CU Stock #: BK:580221, WE:580255, WE/BK:580260, WE/BE:580261, WE/RD:580262, RD:580254, BE:580222, GN:585464, GN/YW:584567, YW:585470, OE:585465, BN:580223, PE:580253, GY:580250, GY/BN:580207, GY/OE:580257, GY/PE:580227, GY/YW:580259, PK:581930 Standard THHN CU Stock #: BK:229732, WE:229740, WE/BK:610028, WE/BE:556199, WE/RD:556198, RD:229757, RD/WE:663039, BE:229765, GN:229773, GN/YW:663112, PE:256594, YW:229781, OE:229799, BN:229807, GY:229815, GY/BN:575297, GY/OE:575298, GY/YW:575299, PK:260539, TN:320176
<b>Color Abbreviations</b> BK-Black    WE-White    RD-Red    BE-Blue    GN-Green    YW-Yellow OE-Orange    BN-Brown    GY-Grey    PK-Pink    PE-Purple    TN-Tan		

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Conductor		Stock Numbers
Size (AWG or kcmil)	No. of strands	
8	19	SIMpull THHN® CU Stock #: BK:204883, WE:204891, RD:204909, BE:204917, GN:204925, YW:238485, OE:238493, BN:238477, GY:238501, PK:577515, PE:256586
6	19	SIMpull THHN® CU Stock #: BK:204933, WE:204941, RD:204958, BE:204966, GN:204974, YW:260687, OE:260679, BN:260695, GY:254649, PE:485607
4	19	SIMpull THHN® CU Stock #: BK:204990, WE:205005, RD:204982, BE:205633, GN:251728, YW:411694, OE:411710, BN:411702, GY:611778, PE:552486
3	19	SIMpull THHN® CU Stock #: BK:243469, WE:243477, RD:243485, BE:372763, GN:601971, YW:551080, OE:551079, BN:551078, GY:551081, PE:552533
2	19	SIMpull THHN® CU Stock #: BK:205021, WE:205039, RD:205013, BE:315812, GN:295832, YW:420653, OE:610171, BN:610169, GY:610172, PE:552534
1	19	SIMpull THHN® CU Stock #: BK:205047, WE:344580, RD:344598, BE:481945, GN:400192, YW:550887, OE:550888, BN:550890, GY:550891, PE:552488
1/0	19	SIMpull THHN® CU Stock #: BK:205054, WE:558771, RD:558773, BE:558774, GN:556315, YW:558777, OE:558779, BN:558778, GY:558781, PE:551539
2/0	19	SIMpull THHN® CU Stock #: BK:205062, WE:556111, RD:556113, BE:556114, GN:556115, YW:556116, OE:556117, BN:556119, GY:558784, PE:552535
3/0	19	SIMpull THHN® CU Stock #: BK:205070, WE:556120, RD:556121, BE:556122, GN:556123, YW:556124, OE:556125, BN:556127, GY:556698, PE:551541
4/0	19	SIMpull THHN® CU Stock #: BK:205088, WE:556128, RD:556129, BE:556130, GN:556131, YW:556132, OE:556133, BN:556135, GY:556697, PE:551540
250	37	SIMpull THHN® CU Stock #: BK:205096, WE:556136, YW:556140, OE:556141, BN:556143, GY:556552, BE:556138, GN:556139, PK:592681, PE:551025, RD:556137, TN:592682
300	37	SIMpull THHN® CU Stock #: BK:205104, WE:556144, RD:556145, BE:556146, GN:556147, YW:556148, OE:556149, BN:556150, GY:556551, PE:551026
350	37	SIMpull THHN® CU Stock #: BK:205112, WE:556151, RD:556152, BE:556153, GN:556154, YW:556155, OE:556156, BN:556157, GY:556707, PE:551027
400	37	SIMpull THHN® CU Stock #: BK:205120, WE:556158, RD:556160, BE:556161, GN:556162, YW:556163, OE:556164, BN:556165, GY:556550, PK:581797, PE:551029, TN:581798
500	37	SIMpull THHN® CU Stock #: BK:205138, WE:556166, RD:556168, BE:556169, GN:556170, YW:556171, OE:556172, BN:556173, GY:556549, PK:581782, PE:551599, TN:581783
600	61	SIMpull THHN® CU Stock #: BK:321471, WE:556174, RD:556176, BE:556177, GN:556178, YW:556179, OE:556180, BN:556181, GY:558859, PE:552485
750	61	SIMpull THHN® CU Stock #: BK:320994, WE:564945, RD:564946, BE:564944, GN:551700, YW:550907, OE:550908, BN:550909, GY:550910, PE:552536
1000	61	SIMpull THHN® CU Stock #: BK:289710, BN:552644, OE:552645, YW:552647
<b>Color Abbreviations</b> BK-Black    WE-White    RD-Red    BE-Blue    GN-Green    YW-Yellow OE-Orange    BN-Brown    GY-Grey    PK-Pink    PE-Purple    TN-Tan		

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PLA STREETLIGHTING	
MES JOB #:	N/A
DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	NOT TO SCALE
CHECKED BY:	ANURAG
PLOT DATE:	2/19/2020
DATE:	2/19/2020



RECEPTACLE CORD CABLE DETAILS	
STANDARD DETAIL	
CITY OF DETROIT	
WAYNE COUNTY, MI	

GRAPHIC SCALE  
NOT TO SCALE



SHEET INFORMATION

DT-08.2	TOTAL SHEETS	SHEET NO.
	02	02





# TRON® In-Line Fuse Holders

## HEB Series Single-Pole Breakaway & Non-Breakaway for 1/32" x 1 1/2" Fuses



### Non-Breakaway Fuse Holders

See page 2 for breakaway holders

**Catalog Symbol:** HEB

### Description:

Water resistant, single-pole non-breakaway in-line fuse holders for 1/32" x 1 1/2" midget fuses. Typical fuse types: BAF, DCM, FNM, FNQ and KTK.

### Ratings:

Volts: 600V (or less)

Amps: Up to 30A\*

### Agency Information:

(1)UL Recognized, Guide IZLT2, File E14853

(2)CSA Certified, Class 6225-01, File 47235

(3)CE

**Coupling Nut Torque:** 10-20lb-in.

### Part Number Explanation

Example: HEB-AK

- HEB = Holder series
- A = Loadside terminal (copper crimp for #12 copper wire)
- K = Lineside terminal (copper setscrew for two #6 copper wires)

### Part Number Selection

From the table on page three, select the combination of desired loadside and lineside terminals for the application (define terminal type, wire size, number of wires per terminal and whether the terminal accepts solid and/or stranded conductors). Then in the right hand two columns, select either the non-breakaway or breakaway holder part number to order.

### Available Part Numbers

HEB-AA<sup>(1)</sup> (2) (3), HEB-AB<sup>(2)</sup>, HEB-AC<sup>(2)</sup>, HEB-AD<sup>(2)</sup>, HEB-AE<sup>(2)</sup>, HEB-AJ, HEB-AK, HEB-AL, HEB-AR, HEB-AY, HEB-BA<sup>(2)</sup>, HEB-BB<sup>(2)</sup>, HEB-BC<sup>(2)</sup>, HEB-BD<sup>(2)</sup>, HEB-CC<sup>(2)</sup>, HEB-DD<sup>(2)</sup>, HEB-JJ, HEB-JK, HEB-JL, HEB-JY, HEB-LL, HEB-NN, HEB-PP<sup>(2)</sup>, HEB-QQ<sup>(2)</sup>, HEB-RR<sup>(2)</sup>, HEB-SS, HEB-TT<sup>(2)</sup>, HEB-ZA.

### Insulating Boots

For insulating boots, see page 2. Insulating boots are not included with non-breakaway holders and must be ordered separately. They come standard with the breakaway holders. When insulating boots are utilized, extra heat retention requires that fuses are sized at a minimum of 200% of the RMS load current.

\*Amp rating limited by conductor size.

### Specification Data - Non-Breakaway & Loadside Breakaway

#### Conductor Terminals

Terminal Type	Conductor Data			Catalog Symbol Load & Line (2) & (3)
	Size	No. Per Terminal	Solid / Stranded	
Copper Crimp	#12 to #8	1	• •	A
	#12	2	• •	
	#10	2	• •	
	#6	1	• •	B
	#8	2	• •	
	#4	1	— •	
Copper Setscrew	#6	2	• •	C
	#2	1	— •	
	#4	2	• •	D
	#20 to #18	1	• •	

Terminal Type	Conductor Data			Catalog Symbol
	Size	No. Per Terminal	Solid / Stranded	
Copper Setscrew	#12 to #3	1	• •	J
	#12 to #3	2	• •	
Solid Copper Terminal for Aluminum Wire Connector	#8 to #12	1	• —	S
	#10 to #4	1	— •	

Terminal Type	Conductor Data			Catalog Symbol
	Size	No. Per Terminal	Solid / Stranded	
Aluminum Crimp	#8	1	— •	N
	#6	1	• —	
	#4	1	— •	
	#3, #4	1	— •	Q
	#2	1	• —	
	#1, #2	1	— •	
Aluminum Setscrew	#17/0	1	— •	T

Terminal Type	Conductor Data			Catalog Symbol
	Size	No. Per Terminal	Solid / Stranded	
Aluminum Setscrew	#12 to #2	1	• •	L
	#12 to #3	2	• •	

### Breakaway Fuse Holders

**Catalog Symbol:** HEB

### Description:

Single-pole breakaway in-line fuse holders for 1/32" x 1 1/2" midget fuses. Typical fuse types: BAF, DCM, FNM, FNQ AND KTK.

### Ratings:

Volts: 600V (or less)

Amps: Up to 30A\*

### Agency Information:

(1)UL Recognized, Guide IZLT2, File E14853

(2)CSA Certified, Class 6225-01, File 47235

(3)CE

**Coupling Nut Torque:** 10-20lb-in.

### Part Number Explanation

Example: HEB-AW-RYC

- HEB = Holder series
- AW = Loadside terminal (copper crimp for #12 copper wire)
- RYC = Lineside terminal (copper setscrew for two #6 copper wires)

### Part Number Selection

From the table on page three, select the combination of desired loadside and lineside terminals for the application (define terminal type, wire size, number of wires per terminal and whether the terminal accepts solid and/or stranded conductors). Then in the right hand two columns, select either the non-breakaway or breakaway holder part number to order.

### Available Part Numbers

#### Breakaway Units:

(Includes fuse holder, breakaway part and insulating boots):  
 HEB-AW-RLA, HEB-AW-RLC-A<sup>(1)</sup> (2) (3), HEB-AW-RLC-B, HEB-AW-RLC-C, HEB-AW-RLC-J, HEB-AW-RYA, HEB-AW-RYC, HEB-BW-RLC-A, HEB-BW-RLC-B, HEB-BW-RYC, HEB-JW-RLC-J, HEB-JW-RYC, HEB-KW-RLC-J, HEB-KW-RYC, HEB-LW-RLA, HEB-LW-RLC-J, HEB-LW-RYA

**Fuse Holder Only:** HEB-AW<sup>(2)</sup>, HEB-BW<sup>(2)</sup>, HEB-DW<sup>(2)</sup>, HEB-JW, HEB-LW

**Breakaway Part:** RLC-A, RLC-B, RLC-C, RLC-J, RYC, RLA, RYA

### Specification Data - Lineside Breakaway

Terminal Type	Conductor Data			Catalog Symbol
	Size	No. Per Terminal	Solid / Stranded	
Copper Crimp	#12 to #8	1	• •	-RLC-A
	#6	1	• •	
	#4	1	• •	
Copper Setscrew	#12 to #2	1	• •	-RLC-J
	#12 to #3	2	• •	
Aluminum Setscrew	#12 to #2	1	• •	-RLA
	#12 to #3	2	• •	
Solid Breakaway	(Required with Breakaway Receptacle)			W

### Insulating Boots

Part Numbers	Type
2A0660	Single conductor
2A0661	Two conductor

Two insulating boots come standard with the breakaway holders (example: HEB-AW-RLC-A). The insulating boots are not included with the non-breakaway holders (example: HEB-AA) or the individual pieces of the breakaway holders (example: HEB-AW, RLC-A). Two insulating boots must be ordered for each holder when ordering them separately. When insulating boots are utilized, extra heat retention requires that fuses are sized at a minimum of 200% of the RMS load current.

\*Amp rating limited by conductor size.



## For HEB Holders Only

Directions: To select complete holder P/N, work from left to right starting with loadside terminal options and then lineside terminal options. Then determine breakaway or non-breakaway style.

