

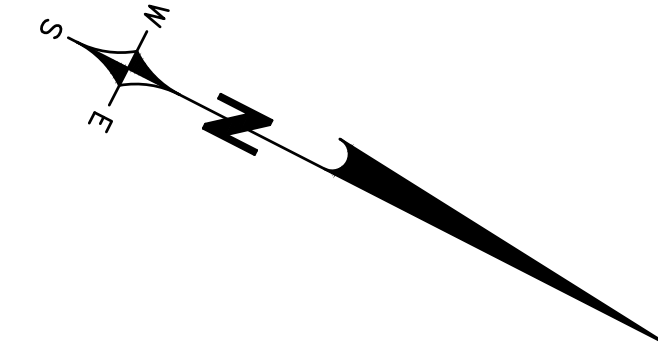
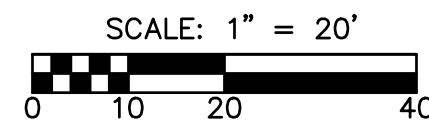
UTILITY CONTACTS
(PER MISS DIG DESIGN TICKET #2025040904418) DATED 4-23-25:

IN COMPLIANCE WITH PUBLIC ACT 53 OF THE STATE OF MICHIGAN (EFFECTIVE AUGUST 1, 1974), THE CONTRACTOR SHALL NOTIFY IN ADVANCE OF CONSTRUCTION ALL PUBLIC AND PRIVATE OWNERS HAVING EXISTING FACILITIES IN OR NEAR THE IMMEDIATE WORKING AREA. FOR CONVENIENCE, THE KNOWN UTILITY OWNERS ARE LISTED ON THIS DRAWING. THIS LISTING DOES NOT, HOWEVER, RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF VERIFYING UTILITY LOCATIONS AND NOTIFYING ALL UTILITY OWNERS AND MISS-DIG (PHONE 1-800-482-7171).

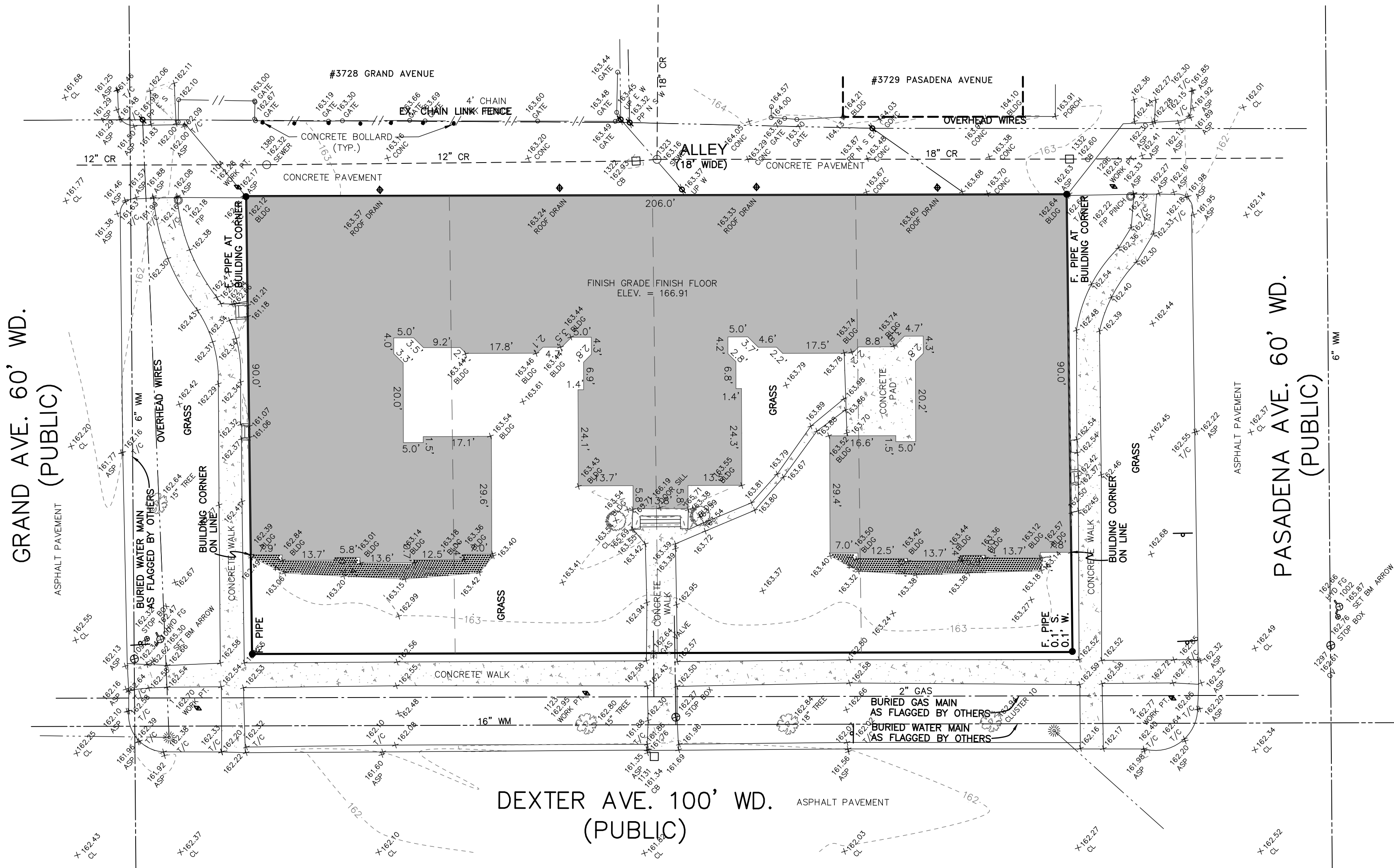
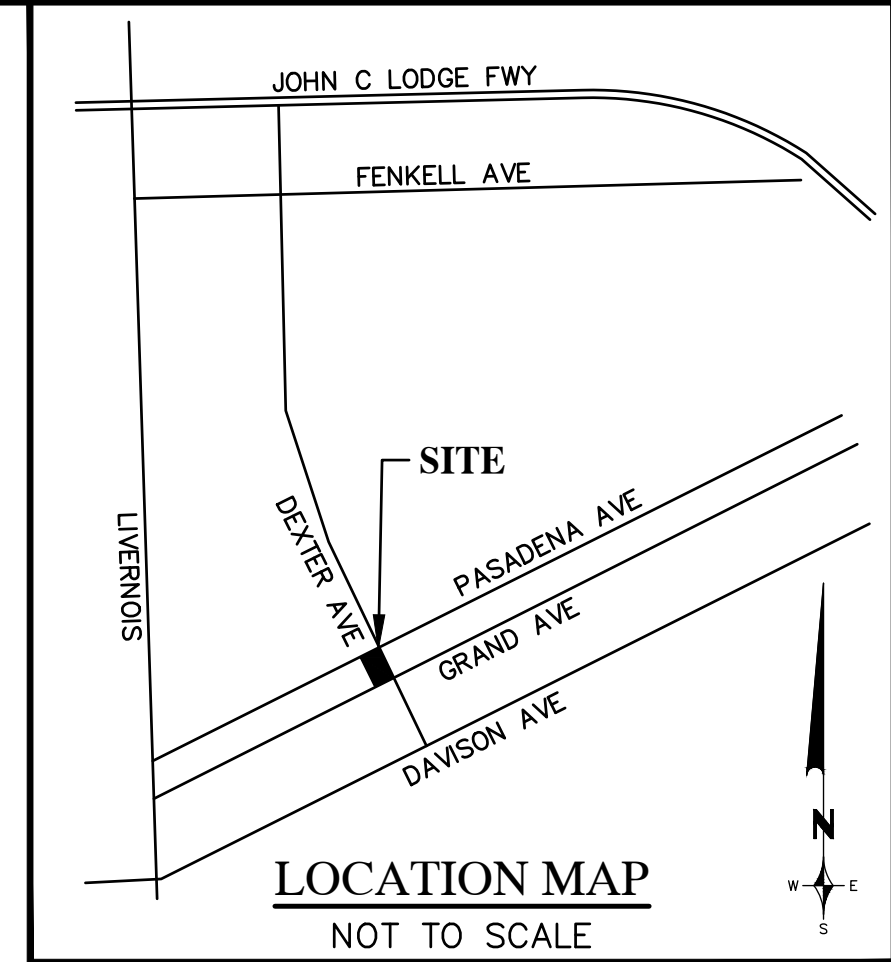
| | |
|-------------------------------|--------------|
| 123.NET FIBER | 248-431-4584 |
| ATT TELEPHONE | 616-881-2268 |
| CITY OF DETROIT POTABLE WATER | 313-663-0354 |
| CITY OF DETROIT SAN/STM | 313-663-0354 |
| DETROIT LIGHTING ELECTRIC | 313-367-5130 |
| DTE ENERGY ELECTRIC | 313-407-5364 |
| DTE ENERGY GAS | 248-318-7839 |
| WAYNE CO. DPS LAND USE | 734-595-6504 |

NOTE:

THE ABOVE LISTING IS PROVIDED FOR CONVENIENCE ONLY. IT DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF VERIFYING UTILITY LOCATIONS AND NOTIFYING ALL UTILITY OWNERS AND MISSDIG.