Loadside Terminal					Lineside Terminal					Available P/N's	
Terminal Type	Wire Size	No. of Wires per Terminal	Solid Wire	Stranded Wire	Terminal Type	Wire Size	No. of Wires per Terminal	Solid Wire	Stranded Wire	Non-Breakaway P/N (Boots not included)	Breakaway P/N (Boots included)
Copper Crimp	#12 to #8	1	Y	Y	Copper Crimp	#12 to #8	1	Y	Y	HEB-AA <sup>(1)(2)</sup>	HEB-AW-RLC-A <sup>(1)(2)</sup>
Copper Crimp	#12	2	Y	Y	Copper Crimp	#12	2	Y	Y	(3)	(3)
Copper Crimp	#12 to #8	1	Y	Y	Copper Crimp	#6	1	Y	Y	HEB-AB <sup>(2)</sup>	HEB-AW-RLC-B
Copper Crimp	#12	2	Y	Y	Copper Crimp	#10	2	Y	Y		
Copper Crimp	#12 to #8	1	Y	Y	Copper Crimp	#4	1	N	Y	HEB-AC <sup>(2)</sup>	HEB-AW-RLC-C <sup>(4)</sup>
Copper Crimp	#12	2	Y	Y	Copper Crimp	#8	2	Y	Y		
Copper Crimp	#12 to #8	1	Y	Y	Copper Crimp	#2	1	N	Y	HEB-AD <sup>(2)</sup>	N/A
Copper Crimp	#12	2	Y	Y	Copper Crimp	#6	2	Y	Y		
Copper Crimp	#12 to #8	1	Y	Y	Copper Crimp	2/0	1	N	Y	HEB-AE <sup>(2)</sup>	N/A
Copper Crimp	#12	2	Y	Y	Copper Crimp	#3	2	N	Y		
Copper Crimp	#12 to #8	1	Y	Y	Copper Setscrew	#12 to #3	1	Y	Y	HEB-AJ	HEB-AW-RLC-J
Copper Crimp	#12	2	Y	Y	Copper Setscrew	#12 to #3	2	Y	Y	HEB-AK	HEB-AW-RYC
Copper Crimp	#12 to #8	1	Y	Y	Aluminum Setscrew	#12 to #2	1	Y	Y	HEB-AL	HEB-AW-RLA
Copper Crimp	#12	2	Y	Y	Aluminum Setscrew	#12 to #2	2	Y	Y	HEB-AY	HEB-AW-RYA
Copper Crimp	#12 to #8	1	Y	Y	Aluminum Setscrew	#12 to #2	2	Y	Y		
Copper Crimp	#12	2	Y	Y	Aluminum Crimp	#1, #2	1	N	Y	HEB-AR	N/A
Copper Crimp	#6	1	Y	Y	Copper Crimp	#12 to #8	1	Y	Y	HEB-BA <sup>(2)</sup>	HEB-BW-RLC-A
Copper Crimp	#10	2	Y	Y	Copper Crimp	#12	2	Y	Y		
Copper Crimp	#6	1	Y	Y	Copper Crimp	#6	1	Y	Y	HEB-BB <sup>(2)</sup>	HEB-BW-RLC-B
Copper Crimp	#10	2	Y	Y	Copper Crimp	#10	2	Y	Y		
Copper Crimp	#6	1	Y	Y	Copper Crimp	#4	1	N	Y	HEB-BC <sup>(2)</sup>	N/A
Copper Crimp	#10	2	Y	Y	Copper Crimp	#8	2	Y	Y		
Copper Crimp	#6	1	Y	Y	Copper Crimp	#2	1	N	Y	HEB-BD <sup>(2)</sup>	N/A
Copper Crimp	#10	2	Y	Y	Copper Crimp	#6	2	Y	Y		
Copper Crimp	#4	1	N	Y	Copper Crimp	#4	1	N	Y	HEB-CC <sup>(2)</sup>	N/A
Copper Crimp	#8	2	Y	Y	Copper Crimp	#8	2	Y	Y		
Copper Crimp	#2	1	N	Y	Copper Crimp	#2	1	N	Y	HEB-DD <sup>(2)</sup>	N/A
Copper Crimp	#6	2	Y	Y	Copper Crimp	#6	2	Y	Y		
Copper Crimp	#20, #18	1	Y	Y	Copper Crimp	#12 to #8	1	Y	Y	HEB-ZA	N/A
Copper Crimp	#12 to #3	1	Y	Y	Copper Crimp	#12	2	Y	Y		
Copper Crimp	#12 to #3	1	Y	Y	Copper Setscrew	#12 to #3	1	Y	Y	HEB-JJ	HEB-JW-RLC-J
Copper Crimp	#12 to #3	1	Y	Y	Copper Setscrew	#12 to #3	2	Y	Y	HEB-JK	HEB-JW-RYC
Copper Crimp	#12 to #3	1	Y	Y	Aluminum Setscrew	#12 to #2	1	Y	Y	HEB-JL	N/A
Copper Crimp	#12 to #3	1	Y	Y	Aluminum Setscrew	#12 to #2	2	Y	Y	HEB-JY	N/A
Aluminum Crimp	#12 to #2	1	Y	Y	Aluminum Setscrew	#12 to #2	1	Y	Y	HEB-LL	HEB-LW-RLA
Aluminum Crimp	#8	1	N	Y	Aluminum Crimp	#8	1	N	Y	HEB-NN	N/A
Aluminum Crimp	#6	1	Y	N	Aluminum Crimp	#6	1	Y	N		
Aluminum Crimp	#6	1	N	Y	Aluminum Crimp	#6	1	N	Y	HEB-PP <sup>(2)</sup>	N/A
Aluminum Crimp	#4	1	Y	N	Aluminum Crimp	#4	1	Y	N		
Aluminum Crimp	#3, #4	1	N	Y	Aluminum Crimp	#3, #4	1	N	Y	HEB-QQ <sup>(2)</sup>	N/A
Aluminum Crimp	#2	1	Y	N	Aluminum Crimp	#2	1	Y	N		
Aluminum Crimp	#1, #2	1	N	Y	Aluminum Crimp	#1, #2	1	N	Y	HEB-RR <sup>(2)</sup>	N/A
Aluminum Crimp	1/0	1	N	Y	Aluminum Crimp	1/0	1	N	Y	HEB-TT <sup>(2)</sup>	N/A
Solid Terminal for aluminum connector	#8 to #12	1	Y	N	Solid Terminal for aluminum connector	#8 to #12	1	Y	N	HEB-SS	N/A
Solid Terminal for aluminum connector	#10 to #14	1	N	Y	Solid Terminal for aluminum connector	#10 to #14	1	N	Y		

(1) UL Recognized, Guide IZLT2, File E14853  
 (2) CSA Certified, Class 6225-01, File 47235  
 (3) CE  
 (4) HEB-AW-RLC-C is for (1) #4 stranded wire only.

Contact your local Cooper Bussmann representative for other possible terminations not listed.

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 2021 S. SCHAEFER HWY. DETROIT, MICHIGAN 48217 PHONE: 734.483.1427 FAX: 734.483.3431 www.metroeng.com	PLA STREETLIGHTING		 PUBLIC LIGHTING AUTHORITY OF DETROIT	FUSE HOLDER DETAILS		GRAPHIC SCALE NOT TO SCALE	 Know what's below. Call before you dig.	SHEET INFORMATION		
	MES JOB #: N/A	DRAWN BY: RYAN JALYNSKI		STANDARD DETAIL				DT-09.2	TOTAL SHEETS	SHEET NO.
	PLOT SCALE: NOT TO SCALE	CHECKED BY: ANURAG		CITY OF DETROIT					02	02
PLOT DATE: 2/19/2020	DATE: 2/19/2020	WAYNE COUNTY, MI								



## IDENTIFICATION TAG TEXT LEGEND

### LIGHTING CONTROLLER (LC) ID TAG NAMING CONVENTION LEGEND

THE FORMAT FOR LIGHTING CONTROLLER ID TAGS SHALL FOLLOW THE FOLLOWING PATTERN:

LCVVWXX

THE SECTIONS SEPARATED FOR CLARITY ARE LC-VV-W-XX. THE LC STAND FOR LIGHTING CONTROLLER. THE V, W AND X ARE AS FOLLOWS:

VV LAST TWO DIGITS OF THE ZIP CODE WHERE THE LIGHTING CONTROLLER IS LOCATED

W ID ASSIGNED TO THE FIRM DESIGNING THE CIRCUIT. EXAMPLES INCLUDE:

M	METRO ENGINEERING SOLUTIONS
T	TETRA TECH
W	C.E.A. AND WADE TRIM JOINT VENTURE

XX ID ASSIGNED TO THE LIGHTING CONTROLLER (LC)

THE TAG SHALL HAVE THE LETTERS MOUNTED HORIZONTALLY WITH THE HOLDER MOUNTED VERTICALLY.

AN EXAMPLE LIGHTING CONTROLLER ID TAG IS:

LC16W30 AN LC INSTALLED IN THE 48230 ZIP THAT WAS LAID OUT BY THE C.E.A AND WADE TRIM JOINT VENTURE AND HAS BEEN ASSIGNED AN ID OF 30 IN THAT ZIP CODE.

### CABLE ID TAG NAMING CONVENTION LEGEND

THE FORMAT FOR CABLE TAGS SHALL FOLLOW THE FOLLOWING PATTERN:

UUUVVWXXYZ

THE SECTIONS SEPARATED FOR CLARITY ARE UUU-VV-W-XX-Y-Z. THE VV-W-XX COMES FROM THE ASSIGNED LIGHTING CONTROLLER ID. THE VARIOUS VALUES STAND FOR:

UUU	PLA	FOR STREET LIGHTING CIRCUITS
	REC	FOR RECEPTACLE CIRCUITS

VVWXX THE ASSIGNED LC ID. SEE THE LC NAMING CONVENTION

Y THE CIRCUIT BRANCH ID (1, 2, 3, 4, ETC.)

Z THE CONDUCTOR CLASSIFICATION

CLASSIFICATIONS ARE:

A	A PHASE CONDUCTOR
B	B PHASE CONDUCTOR
N	NEUTRAL CONDUCTOR
G	EQUIPMENT GROUND CONDUCTOR (EGC)

THE TAG SHALL HAVE THE LETTERS MOUNTED AND THE HOLDER MOUNTED HORIZONTALLY.

NOTE: CABLE TAG LABELS ARE GENERATED FOR THE CABLE(S) BEING TAGGED DEPENDING ON WHAT IS INCLUDED UNDER THE TAG. FOR INSTANCE, AN ENTIRE BRANCH CIRCUIT 4 CABLE BUNDLE INCLUDING 2 POWER LEGS, 1 NEUTRAL AND 1 EGC COULD BE TAGGED WITH A SINGLE UUU-VV-W-XXY TAG AS LONG AS THE CABLES ARE ALL PHYSICALLY TIED TOGETHER. WHEN AN ENTIRE BRANCH CIRCUIT IS BUNDLED AND TAGGED TOGETHER WITH A CIRCUIT IDENTIFIER OF UUU-VV-W-XX-Y THEN THE INDIVIDUAL CABLES IN THAT BUNDLE CAN BE TAGGED WITH JUST AN "A", "B", "N" OR "G".

NOTE: AN EQUIPMENT GROUND CONDUCTOR (EGC) CAN BE SHARED BETWEEN BRANCH CIRCUITS OR EVEN LIGHTING CONTROLLER CIRCUITS IF ALL THE CABLES SHARE THE SAME CONDUIT WHICH CREATES A UNIQUE TAGGING CONVENTION. THE EGC, IF TAGGED SEPARATELY, IS TAGGED TO INDICATE WHAT LEVEL OF SHARING IS USING THE EGC. THE LEVELS OF EGC TAGGING ARE:

UUUVVWXXYG	AN EGC FOR A BRANCH CIRCUIT OR INDIVIDUAL PHASE BUNDLE
UUUVVWXXG	AN EGC SHARED BETWEEN MULTIPLE BRANCH CIRCUITS
EGC	AN EGC SHARED BETWEEN DIFFERENT TYPES OF CIRCUITS OR LCS

NOTE: THERE EXISTS DECORATIVE LIGHTING WITHIN THE DETROIT LIGHTING AREA UTILIZING STRAND LIGHTING. THOSE CIRCUITS ARE BUNDLED TOGETHER AND GET A UNIQUE TAG OF "STRAND".

EXAMPLE CABLES TAGS ARE:

PLA26W5A1A	PLA STREET LIGHTING BRANCH CIRCUIT BUNDLE
PLA26W5A1AA	PLA STREET LIGHTING BRANCH CIRCUIT LAMP LOOP
REC26W5A1A	RECEPTACLE BRANCH CIRCUIT BUNDLE
STRAND	STRAND LIGHTING FEED CABLE BUNDLE



PLA STREETLIGHTING	
MES JOB #:	N/A
DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	NOT TO SCALE
CHECKED BY:	ANURAG
PLOT DATE:	2/19/2020
DATE:	2/19/2020



IDENTIFICATION TAG DETAILS	
STANDARD DETAIL	
CITY OF DETROIT	
WAYNE COUNTY, MI	

GRAPHIC SCALE  
NOT TO SCALE



SHEET INFORMATION	
<b>DT-11.1</b>	
TOTAL SHEETS	SHEET NO.
02	01

## IDENTIFICATION TAG TEXT LEGEND - CONTINUED

### LUMINAIRE ID TAG NAMING CONVENTION LEGEND

THE FORMAT FOR LUMINAIRE ID TAGS SHALL FOLLOW THE FOLLOWING PATTERN:

WXXXYYZZZ

THE SECTIONS SEPARATED FOR CLARITY ARE W-XXX-YYY-ZZZ. THE W, X, Y AND Z ARE AS FOLLOWS:

W THE LUMINAIRE TYPE. SOME LUMINAIRE TYPES ARE:

- L LIGHT EMITTING DIODE (LED) FIXTURE
- S SODIUM VAPOR FIXTURE

XXX THE LUMINAIRE WATTAGE. SOME EXAMPLES ARE:

- 118 118W LUMINAIRE
- 152 152W LUMINAIRE

THESE WATTAGES ARE REGARDLESS OF THE LUMINAIRE TYPE.

YYY THE ALPHA PORTION OF THE PLA ASSIGNED LUMINAIRE ID.

ZZZ THE NUMERIC PORTION OF THE PLA ASSIGNED LUMINAIRE ID.

THE TAG SHALL HAVE THE LETTERS MOUNTED HORIZONTALLY WITH THE HOLDER MOUNTED VERTICALLY.

AN EXAMPLE LUMINAIRE ID TAG IS:

L118AFK941 A 118W LED LUMINAIRE WITH THE PLA ID OF AFK941.

## MATERIALS

### CABLE CIRCUIT IDENTIFICATION TAGS

THE IDENTIFICATION TAGS FOR CABLE CIRCUITS SHALL USE TECH PRODUCTS, INC. FASTTAGS MINIATURE MARKERS. THE TAGS SHALL HAVE BLACK RAISED LETTERING ON A YELLOW BACKGROUND. THE LETTERING SHALL BE ORIENTATED HORIZONTALLY AND IN A SINGLE LINE.

### LIGHTING CONTROLLER IDENTIFICATION TAGS

THE IDENTIFICATION TAGS FOR LIGHTING CONTROLLERS SHALL USE TECH PRODUCTS, INC. EVERLAST 1" VERTICALLY MOUNTED NUMBERS AND LETTERS WITH SOLID BLACK POLYPROPYLENE CHARACTERS EMBEDDED IN A BRIGHT YELLOW POLYPROPYLENE BACKGROUND. THE LETTERS SHALL BE STACKED VERTICALLY WITH THE HOLDER MOUNTED VERTICALLY ON THE POLE. EACH CHARACTER SHALL BE 0.70" TALL WHEN MOUNTED. THE TAG SHALL BE MOUNTED ON THE POLE'S STREETSIDE.