| LEGEND | | R.O.W. | |
|---------|-----------------|--------|----------------|
| --- | BOUNDARY LINE | --- | RIGHT OF WAY |
| - - - - | PARCEL LINE | ○ | MANHOLE |
| - - - - | EASEMENTS | □ | CATCH BASIN |
| - - - - | FENCE LINE | ○ | ROOF DRAIN |
| - - - - | SANITARY SEWER | ⊗ | GATE VALVE |
| - - - - | STORM SEWER | ⊕ | HYDRANT |
| - - - - | WATER MAIN | ⊖ | WATER SHUT-OFF |
| - - - - | GAS MAIN | ⊙ | UTILITY POLE |
| - - - - | ELECTRIC CABLE | ⊗ | LIGHT POLE |
| - - - - | CONTOUR MAJOR | ⊕ | SIGN |
| - - - - | CONTOUR MINOR | ⊖ | TREE |
| ○ | FIP, SCI | ASP | TOP OF ASPHALT |
| ○ | WORK POINT | T/C | TOP OF CURB |
| ○ | SET CAPPED IRON | CL | CENTERLINE |
| ○ | FIP | + | SPOT ELEVATION |
| ○ | FOUND IRON PIPE | | |
| M. | MEASURED | | |
| R. | RECORDED | | |



CONTROL POINTS:

| NO. | NORTHING | EASTING | ELEV. | DESC. |
|------|-------------|---------------|--------|--------------|
| 1 | 327291.1290 | 13456841.1020 | 162.70 | WP SCI |
| 2 | 327507.8000 | 13456727.3510 | 162.77 | WP SCI |
| 1104 | 327240.4600 | 13456720.0290 | 162.28 | WP PK |
| 1123 | 327376.2260 | 13456793.3140 | 162.95 | WP HUB |
| 1296 | 327436.0790 | 13456619.6920 | 162.63 | WP X IN ASPH |

BENCHMARKS: (CITY OF DETROIT DATUM)

| NO. | NORTHING | EASTING | ELEV. | DESC. |
|------|-------------|---------------|--------|------------------|
| 1001 | 327275.0360 | 13456829.9840 | 165.30 | ARROW ON HYDRANT |
| 1002 | 327534.6710 | 13456687.6330 | 165.87 | ARROW ON HYDRANT |

STRUCTURE TABLE:

| POINT | DESCRIPTION | RIM | PIPE SIZE | DIRECTION | INVERT |
|-------|-------------|--------|---------------|-----------|--------|
| 1092 | GATE VALVE | 162.34 | FULL OF WATER | | |
| 1131 | CATCH BASIN | 161.34 | T/WATER | | 157.86 |
| 1297 | GATE VALVE | 162.61 | FULL OF WATER | | |
| 1322 | CATCH BASIN | 162.93 | T/WATER | | 159.27 |
| 1323 | SEWER MH | 163.16 | 12" | S | 159.96 |
| | | | 18" | W | 151.44 |
| | | | 12" | S | 151.53 |
| | | | 18" | N | 151.29 |
| 1332 | CATCH BASIN | 162.60 | T/WATER | | 159.07 |
| 1380 | SEWER MH | 162.32 | 12" | S | 153.57 |
| | | | 12" | N | 152.12 |
| | | | 12" | S | 157.73 |

NOTE:

DWSD HAS NO AVAILABLE RECORDS FOR THE SEWER IN THE ALLEY WEST OF DEXTER AVE. BETWEEN GRAND AVE. AND PASADENA AVE.

UTILITY NOTES:

1. SOME EXISTING CATCH BASINS (SHOWN WITHOUT CONNECTIONS TO EXISTING SEWERS) ARE OLD STRUCTURES WITH TRAPS - THE LOCATIONS OF WHERE THEY ARE CONNECTING TO THE EXISTING SEWERS ARE NOT KNOWN.

NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. 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. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENT OF ALL STRUCTURES, KNOWN OR UNKNOWN, SHOWN OR UNSHOWN, LOCATED WITHIN THE LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE IF ANY SUCH STRUCTURES ARE IDENTIFIED. ALL COSTS ASSOCIATED WITH LOCATING AND ADJUSTING THESE STRUCTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. DESIGN PROFESSIONAL AND CLIENT WARRANT THAT IN TRANSMITTING INSTRUMENTS OF SERVICE, OR ANY OTHER INFORMATION, THE TRANSMITTING PARTY IS THE COPYRIGHT OWNER OF SUCH INFORMATION OR HAS PERMISSION FROM THE COPYRIGHT OWNER TO TRANSMIT SUCH INFORMATION FOR ITS USE OF THE PROJECT. IF THE CLIENT AND DESIGN PROFESSIONAL INTEND TO TRANSMIT INSTRUMENTS OF SERVICE OR ANY OTHER INFORMATION OR DOCUMENTATION IN DIGITAL FORM, THEY SHALL ENDEAVOR TO ESTABLISH NECESSARY PROTOCOLS GOVERNING SUCH TRANSMISSIONS.



Julian J. Wargo, Jr.

| ISSUED FOR | DATE | ISSUED FOR | DATE | ISSUED FOR | DATE | ISSUED FOR | DATE | ISSUED FOR | DATE |
|------------|---------|------------|------|------------|------|------------|------|------------|------|
| PERMIT | 5-9-25 | | | | | | | | |
| BIDS | 6-24-25 | | | | | | | | |

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DETROIT, MI 48234

TOPOGRAPHIC SURVEY
CABOT APARTMENTS
DETROIT WAYNE COUNTY MICHIGAN

| DATE | SCALE | HOR: 1" = 20' | VER: 1" = N/A |
|-------------|-------|---------------|---------------|
| 5-9-25 | | | |
| DESIGNED BY | JLW | JOB NO. | 25114 |
| DRAWN BY | PTG | SHEET | C.101 |

WATER MAIN QUANTITIES:

| | |
|---|-------|
| 3" DIP CL52 DOMESTIC WATER SERVICE | 52 LF |
| CONNECT TO EX. 4" WATER SERVICE | 1 EA |
| ABANDON EX. 4" WATER SERVICE | 52 LF |
| 8" DIP CL52 FIRE SUPPRESSION SERVICE | 41 LF |
| 16"x16"x8" TAPPING SLEEVE VALVE IN WELL | 1 EA |

SANITARY SEWER QUANTITIES:

| | |
|--|------|
| 8" PVC SDR 23.5/PVC SCH 40 PIPE SAN. SERVICE | 9 LF |
| 8" CLEANOUT | 1 EA |
| CONNECT TO EX. 12" SEWER (DROP CONNECTION) | 1 EA |

NOTE:
 QUANTITIES SHOWN ABOVE ARE FOR PERMIT PURPOSES ONLY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING THE ACTUAL SCOPE OF WORK IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS.

UTILITY NOTES:

- REFER TO ARCHITECTURAL PLANS TO COORDINATE ALL BUILDING LEADS
- ALL TRENCHES WITHIN A ONE ON ONE SLOPE OF PAVEMENT SHALL BE BACKFILLED WITH SAND (MDOT CLASS II MINIMUM) AND MECHANICALLY COMPACTED IN NOT MORE THAN 9" LAYER TO 95% MAXIMUM DRY DENSITY PER MODIFIED PROCTER COMPACTION TEST ASTM D-1557. COMPACTED SAND BACKFILL SHALL ALSO BE PROVIDED FOR ALL SEWER TRENCHES LOCATED UNDER, OR WITHIN, THREE FEET OF PAVEMENT.
- A MINIMUM VERTICAL CLEARANCE OF 18 INCHES IS REQUIRED AT UTILITY CROSSINGS (MEASURED FROM THE OUTSIDE OF PIPE TO THE OUTSIDE OF PIPE). POSITIVE PROVISIONS SHALL BE MADE TO ENSURE THAT ALL UTILITY TRENCHES ARE FREE DRAINING DURING ALL PHASES OF CONSTRUCTION.
- ROADWAY, DRIVEWAY AND PARKING AREA CROSSINGS SHALL BE TEMPORARILY CONDITIONED IMMEDIATELY AFTER CROSSING BY PLACING 8" OF MDOT 22A GRAVEL OR SLAG AGGREGATE, AND SHALL BE MAINTAINED IN GOOD, DUST-FREE CONDITION UNTIL PAVEMENT RESTORATION IS MADE.
- THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF ALL UTILITY LINES AND STRUCTURES, AS OUTLINED ON THE SITE PREPARATION PLAN, WITH THE INSTALLATION OF UTILITY IMPROVEMENTS.
- NO CONNECTION MAY BE MADE TO ANY EXISTING WATER MAIN UNTIL THE NEW MAIN HAS PASSED ALL PRESSURE AND BACTERIOLOGICAL TESTING.
- WATERMAIN SHALL HAVE A MINIMUM OF 5.5 FEET OF COVER.
- ALL SANITARY AND STORM DRAINAGE AND WATER SERVICES WITHIN PRIVATE PROPERTY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MICHIGAN PLUMBING CODE (2015).
- ALL SANITARY AND STORM DRAINAGE AND WATER INSTALLED WITHIN THE ROW SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETROIT WATER AND SEWERAGE DEPARTMENT (DWS) STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING PUBLIC OR PRIVATE UTILITIES. ANY DAMAGE SHALL BE REPAIRED AT NO COST TO THE OWNER OR THE CITY OF DETROIT.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED BY THE CITY OF DETROIT PRIOR TO CONSTRUCTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO PAY ALL FEES ASSOCIATED WITH THE WORK TO BE PERFORMED FOR STORM SEWER, SANITARY SEWER, WATER AND GAS CONNECTIONS, STREET CUT PERMIT, ETC AS REQUIRED BY GOVERNING AGENCIES.
- THE CONTRACTOR SHALL INSPECT AND CLEAN ALL NEW MANHOLES, CATCH BASINS, DRAIN INLETS AND CLEANOUTS SHALL BE INSPECTED AND CLEANED IMMEDIATELY PRIOR TO THE SUBSTANTIAL COMPLETION OF THE PROJECT.
- ELECTRIC, GAS, CABLE AND TELEPHONE SERVICES TO THE BUILDINGS WILL BE COORDINATED WITH UTILITY OWNERS.
- PROPOSED TAP OF EXISTING WATERMAIN FOR NEW CONNECTION WILL BE PER DWS STANDARDS AND SPECIFICATIONS.
- PROPOSED CONNECTION TO DWS PUBLIC SEWER MANHOLE WITH EXTERIOR DROP CONNECTION PER DWS STANDARDS AND SPECIFICATIONS.
- THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH THE CURRENT DWS STANDARD SPECIFICATIONS AND DETAILS.
- PROPOSED CONNECTION TO DWS PUBLIC SEWER MANHOLE FOR STORM OUTLET PER DWS STANDARDS AND SPECIFICATIONS.
- WATER LEAD CROSSING PER DWS STANDARDS AND SPECIFICATIONS.
- REFER TO ARCHITECT'S PLANS FOR EXACT LOCATION OF ALL BUILDING SERVICES (SANITARY WATER, GAS, ELECTRICAL, CTV, FIBER) AND ROOF DOWNSPOUTS.
- NEW ROOF DOWNSPOUTS SHALL EXTEND A MIN. OF 4'-FEET AWAY FROM THE BUILDING TO DISCHARGE ONTO GRADE AND SHALL NOT BE CONNECTED TO THE SEWER. PLACE A SPLASH BLOCK AT THE BOTTOM OF THE DOWNSPOUT/ELBOW FOR EROSION CONTROL.
- RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION OR BETTER CONDITION.