### LUMINAIRE IDENTIFICATION TAGS

THE IDENTIFICATION TAGS FOR LUMINAIRES SHALL USE TECH PRODUCTS, INC. EVERLAST 1" VERTICALLY MOUNTED NUMBERS AND LETTERS WITH SOLID BLACK POLYPROPYLENE CHARACTERS EMBEDDED IN A BRIGHT YELLOW POLYPROPYLENE BACKGROUND. THE LETTERS SHALL BE STACKED VERTICALLY WITH THE HOLDER MOUNTED VERTICALLY ON THE POLE. EACH CHARACTER SHALL BE 0.70" TALL WHEN MOUNTED. A TAG IS MOUNTED ON THE POLE FOR EACH INDIVIDUAL LUMINAIRE ON THE POLE. THE TAG(S) SHALL BE MOUNTED ON THE POLE'S STREETSIDE.



PLA STREETLIGHTING	
MES JOB #:	N/A
DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	NOT TO SCALE
CHECKED BY:	ANURAG
PLOT DATE:	2/19/2020
DATE:	2/19/2020



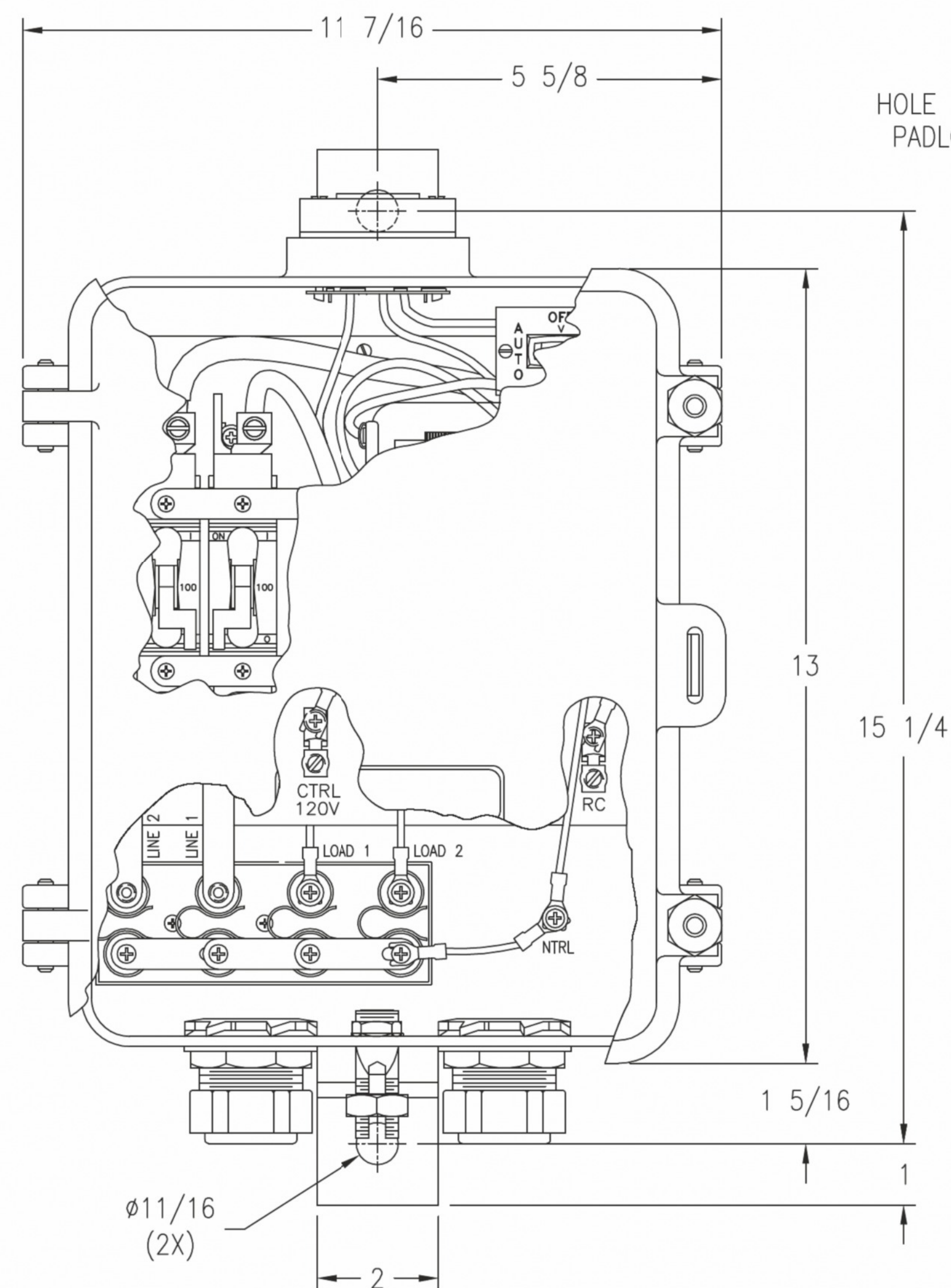
IDENTIFICATION TAG DETAILS
STANDARD DETAIL
CITY OF DETROIT
WAYNE COUNTY, MI

GRAPHIC SCALE  
NOT TO SCALE



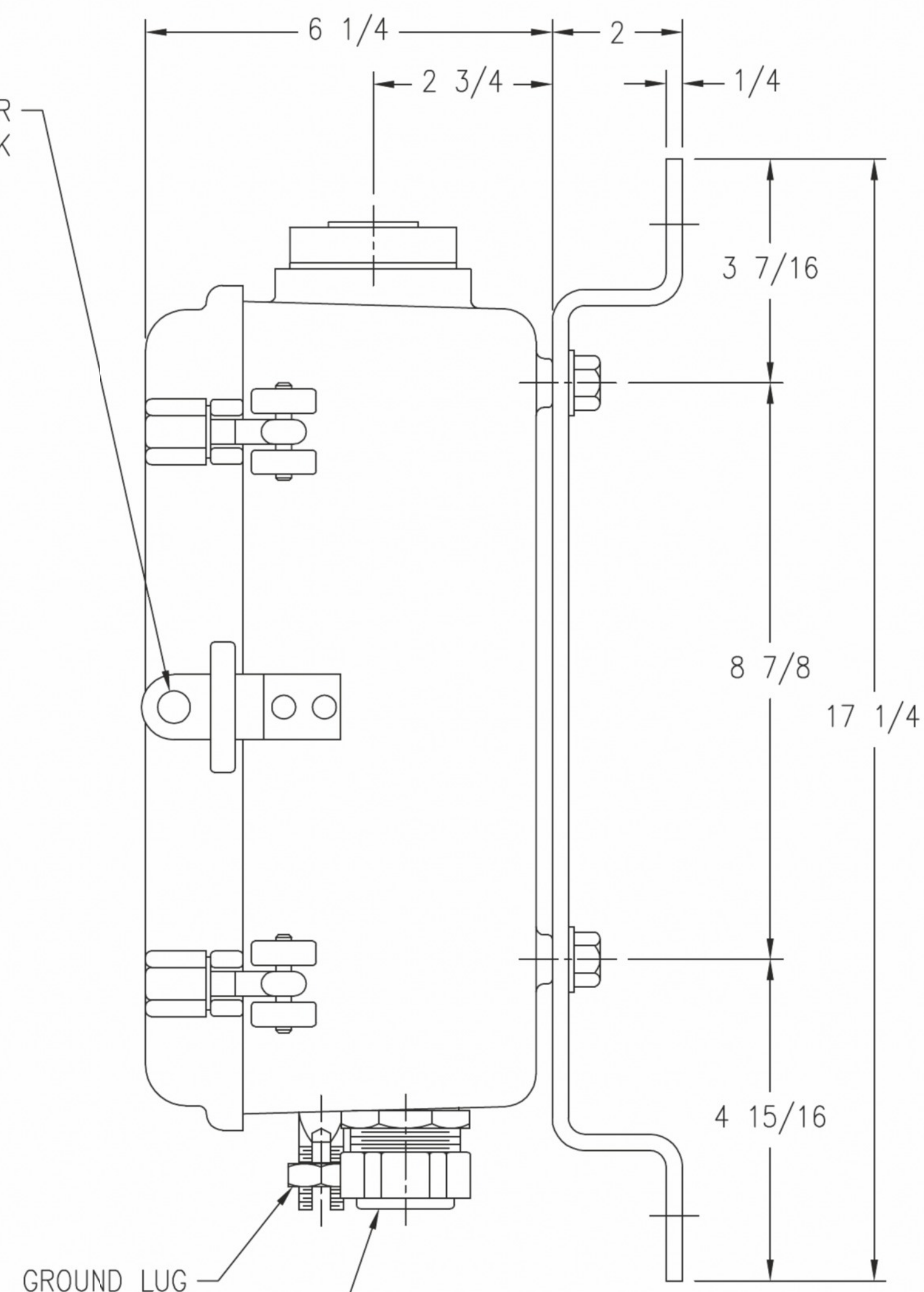
SHEET INFORMATION	
<b>DT-11.2</b>	
TOTAL SHEETS	SHEET NO.
02	02





CONTROL TERMINALS WILL ACCEPT #6 THRU #14 AWG WIRE  
 LINE/LOAD TERMINALS WILL ACCEPT #4 THRU #1/0 AWG WIRE

HOLE FOR  
 PADLOCK



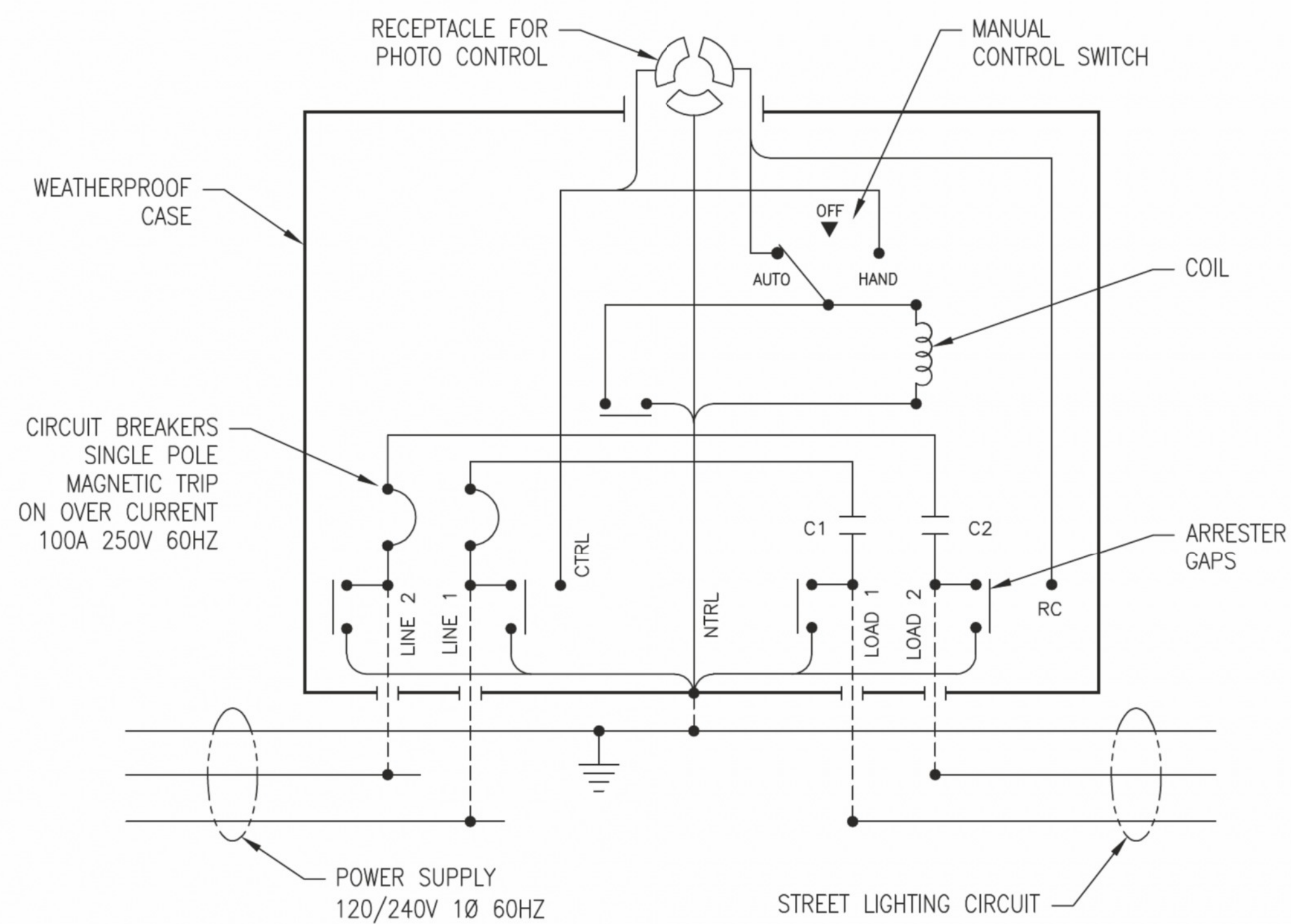
(2) COMPRESSION CONNECTORS WITH  
 NEOPRENE BUSHINGS WITH OVAL HOLES FOR  
 0.547x0.89 TO 0.687x1.031 CABLE OD

CAST ALUMINUM WEATHERPROOF CASE WITH BRACKET

<b>TRINETICS</b> Menomonee Falls, Wisconsin U.S.A.	
TYPE MR-YO	LINE POLE 2
SPEC. NO. 6442	SERIAL NO. XXXX
FOR INSTRUCTIONS REFER IS-11939	
CONTROL CIRCUIT RATING	
120 VOLTS	60 HZ
A-C LOAD CIRCUIT 100 AMPS 120/240 VOLTS	

NAMEPLATE DETAIL

CONNECTIONS FOR TYPE MR-YO SPEC 6442 STREET LIGHT CONTROL ASS'Y  
 WITH SINGLE POLE MAGNETIC TRIP ON OVERLOAD CIRCUIT BREAKERS.



TWO POLE STREET LIGHT CONTROL ASS'Y WIRED FOR OPERATION WITH 120V PHOTO CONTROL UNIT AND RATED FOR SWITCHING A STREET LIGHTING LOAD WITH NORMAL CURRENT WHICH DOES NOT EXCEED THE LOAD CURRENT RATING SHOWN ON THE NAMEPLATE. IF SUPPLY IS 240/480V, A SEPARATE 120V SOURCE MUST BE CONNECTED TO "CTRL" TERMINAL FOR PC OPERATION.

THE LOCATION OF THE PHOTO CONTROL UNIT MAY BE EITHER AT THE CONTROL ASS'Y AND PLUGGED INTO THE RECEPTACLE PROVIDED FOR SAME, OR AT A REMOTE POINT SUCH AS AN AUXILIARY PHOTO CONTROL MOUNTING ADAPTER OR ANOTHER STREET LIGHT CONTROL ASS'Y.