CONNECTION NOTE:

CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT ALL PROPOSED CONNECTIONS AND CROSSINGS AND SUPPLY ELEVATIONS AND LOCATIONS TO THE DESIGN ENGINEER TO CONFIRM OR ADJUST DESIGN.

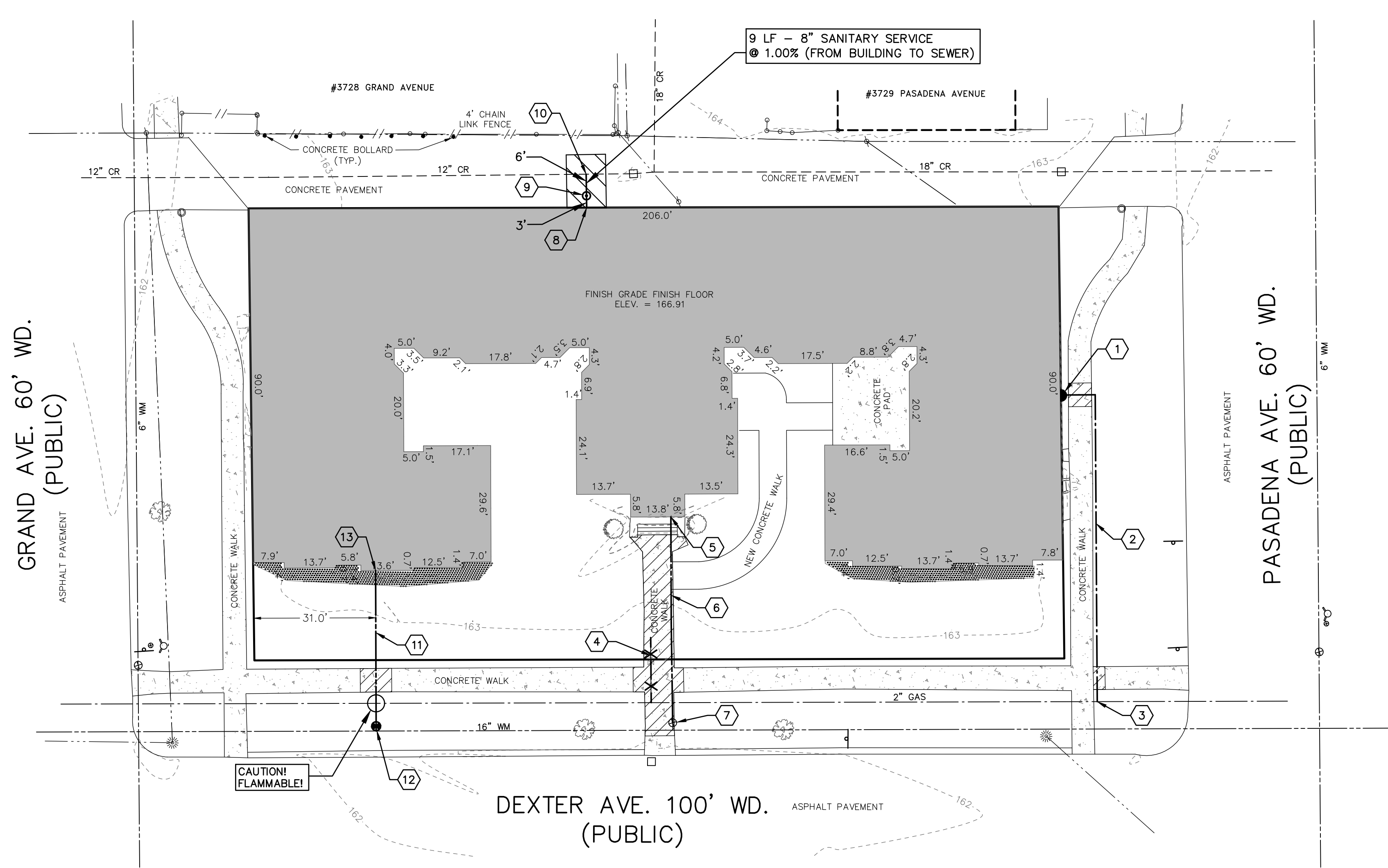
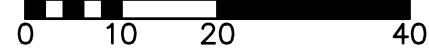
DWS NOTE:

BEFORE TAPPING ANY DWS-OWNED ASSET, THE CONTRACTOR SHALL OBTAIN A TAP PERMIT FROM DWS.

CAUTIONARY NOTES:

- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. 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. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.
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SCALE: 1" = 20'



UTILITY LEGEND

| EXISTING | PROPOSED |
|------------------|------------------|
| ○ MANHOLE | ● MANHOLE |
| □ CATCH BASIN | ■ CATCH BASIN |
| ⊙ CLEANOUT | ⊙ CLEANOUT |
| ⊕ ROOF DRAIN | ⊕ TREE REMOVAL |
| ⊗ GATE VALVE | — SANITARY SEWER |
| ⊕ HYDRANT | — STORM SEWER |
| ⊕ WATER SHUT-OFF | — WATER MAIN |
| ⊕ UTILITY POLE | — GAS MAIN |
| ⊕ GUY ANCHOR | — WATER MAIN |
| ⊕ LIGHT POLE | — GAS MAIN |
| ⊕ SIGN | — ELECTRIC CABLE |
| ⊕ TREE | |

NOTES:

- REFER TO MEP PLANS FOR EXACT LOCATION AND SIZES OF ALL BUILDING SERVICES.
- ALL PROPOSED STORM SEWER AND SANITARY SEWER WILL BE PRIVATE.
- ALL PROPOSED DOMESTIC WATER AND FIRE SUPPRESSION WILL BE PRIVATE LINES.
- REFER TO ARCHITECTURAL SITE PLAN SHEET A.S.101 FOR ALL DIMENSIONS.

STANDARD DETAIL NOTE:

THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH THE CURRENT DWS STANDARD SPECIFICATIONS AND DETAILS.

UTILITY PIPE MATERIALS:

- SANITARY LEAD - 8" PVC SDR 23.5 OR PVC SCH 40 OR APPROVED EQUAL.
- WATER LEAD (3" AND LARGER) - DIP, CL52, POLYETHYLENE WRAPPED.

REPAIRS LEGEND:

- Remove and replace concrete walk joint-to-joint for installation of new utility - exact limits to be determined in the field by the contractor.
- ABANDON EXISTING UTILITY LINE.
- REMOVE AND REPLACE CONCRETE PAVEMENT FOR INSTALLATION OF NEW UTILITY - EXACT LIMITS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR - SEE C.E.D DETAIL.

REPAIRS KEY:

- GAS METER - SEE SHEET M.101 FOR DETAIL.
- APPROXIMATE ROUTE OF NEW GAS SERVICE (EXACT ROUTE TO BE DETERMINED BY UTILITY PROVIDER).
- CONNECT TO EXISTING 2" GAS MAIN - COORDINATE WITH UTILITY PROVIDER.
- ABANDON EXISTING GAS SERVICE - COORDINATE WITH UTILITY PROVIDER.
- 3" DOMESTIC WATER SERVICE IE = 160.91 - SEE SHEET P.100 FOR DETAIL.
- REMOVE EXISTING 4" WATER SERVICE AND REPLACE WITH 52 LF - 3" DI CL52 WATER MAIN PIPE WITH POLYETHYLENE WRAP FROM BUILDING TO VALVE. (PRIVATE DOMESTIC SERVICE).
- EXISTING 4" GATE VALVE AND BOX TO REMAIN. CONNECT TO EXISTING 4" WATER SERVICE WITH 4"x3" REDUCER.
- 8" SANITARY SEWER SERVICE IE = 158.33 - SEE SHEET P.100 FOR DETAIL.
- 8" CLEANOUT RIM = 163.10 (MATCH EXISTING GROUND), IE = 158.30.
- CONNECT TO EXISTING 12" SEWER, 8" IE = 158.24, 12" IE = 151.55± (V.F.) - DROP CONNECTION REQUIRED.
- INSTALL 41 LF - 8" DI CL52 WATERMAIN PIPE WITH POLYETHYLENE WRAP FROM BUILDING TO EXISTING 16" WATERMAIN (PRIVATE PIPE SUPPRESSION SERVICE).
- CONNECT TO EXISTING WATERMAIN WITH 16"x16"x8" TAPPING SLEEVE VALVE IN WELL. SET RIM AT ELEV. 162.25 (MATCH EXISTING GROUND).
- 8" FIRE SUPPRESSION SERVICE - SEE MEP FOR DETAIL.



Julian J. Wargo, Jr.

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UTILITY PLAN
 CABOT APARTMENTS
 DETROIT WAYNE COUNTY MICHIGAN

| | | | |
|-------------|--------|---------|---------------|
| DATE | 5-9-25 | SCALE | HOR: 1" = 20' |
| DESIGNED BY | JW | VER: | 1" = N/A |
| DRAWN BY | PTG | JOB NO. | 25114 |
| FIELD BOOK | | SHEET | C.200 |

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GENERAL UTILITY NOTES:

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF DETROIT.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY AND/OR OBTAIN ANY INFORMATION NECESSARY REGARDING THE PRESENCE OF UNDERGROUND UTILITIES, WHICH MIGHT AFFECT THIS JOB.
- ALL TRENCHES UNDER OR WITHIN THREE (3) FEET OR THE FORTY-FIVE (45) DEGREE ZONE OF INFLUENCE LINE OF EXISTING AND/OR PROPOSED PAVEMENT, BUILDING PAD OR DRIVE APPROACH SHALL BE BACKFILLED WITH SAND COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF MAXIMUM UNIT WEIGHT (ASTM D-1557). ALL OTHER TRENCHES TO BE COMPACTED TO 90% OR BETTER.
- WHENEVER EXISTING MANHOLES OR SEWER PIPE ARE TO BE TAPPED, DRILL HOLES 4" CENTER TO CENTER, AROUND PERIPHERY OF OPENING TO CREATE A PLANE OF WEAKNESS JOINT BEFORE BREAKING SECTION OUT.
- EXACT GRADES AND DEPTHS OF UTILITIES ARE TO BE CHECKED CLOSELY PRIOR TO INSTALLATION.
- REFER TO CITY OF DETROIT STANDARD DETAIL SHEETS FOR ADDITIONAL INFORMATION.

CONTRACTOR'S RESPONSIBILITIES:

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING SURVEY INFORMATION INCLUDING UTILITY SYSTEMS BEFORE ANY DEMOLITION OR CONSTRUCTION WORK OCCURS. ANY DISCREPANCIES WITH THE SURVEY INFORMATION SHALL BE REPORTED TO THE CITY'S REPRESENTATIVE IMMEDIATELY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR COST INCURRED DUE TO DAMAGE AND REPLACEMENT OF SAID UTILITIES.
- ALL EXISTING CONDITIONS DESIGNATED TO REMAIN WITHIN THE NEW CONSTRUCTION AREA (INCLUDING MAILBOXES) SHALL BE PROPERLY AND ADEQUATELY PROTECTED FROM DAMAGE DURING CONSTRUCTION OPERATIONS AND THROUGHOUT CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESTORE TO THE ORIGINAL CONDITION ANY OF THESE EXISTING ITEMS THAT ARE DAMAGED OR DISTURBED IN ANY WAY.
- CONTRACTOR SHALL LIMIT ALL WORK AND DISTURBANCE TO WITHIN DESIGNATED PROJECT AREAS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESTORE TO THE ORIGINAL CONDITION ANY DAMAGE OR DISTURBANCE OUTSIDE THESE LIMITS.
- STREETS, SIDEWALKS AND ADJACENT PROPERTY SHALL BE PROTECTED THROUGHOUT THE WORK AS REQUIRED BY LOCAL CODES AND REGULATIONS AND APPROVED BY THE CITY.
- ALL MATERIAL SPECIFIED TO BE REMOVED BECOMES THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF-SITE PER APPLICABLE CODES AND REGULATIONS EXCEPT THAT PRIOR TO DISPOSAL OF ANY CASTINGS, SIGNS, OR POSTS THEY SHALL BE MADE AVAILABLE TO THE CITY OF DEARBORN FOR THE CITY'S SALVAGE YARD.
- DURING DEMOLITION OPERATIONS EVERY EFFORT SHALL BE MADE TO CONTROL DUST, PER CITY REQUIREMENTS.
- DURING CONSTRUCTION THE CONTRACTOR SHALL PROVIDE WATCHMEN AND FLAGMEN AS MAY BE REQUIRED FOR THE SAFETY AND CONVENIENCE OF THE PUBLIC AND SHALL FURNISH ALL BARRICADES, SIGNS, AND LIGHTS NECESSARY TO PROTECT THE PUBLIC. TRAFFIC SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE AUTHORIZED BY THE CITY OF DEARBORN. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE MICHIGAN MANUAL OF TRAFFIC CONTROL DEVICES, CURRENT EDITION BY THE MICHIGAN DEPARTMENT OF TRANSPORTATION.