WHEN PHOTO CONTROL IS TO BE REMOTE, CLOSE THE SELF CONTAINED RECEPTACLE FOR PHOTO CONTROL WITH AN OPEN CIRCUITED CAP. ESTABLISH THE OPERATING CIRCUIT BY WIRING FROM THE "RC" TERMINAL TO THE LOAD LEAD OF THE REMOTELY LOCATED AUXILIARY PHOTO CONTROL MOUNTING ADAPTER, OR TO THE "RC" TERMINAL OF ANOTHER STREET LIGHT CONTROL ASS'Y. INTERCONNECTION OF "RC" TERMINALS OF TWO OR MORE STREET LIGHT CONTROL ASSEMBLIES PROVIDES GANG OPERATION WITH A SINGLE PC UNIT.

MANUAL CONTROL SWITCH IS SHOWN IN "AUTO" POSITION AND PHOTO CONTROL ESTABLISHES ON-OFF STREET LIGHT OPERATING SCHEDULE. MANUAL CONTROL SWITCH IN HAND OR OFF POSITIONS BY-PASSES PHOTO CONTROL TO PROVIDE, RESPECTIVELY, STREET LIGHT CIRCUIT ON OR OFF OPERATION. REMOTE PC LOCATION OR GANG OPERATION CONNECTIONS ARE NOT AFFECTED BY OPERATION OF INDIVIDUAL MANUAL CONTROL SWITCHES. HOWEVER, 120V MUST BE AVAILABLE AT EACH STREET LIGHT CONTROL ASSEMBLY TO PERMIT HAND-ON CIRCUIT OPERATION WITH RESPECTIVE MANUAL CONTROL SWITCH.

THE RELAY MUST BE ENERGIZED CONTINUOUSLY AT 120V DURING THE TIME OF RELAY CONTACT CLOSURE.

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<b>TRINETICS</b>		RELAY ASSEMBLY MR-YO SPEC 6442	
THIRD ANGLE PROJECTION	SIZE B	DRAWN BY G Pietschmann	DATE PART NUMBER 7/14/11
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED	FAMILY ID C1643	APPROX. WEIGHT 24 LB	SCALE 5/16
			31183000



PLA STREETLIGHTING	
MES JOB #:	N/A
DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	NOT TO SCALE
CHECKED BY:	ANURAG
PLOT DATE:	2/19/2020
DATE:	2/19/2020



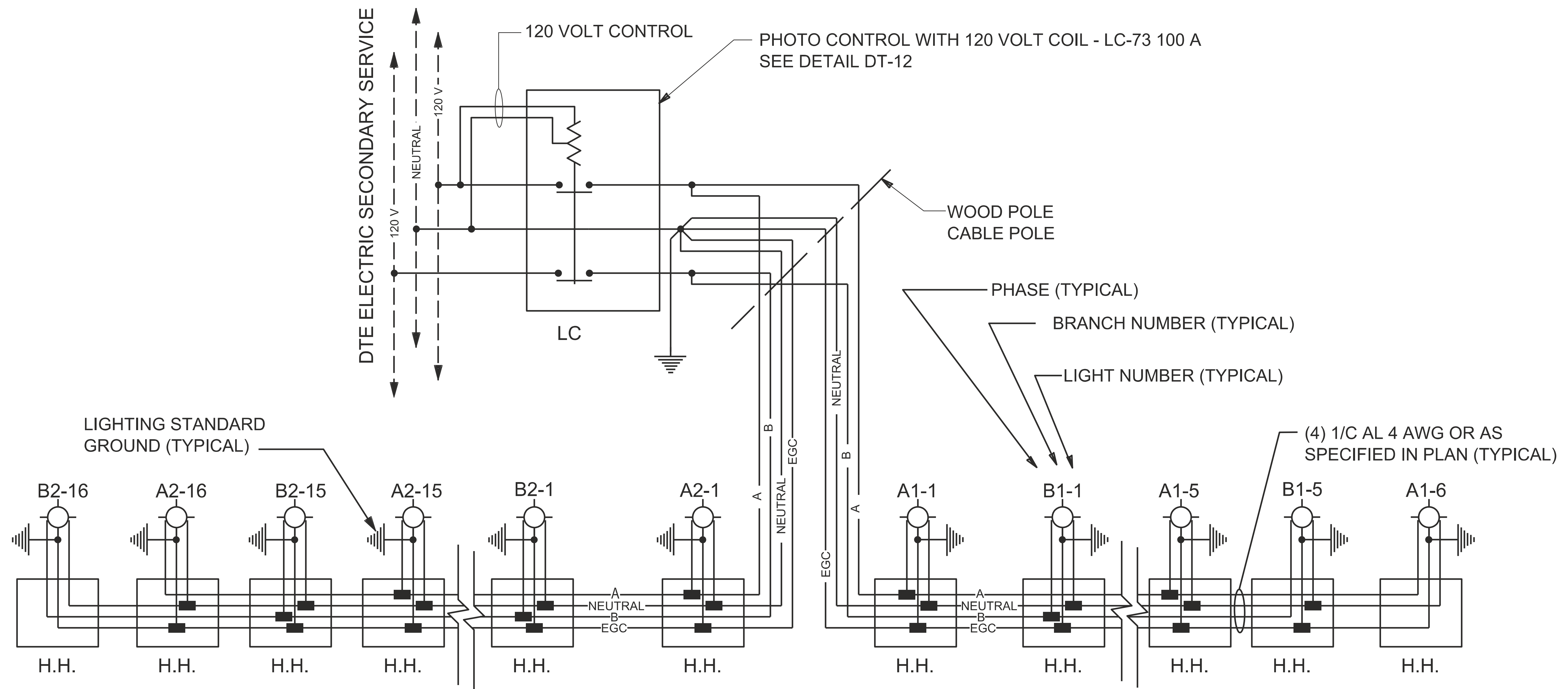
STREET LIGHTING PHOTO CONTROLLER DETAILS	
STANDARD DETAIL	
CITY OF DETROIT	
WAYNE COUNTY, MI	

GRAPHIC SCALE  
 NOT TO SCALE



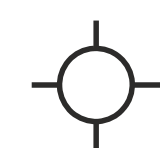
SHEET INFORMATION	
DT-12	TOTAL SHEETS: 01
	SHEET NO.: 01



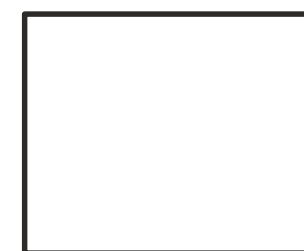


## UNDERGROUND STREET LIGHTING CIRCUIT TYPICAL WIRING SCHEMATIC THREE CONDUCTOR AND EQUIPMENT GROUND CONDUCTOR (EGC)

NOT TO SCALE



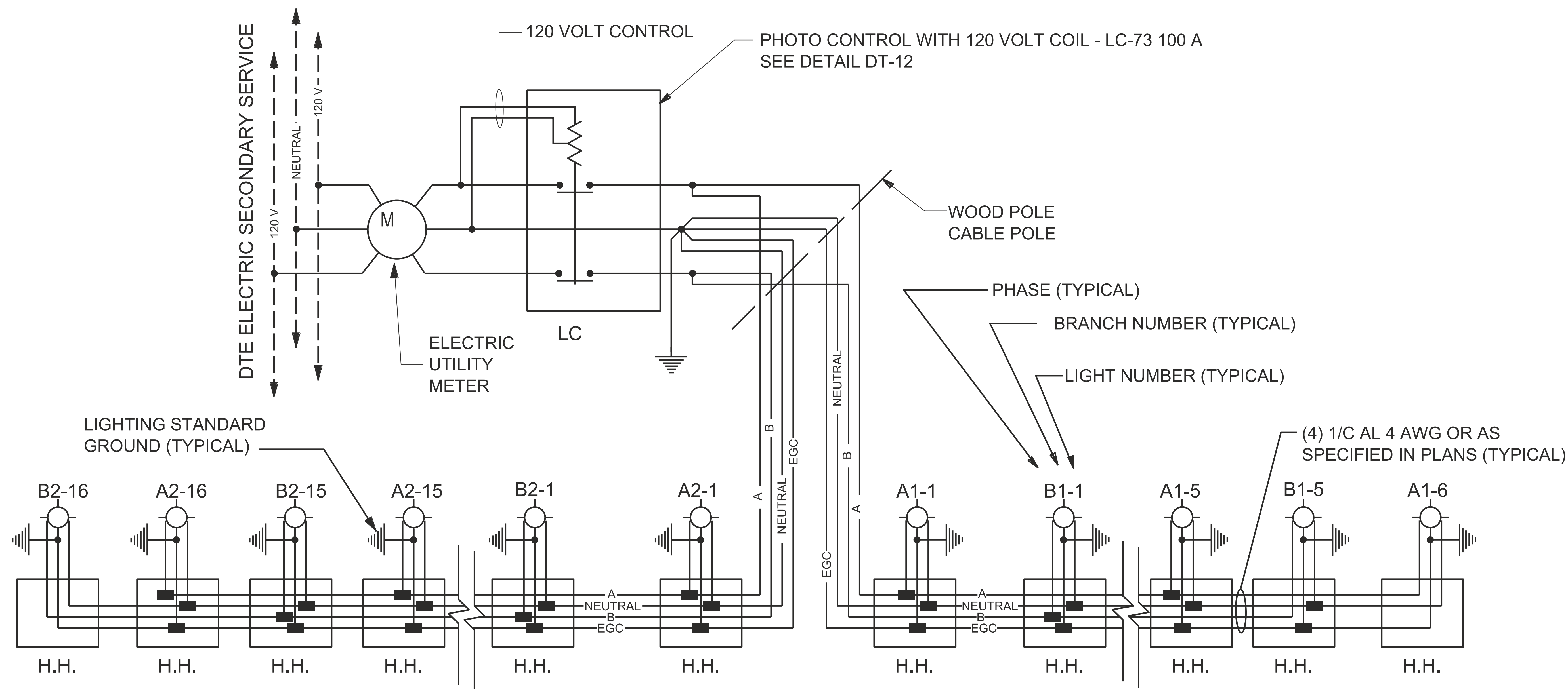
UNDERGROUND FED LIGHTING STANDARD



HANDHOLE

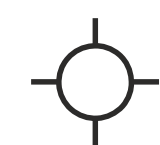


HOMAC RAB 1/0-xx MECHANICAL CONNECTOR INSTALLED IN HANDHOLE  
xx = IS THE OUTLET CONFIGURATION RAB 1/0-21 IS SHOWN  
SIZE AS NECESSARY FOR MULTIPLE LUMINAIRES OR CIRCUIT BRANCHES



## RECEPTACLE CIRCUIT TYPICAL WIRING SCHEMATIC THREE CONDUCTOR AND EQUIPMENT GROUND CONDUCTOR (EGC)

NOT TO SCALE



UNDERGROUND FED LIGHTING STANDARD



HANDHOLE



HOMAC RAB 1/0-xx MECHANICAL CONNECTOR INSTALLED IN HANDHOLE  
xx = IS THE OUTLET CONFIGURATION RAB 1/0-21 IS SHOWN  
SIZE AS NECESSARY FOR MULTIPLE RECEPTACLES OR CIRCUIT BRANCHES



**CABLES IN HANDHOLES AND MANHOLES:**

STREET LIGHTING AND RECEPTACLE CABLES IN HANDHOLES AND MANHOLES SHALL BE PULLED STRAIGHT THROUGH THE STRUCTURE UNLESS THERE IS A TAP REQUIRED TO SERVICE A STREET LIGHT, RECEPTACLE OR CIRCUIT BRANCH LOCATION.

LOCATIONS REQUIRING A SERVICE TAP WILL HAVE THE SERVICE PHASE TAPPED WITH THE APPROPRIATE HOMAC RAB CONNECTOR AND THE NON-SERVICE PHASE PULLED STRAIGHT THROUGH.

LOCATIONS REQUIRING CIRCUIT TAPS FOR CIRCUIT BRANCHES WILL BE IDENTIFIED ON THE PLANS WITH THE REQUIRED TAP SIZE AND PHASE PROVIDED.

**EXAMPLE 1 - LAMP LOOP:**

AN EXAMPLE IS A HANDHOLE LOCATION WITH BOTH THE A PHASE AND THE B PHASE COMING IN AND CONTINUING ALONG TO FEED ADDITIONAL STREET LIGHT LOCATIONS. THE HANDHOLE ALSO FEEDS A STREET LIGHTING STANDARD THAT HAS 2 LUMINAIRES THAT ARE TO BE CONNECTED TO THE B PHASE CABLE AND NO RECEPTACLE. THE B PHASE CABLE WILL HAVE A 4-WAY HOMAC RAB CONNECTOR INSTALLED. THE NEUTRAL WILL HAVE A 4-WAY HOMAC RAB CONNECTOR INSTALLED. THE EGC WILL HAVE A 3-WAY HOMAC RAB CONNECTOR INSTALLED. THE A PHASE CABLE WILL BE PULLED STRAIGHT THROUGH.

**EXAMPLE 2 - CIRCUIT BRANCH:**

AN EXAMPLE IS A HANDHOLE LOCATION WITH BOTH THE A PHASE AND THE B PHASE COMING IN AND FEEDING TWO DIFFERENT DIRECTIONS GOING OUT WITHOUT A STREET LIGHT LOCATION DIRECTLY CONNECTED TO THE HANDHOLE. THIS EXAMPLE REQUIRES CABLE 3-WAYS (ALSO CALLED A T-TAP OR BRANCH) TO BE INSTALLED TO FEED THE TWO DIFFERENT DIRECTIONS. A 3-WAY HOMAC RAB WILL BE INSTALLED ONTO EACH OF THE A PHASE, B PHASE, NEUTRAL AND EGC CABLES.

**UNDERGROUND PHASE IDENTIFICATION**

**CURRENT UNDERGROUND CONSTRUCTION WIRING STANDARD**

CONDUCTOR ID	BLACK	WHITE/WHITE STRIPE	RED/RED STRIPE	GREEN/BARE
PHASE	A PHASE	NEUTRAL	B PHASE	EGC

**OBSOLETE UNDERGROUND CONSTRUCTION WIRING STANDARD**

CONDUCTOR ID	BLACK	WHITE/WHITE STRIPE	RED/RED STRIPE	GREEN/BARE
PHASE	A PHASE	NEUTRAL	B PHASE	---

\*\*\* WHEN MODIFICATIONS OR ADDITIONS ARE REQUIRED ON OBSOLETE STYLE CONSTRUCTION CIRCUITS, THE CHANGES SHOULD BE MADE WITH THE OBSOLETE STYLE OR THE ENTIRE CIRCUIT MUST BE UPDATED.

\*\*\* THE CURRENT UNDERGROUND CONSTRUCTION AND THE OBSOLETE UNDERGROUND CONSTRUCTION STANDARDS SHALL NOT BE INTERMINGLED EXCEPT AT THE CIRCUIT SOURCE POINT WHERE THE NEUTRAL IS BONDED TO THE GROUND AT THE MAIN BREAKER.

\*\*\* THERE ARE INSTALLATIONS WHERE NEITHER COLOR-CODED, EITHER COLORED INSULATION OR PHASE MARKED, CONDUCTORS ARE USED SO THAT ALL THE CONDUCTORS ARE THE SAME COLOR, TYPICALLY BLACK. PHASING MUST BE FIELD VERIFIED PRIOR TO CONNECTING ANY COLOR-CODED CONDUCTORS TO NON-CODED CONDUCTORS.

\*\*\* PRIOR TO CONNECTING ANY NEW CIRCUIT CABLING TO EXISTING CIRCUIT CABLING, CARE IS TO BE TAKEN BY VERIFYING THE EXISTING CIRCUIT CABLING PHASING TO ENSURE THAT PROPER ELECTRICAL CONNECTIONS ARE MADE. IF THE EXISTING CIRCUIT CABLING IS FOUND TO HAVE IMPROPER PHASE IDENTIFICATIONS THEN THE EXISTING CIRCUIT CABLING MUST BE CORRECTED PRIOR TO CONNECTING ANY NEW CABLING.

\*\*\* THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING CIRCUIT PHASE IDENTIFICATIONS PRIOR TO CONNECTING ANY NEW CIRCUIT CABLING TO EXISTING CIRCUIT CABLING. IF THE EXISTING CIRCUIT CABLING IS FOUND TO HAVE IMPROPER PHASE IDENTIFICATIONS THEN THE EXISTING CIRCUIT CABLING MUST BE CORRECTED PRIOR TO CONNECTING ANY NEW CABLING.



PLA STREETLIGHTING	
MES JOB #:	N/A
DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	NOT TO SCALE
CHECKED BY:	ANURAG
PLOT DATE:	2/19/2020
DATE:	2/19/2020



UNDERGROUND LIGHTING AND RECEPTACLE CIRCUITS TYPICAL WIRING SCHEMA DETAILS
STANDARD DETAIL
CITY OF DETROIT
WAYNE COUNTY, MI

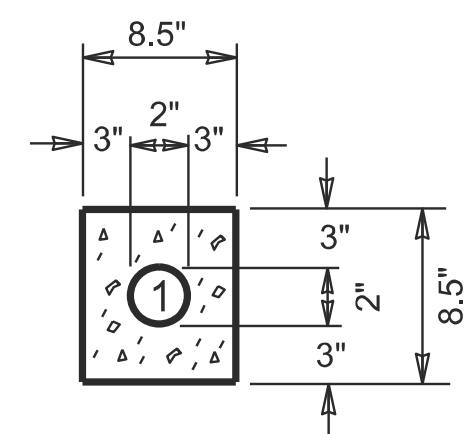
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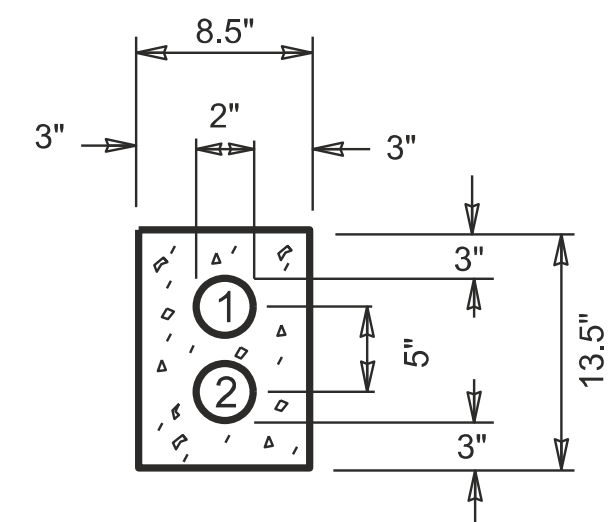
SHEET INFORMATION

<b>DT-13.3</b>	TOTAL SHEETS	SHEET NO.
	03	03

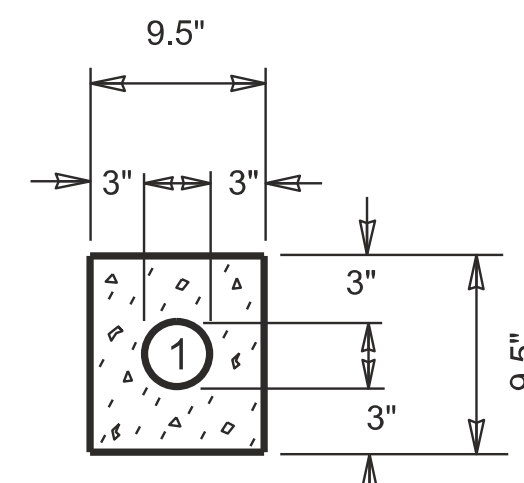




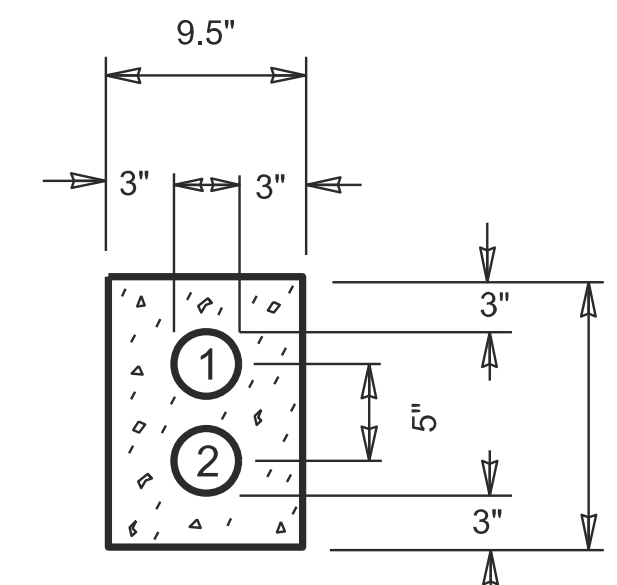
1 - 2" CONDUIT



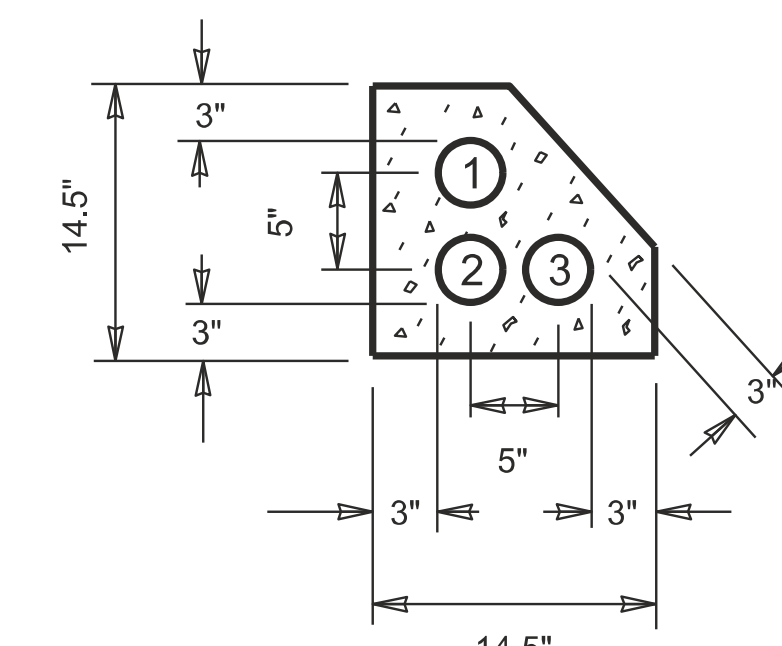
2 - 2" CONDUITS



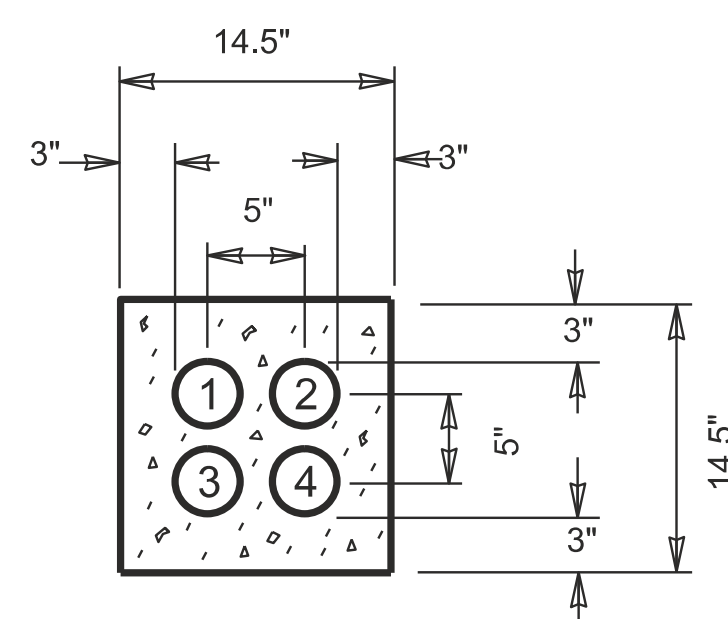
1 - 3" CONDUIT



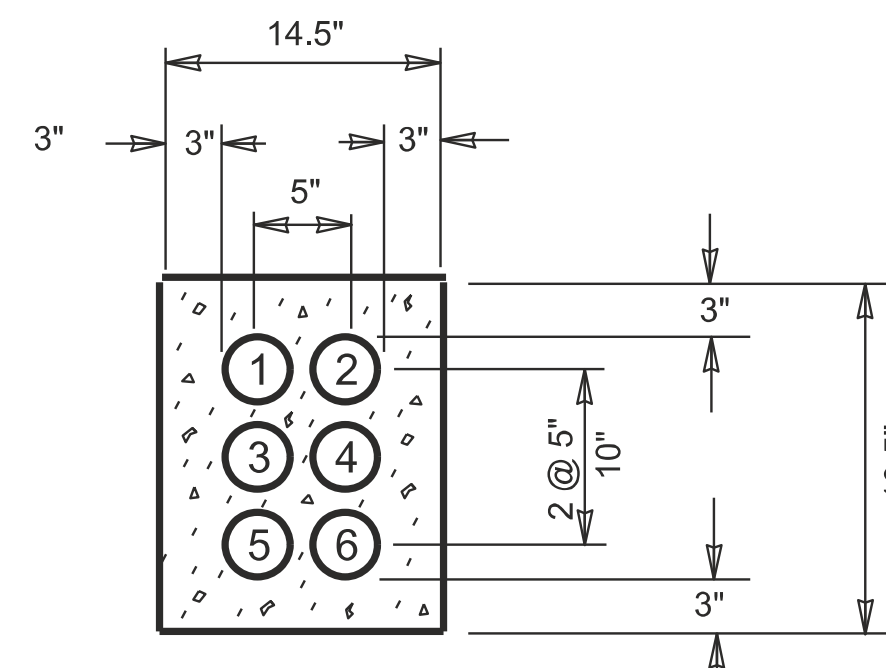
2 - 3" CONDUITS



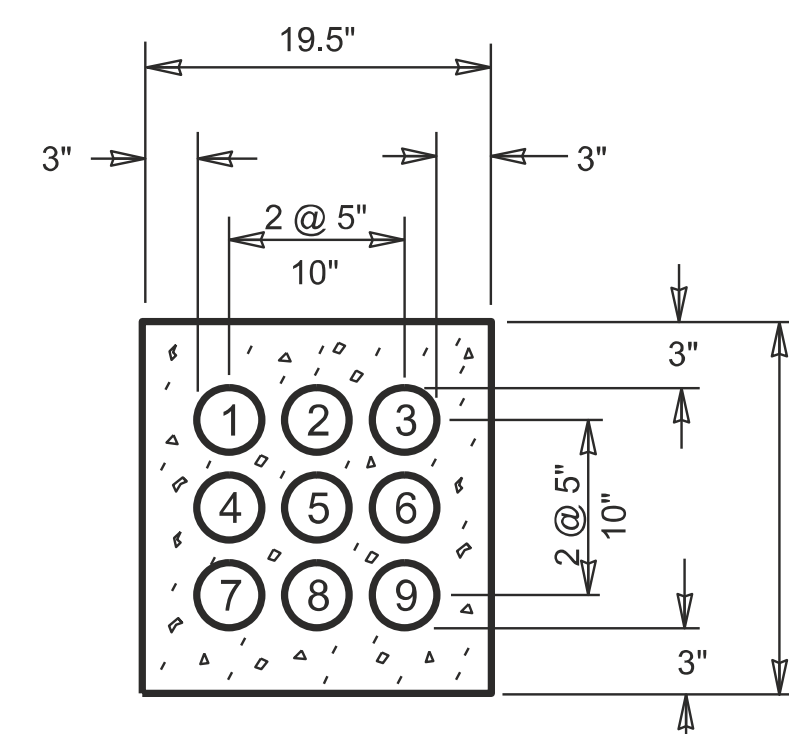
3 - 3" CONDUITS



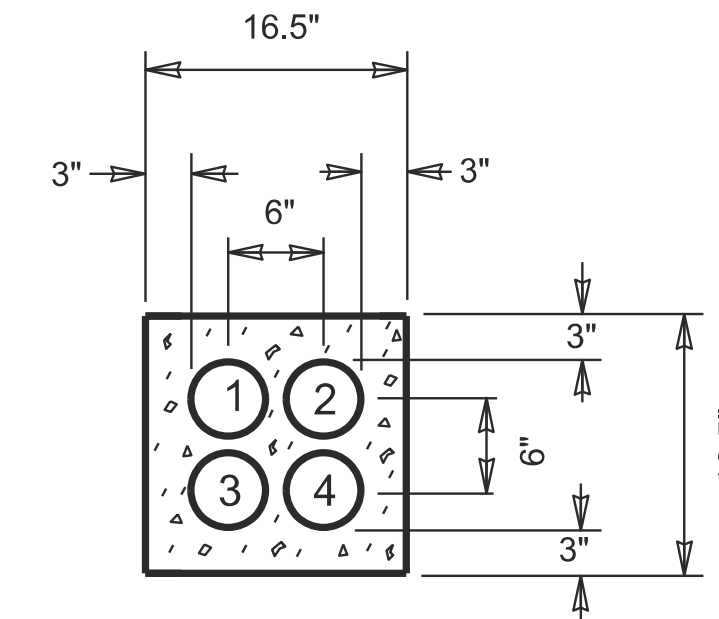
4 - 3" CONDUITS



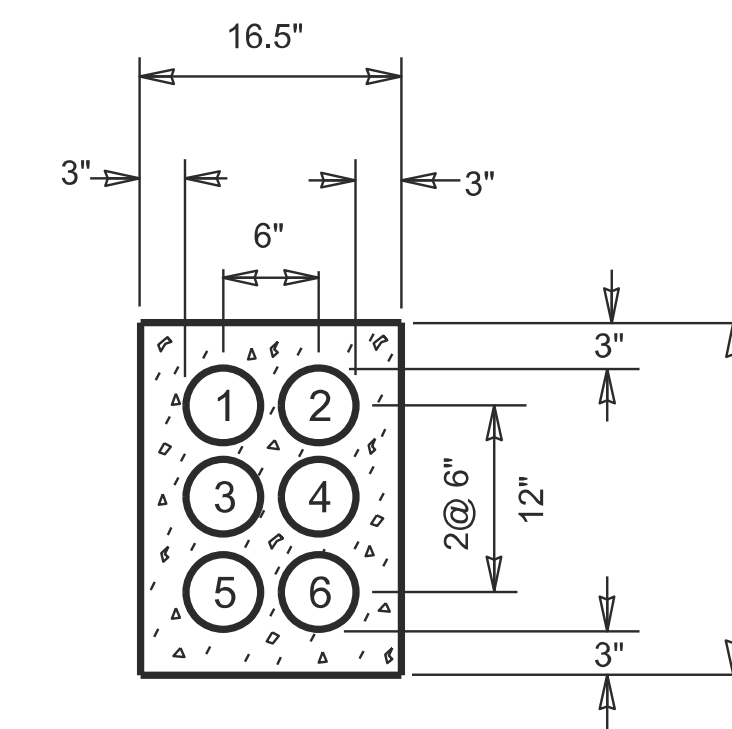
6 - 3" CONDUITS



9 - 3" CONDUITS



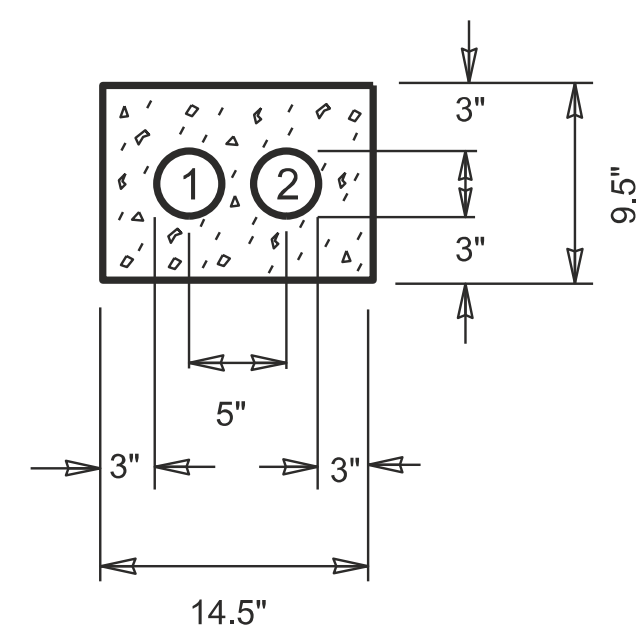
4 - 4" CONDUITS



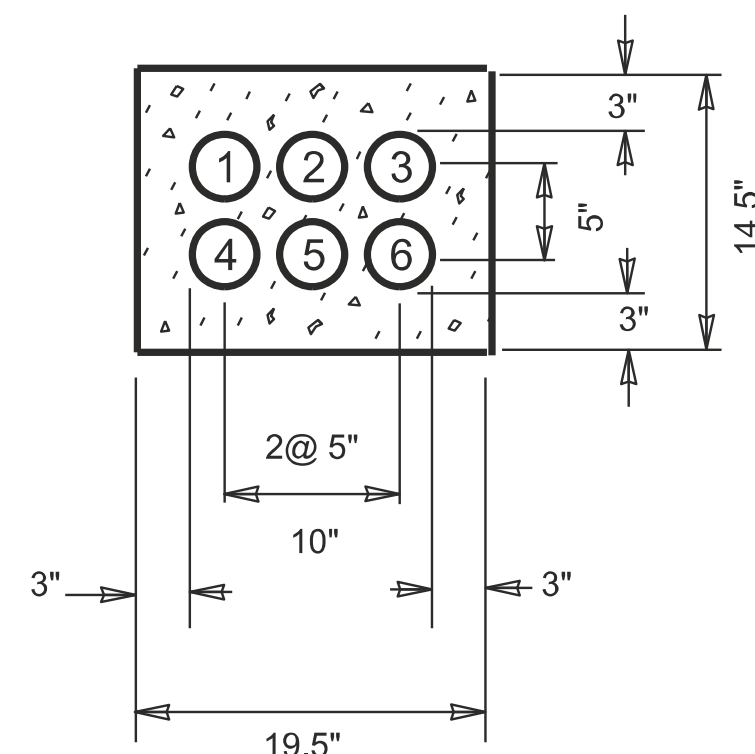
6 - 4" CONDUITS

ALTERNATE ARRANGEMENT OF 3" CONDUIT

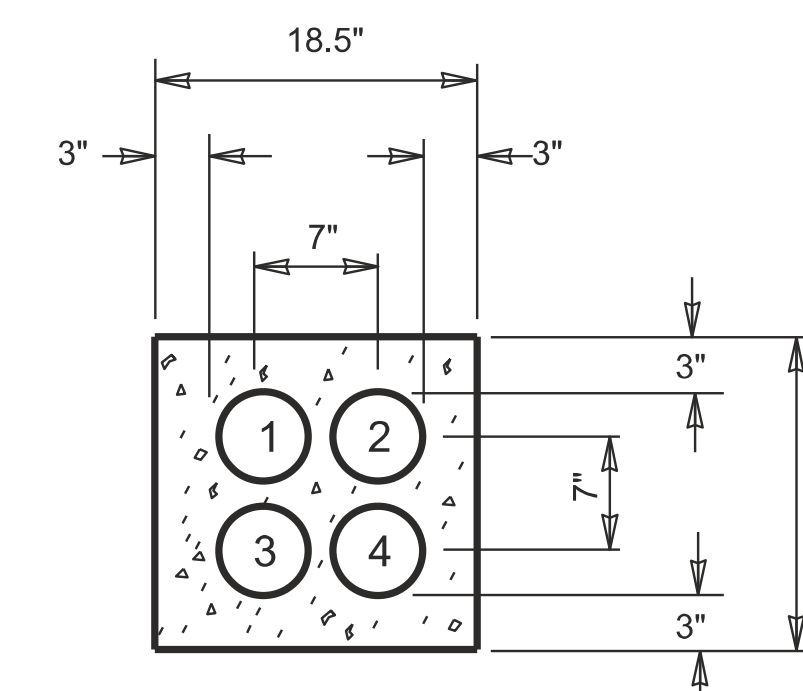
(TO SUIT FIELD CONDITIONS)  
(TO BE APPROVED BY THE ENGINEER)



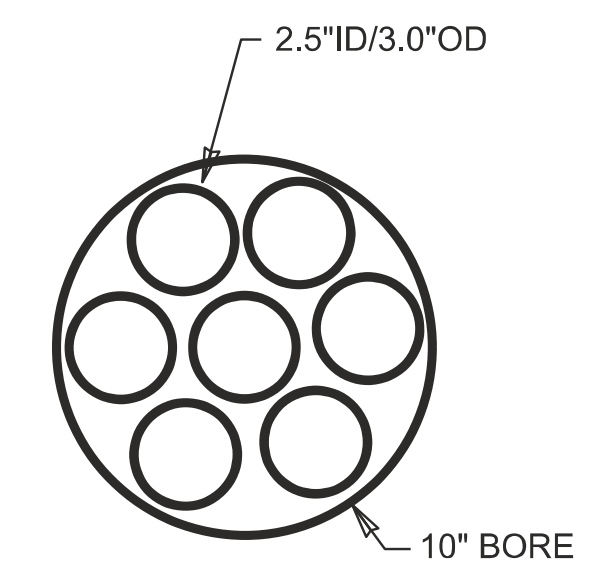
2-3" CONDUITS



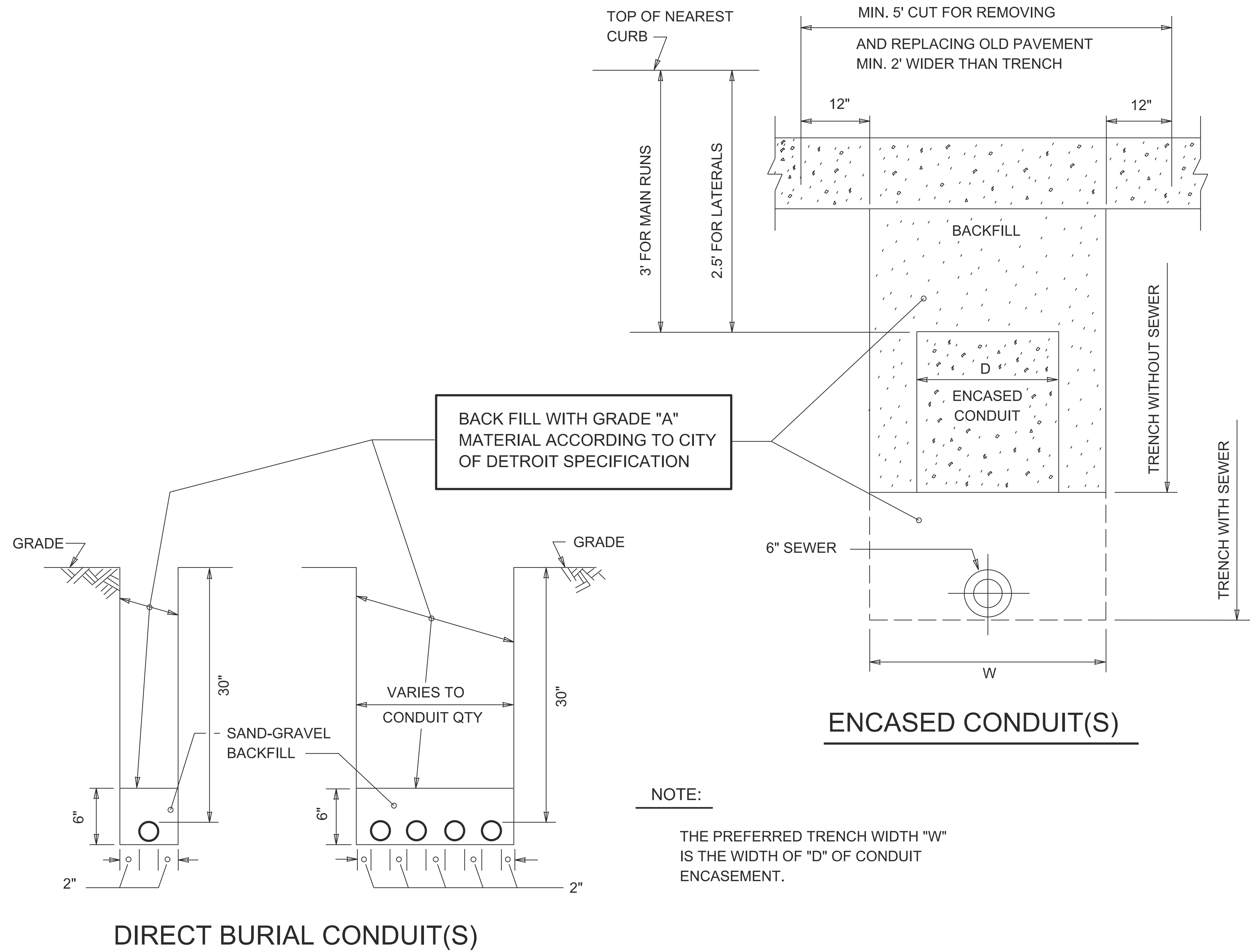
6-3" CONDUITS

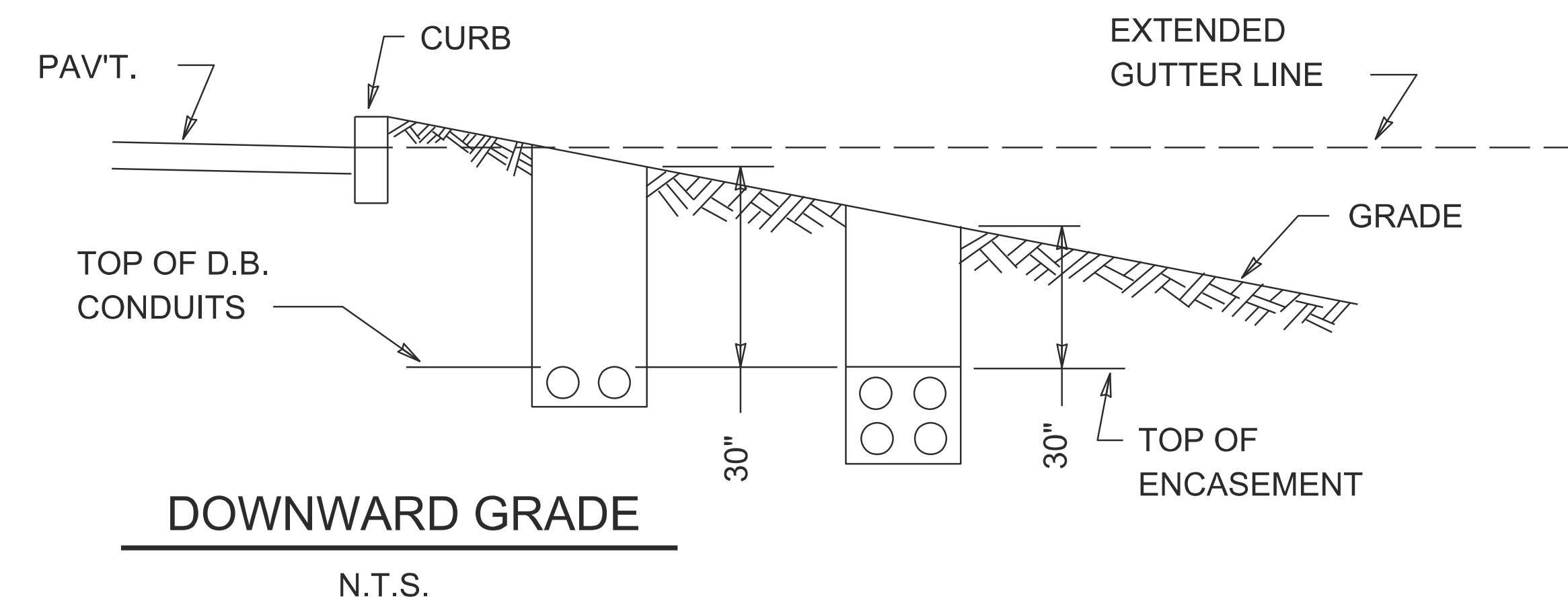
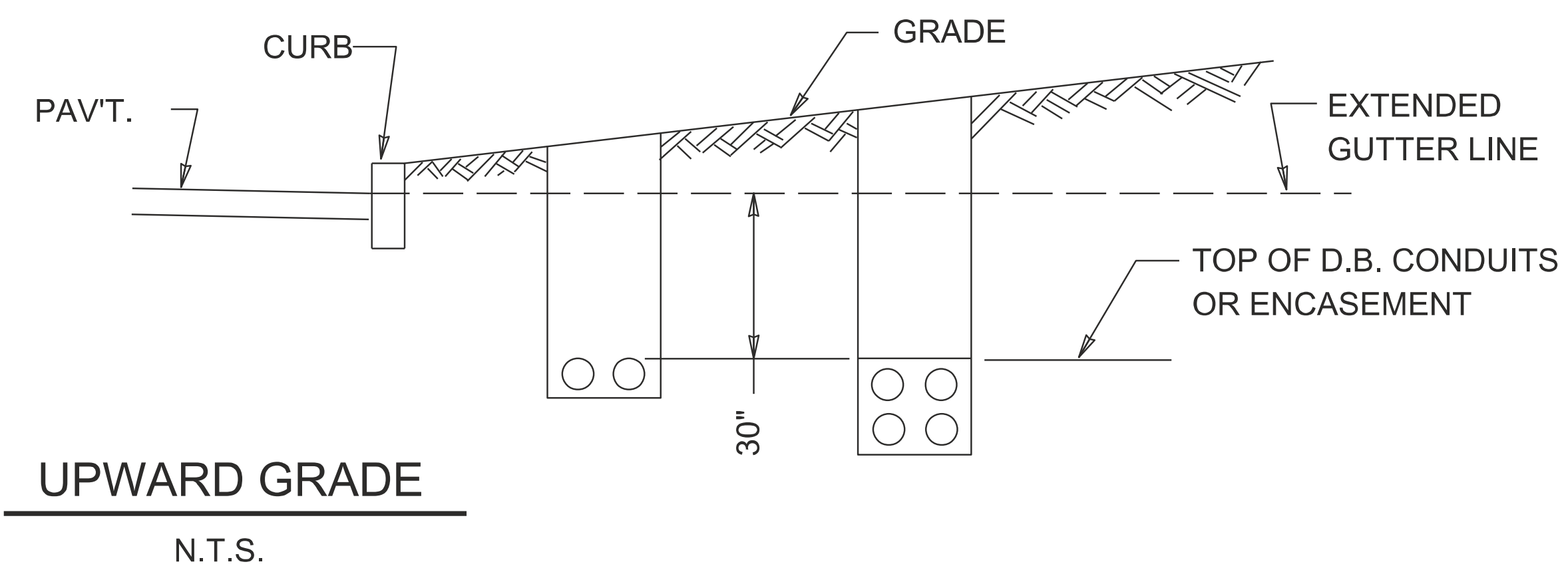


4 - 5" CONDUITS



7-2.5" CONDUITS  
IN  
10" DIRECTIONAL BORE





PLA STREETLIGHTING	
MES JOB #:	N/A
DRAWN BY:	RYAN JALYNSKI
PLOT SCALE:	NOT TO SCALE
CHECKED BY:	ANURAG
PLOT DATE:	2/19/2020
DATE:	2/19/2020



UNDERGROUND STRUCTURES DETAILS
STANDARD DETAIL
CITY OF DETROIT
WAYNE COUNTY, MI

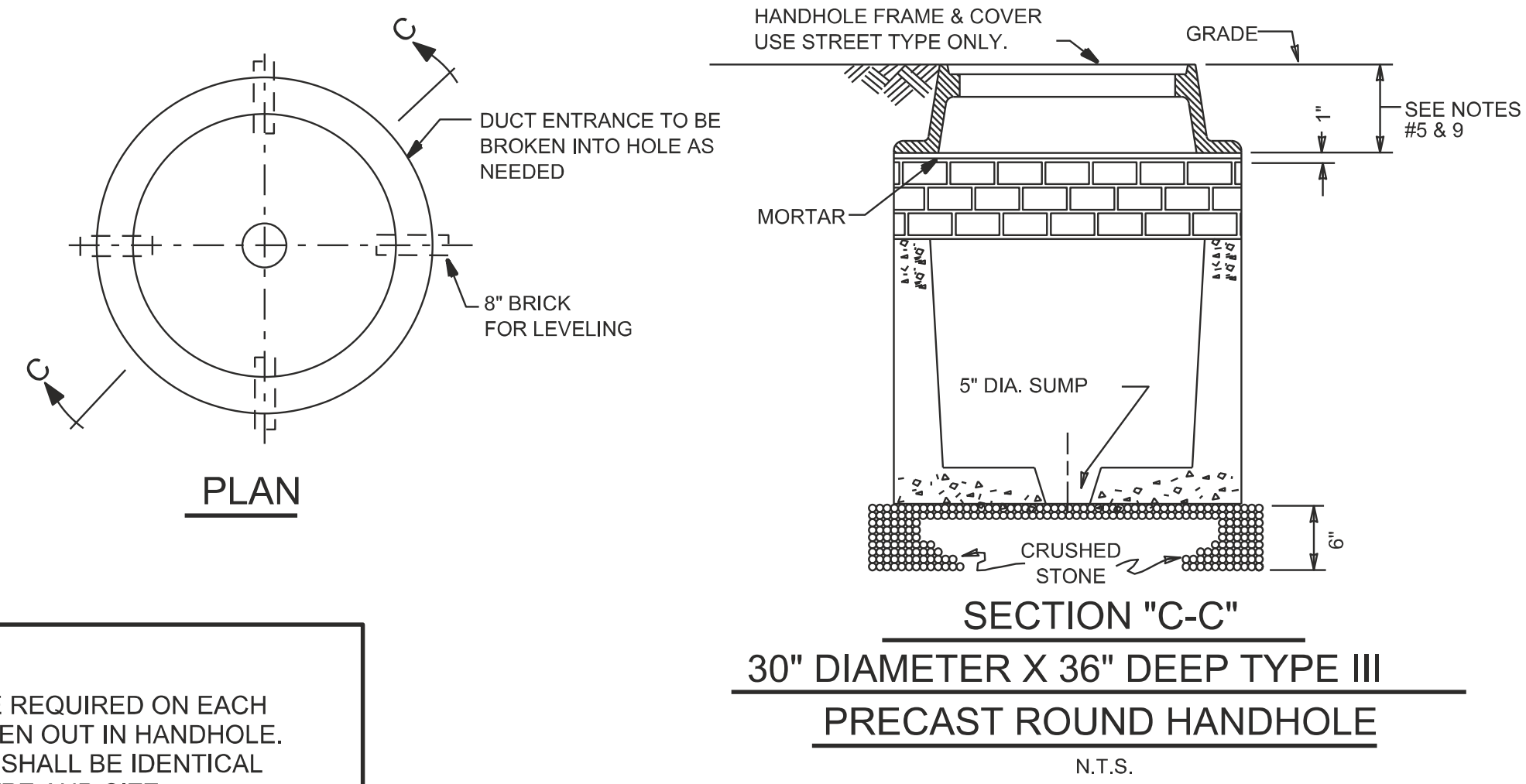
GRAPHIC SCALE  
NOT TO SCALE



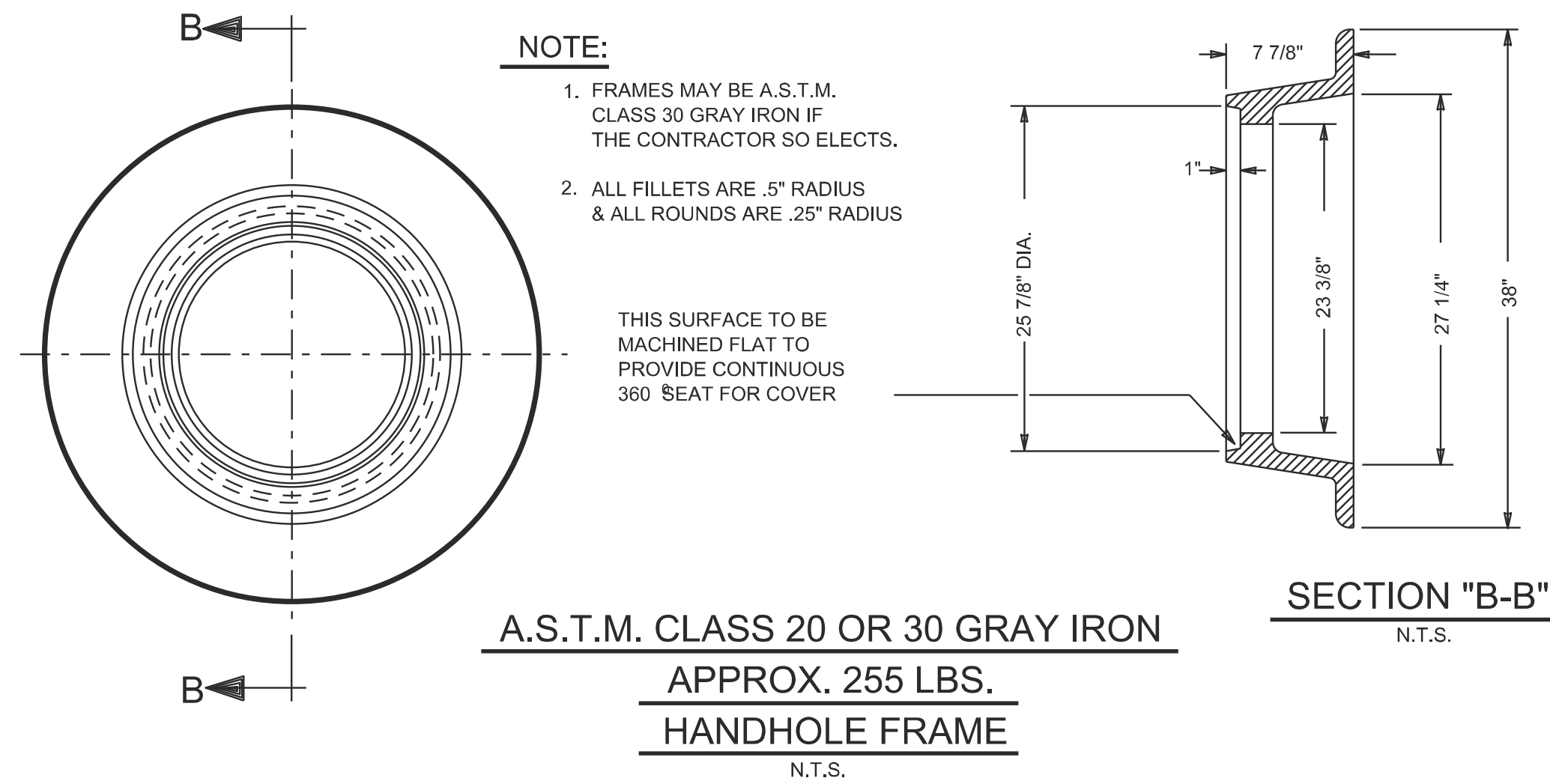
SHEET INFORMATION	
<b>DT-15.3</b>	
TOTAL SHEETS	SHEET NO.
06	03



## ROUND PRECAST HANDHOLE DETAILS

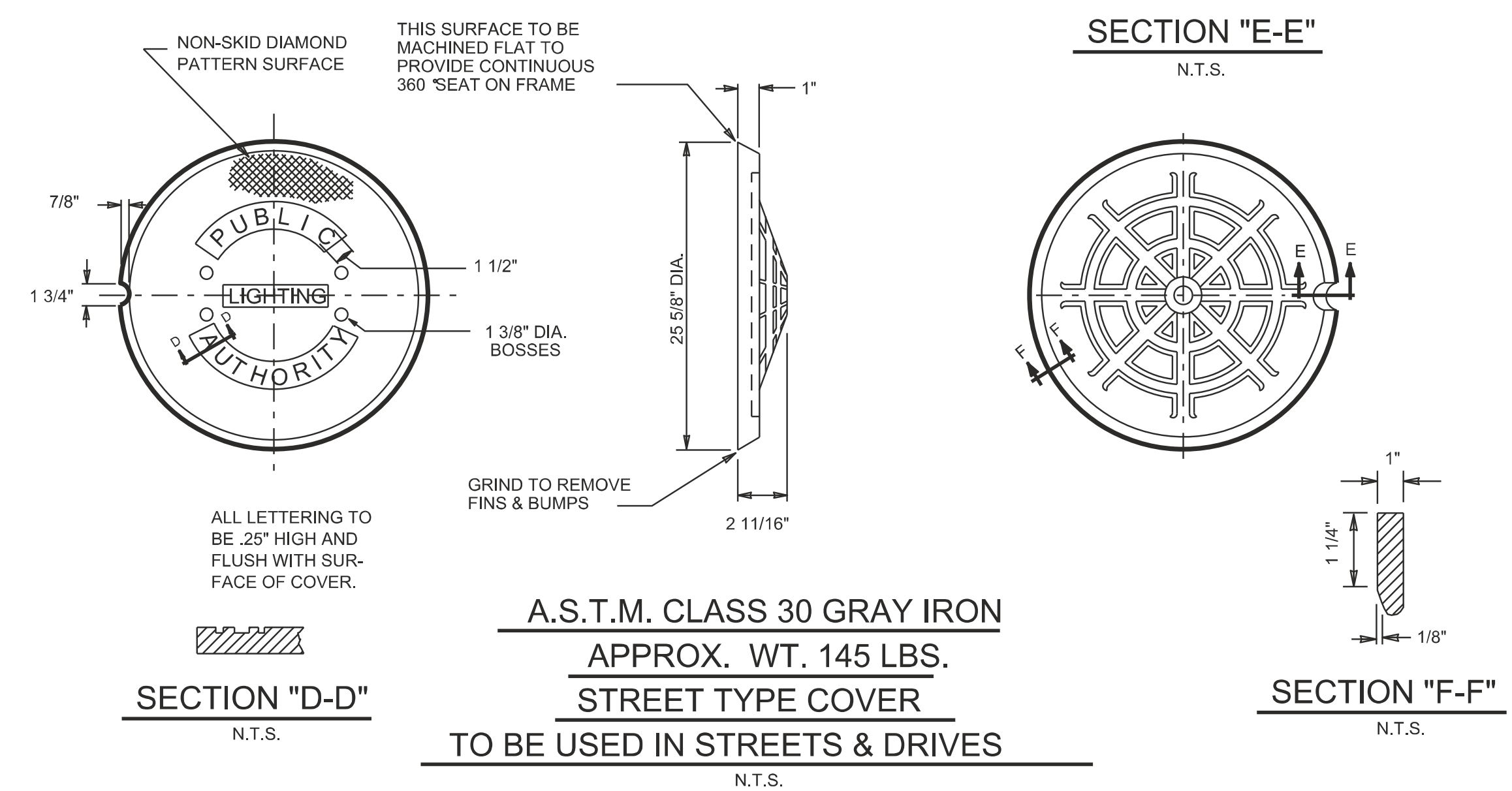


**NOTE:**  
 BELL ENDS ARE REQUIRED ON EACH CONDUIT BROKEN OUT IN HANDHOLE. TYPE AND SIZE SHALL BE IDENTICAL TO CONDUIT TYPE AND SIZE.

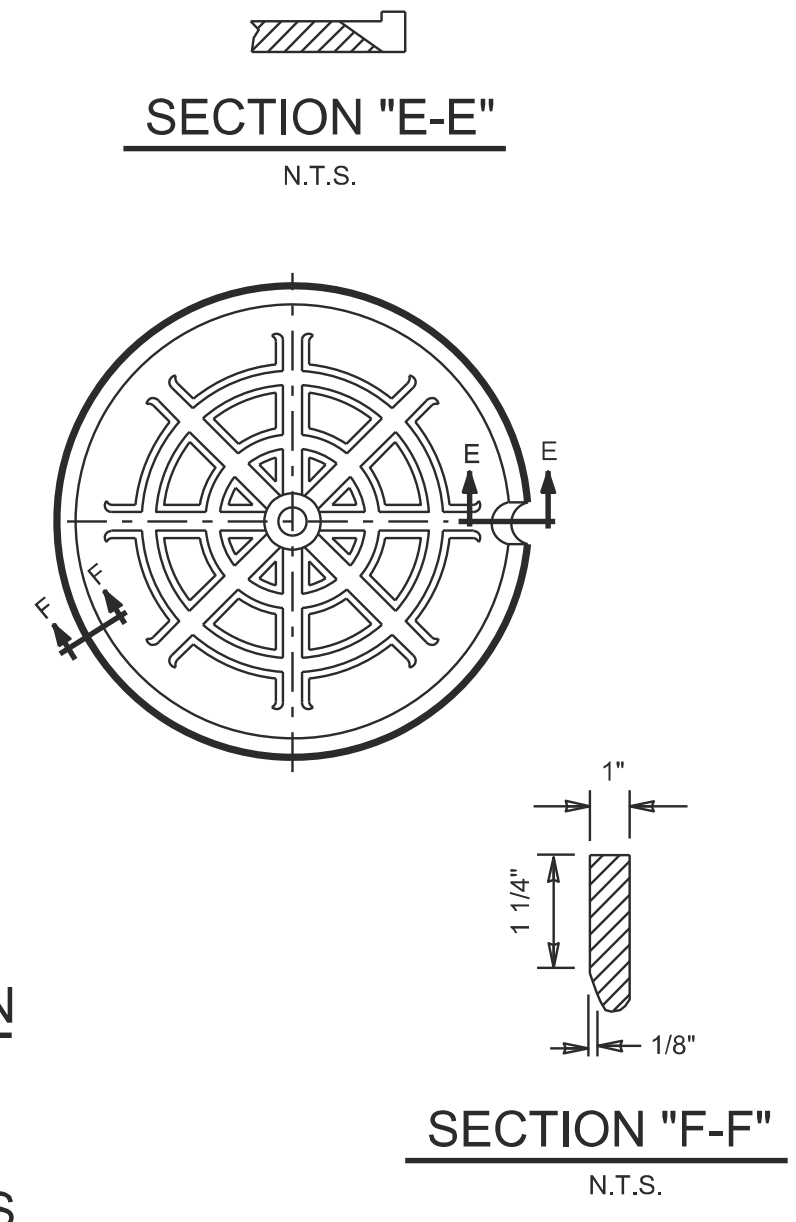


**NOTE:**  
 1. FRAMES MAY BE A.S.T.M. CLASS 30 GRAY IRON IF THE CONTRACTOR SO ELECTS.  
 2. ALL FILLETS ARE .5\"/>

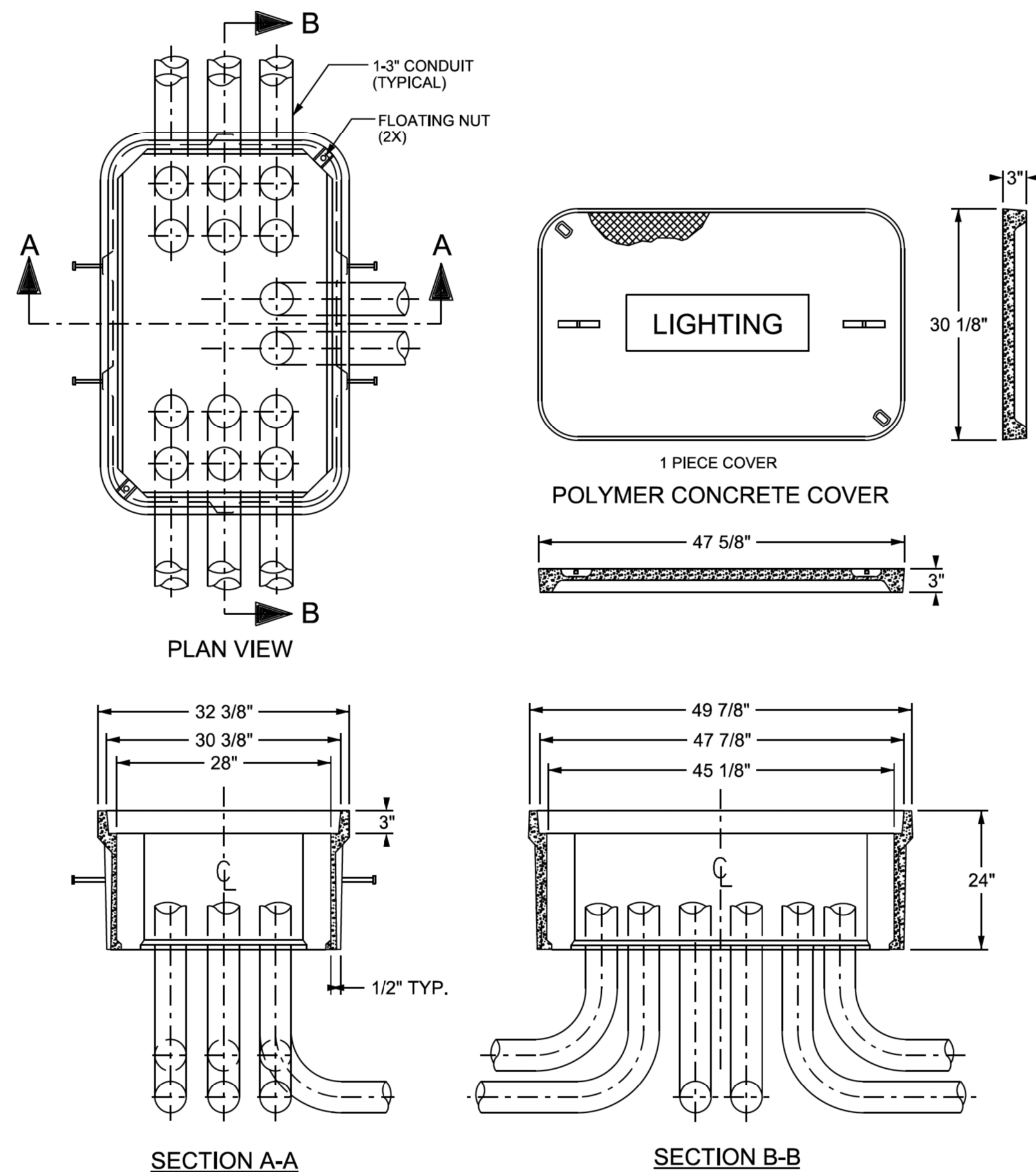
**A.S.T.M. CLASS 20 OR 30 GRAY IRON**  
**APPROX. 255 LBS.**  
**HANDHOLE FRAME**  
 N.T.S.



**A.S.T.M. CLASS 30 GRAY IRON**  
**APPROX. WT. 145 LBS.**  
**STREET TYPE COVER**  
**TO BE USED IN STREETS & DRIVES**  
 N.T.S.



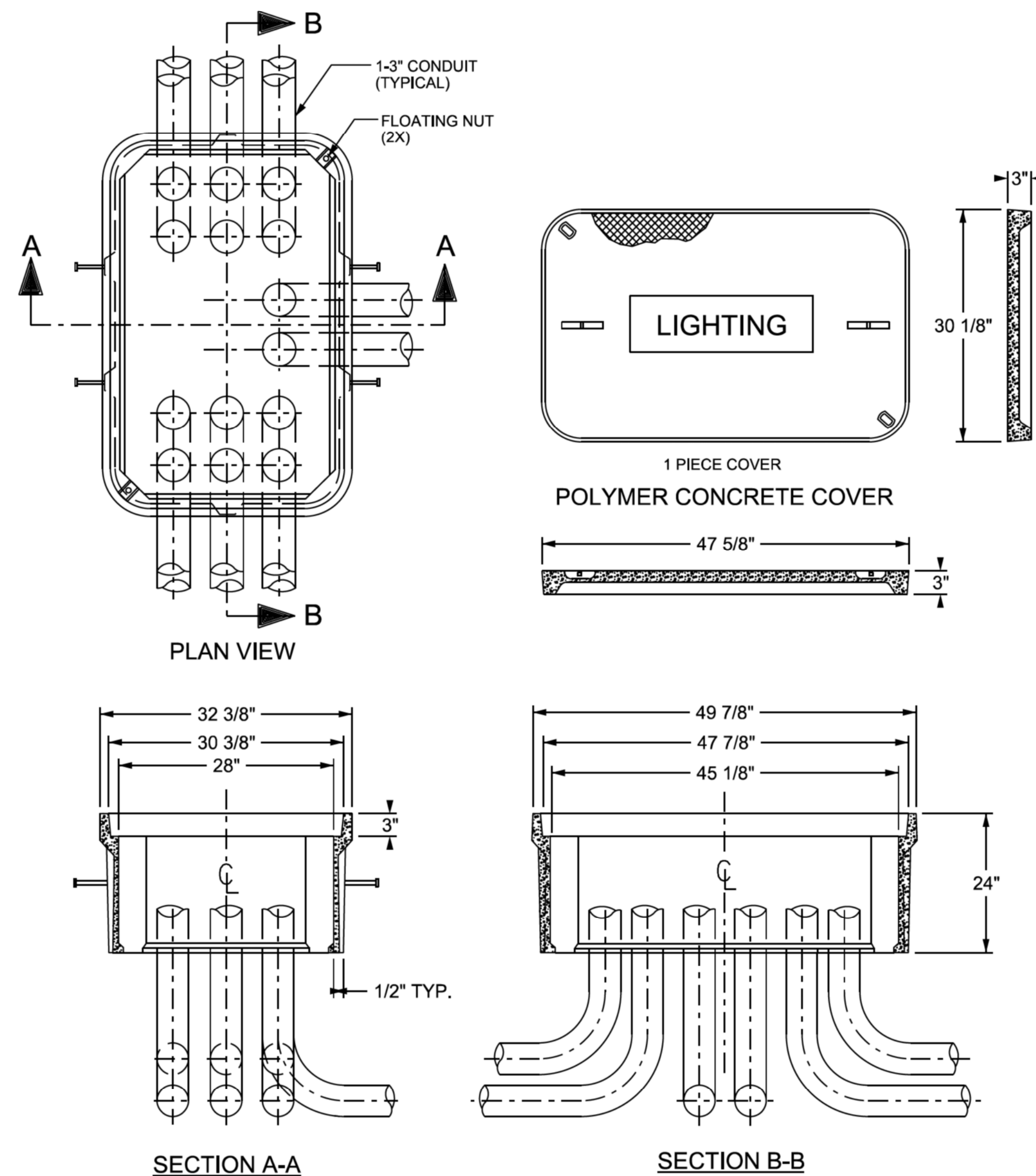
POLYMER CONCRETE MANHOLE ASSEMBLY  
30" X 48" X 24" DEEP



ASSEMBLY TO HAVE AN OPEN BOTTOM  
LOAD RATING: ANSI TIER 15/22 - 20K POUNDS

NOT TO SCALE

POLYMER CONCRETE MANHOLE ASSEMBLY  
30" X 48" X 24" DEEP



ASSEMBLY TO HAVE AN OPEN BOTTOM  
LOAD RATING: ANSI TIER 15/22 - 20K POUNDS

NOT TO SCALE



# POLYMER CONCRETE STRUCTURE INSTALLATION