DAMAGE TO PRIVATE PROPERTY:

ALL SIDEWALKS, DRIVEWAYS, LAWNS, FENCING, TREES, SHRUBS, SPRINKLERS, LANDSCAPING, ETC., THAT ARE DAMAGED DURING CONSTRUCTION MUST BE REPAIRED OR REPLACED, IN KIND OR BETTER, BY THE CONTRACTOR. ALL STREET SIGNS, MAIL BOXES, ETC., REMOVED SHALL BE REPLACED IN KIND OR BETTER, BY THE CONTRACTOR. ALL THE REPAIRS OR REPLACEMENTS DUE TO THE CONTRACTOR'S WORK ARE TO BE INCLUDED IN THE CONTRACT PRICE(S) AND SHALL NOT BE AN EXTRA TO THE CONTRACT.

THE CONTRACTOR SHALL SECURE PERMISSION IN WRITING FROM ADJACENT PROPERTY OWNERS PRIOR TO ENTERING UPON ANY ADJOINING PROPERTIES, UNLESS OFFSITE PERMITS HAVE ALREADY BEEN OBTAINED BY THE OWNER AND ARE PART OF THE CONTRACT DOCUMENTS.

DEWATERING OF TRENCH AND EXCAVATIONS:

IF NOT SPECIFICALLY PROVIDED FOR IN THE CONSTRUCTION DESIGN DOCUMENTS, THE DESIGN OR QUALITATIVE ANALYSIS OF GROUND WATER DEWATERING SYSTEMS IS BEYOND THE SCOPE OF DESIGN FOR THESE DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING AND PROVIDING APPROPRIATE EXCAVATION DEWATERING SYSTEMS FOR USE DURING CONSTRUCTION.

THE DEWATERING METHOD SELECTED BY THE CONTRACTOR WILL NOT ADVERSELY AFFECT ADJACENT PAVEMENTS OR STRUCTURES PRIOR TO BEGINNING DEWATERING CONDITIONS. MEANS AND METHODS OF DEWATERING ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF DEWATERING WILL BE CONSIDERED INCLUDED IN THE WORK OF CONSTRUCTING THE UNDERGROUND UTILITIES UNLESS SPECIFICALLY INDICATED OTHERWISE.

BY-PASS PUMPING:

FROM TIME TO TIME IT MAY BE NECESSARY FOR THE CONTRACTOR TO BY-PASS PUMP TO COMPLETE THE WORK INDICATED ON THE PLANS. THE COST OF BY-PASS PUMPING, THE METHODS, EQUIPMENT AND MEANS OF PROVIDING THAT WORK ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CONSIDERED PART OF THE WORK WHETHER SPECIFICALLY CALLED OUT ON THE PLANS OR NOT.

PAVEMENT REMOVAL:

THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE THICKNESS OF THE PAVEMENT REMOVAL. PAVEMENT CORE SAMPLES ARE FOR INFORMATIONAL PURPOSES ONLY AS TO THE THICKNESS OF THE PAVEMENT AT THE LOCATION OF THE SAMPLE. THE OWNER AND ENGINEER MAKE NO REPRESENTATION, WARRANTY OR GUARANTEE THAT THE SAMPLES ACCURATELY REFLECT THE PAVEMENT THICKNESS ON THE PROJECT.

STRUCTURE BACKFILL:

STRUCTURAL BACKFILL SHALL BE PLACED IN CONFORMANCE WITH THE PROJECT PLANS, SPECIFICATIONS OR AS REQUIRED BY THE COMMUNITY, GOVERNMENT AGENCY OR UTILITY THAT HAS JURISDICTION OVER THE WORK.

PUBLIC SIDEWALK REPAIR NOTES:

- ANY SIDEWALK THAT IS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED PER ADA GUIDELINES.
- SIDEWALK REMOVAL ADJACENT TO CURB RAMPS WILL NECESSITATE REPLACEMENT OF THE CURB RAMPS IF EXISTING RAMPS DO NOT MEET ADA GUIDELINES.
- ALL SIDEWALKS ARE TO BE KEPT AND MAINTAINED IN GOOD REPAIR BY THE OWNER OF THE LAND ADJACENT TO AND ABUTTING THE SAME.
- PRIOR TO ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY FOR THIS SITE, ALL EXISTING SIDEWALKS MUST BE REPAIRED TO CONFORM WITH CITY STANDARDS.
- ALL AREAS AND DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTORS ARE RESPONSIBLE FOR THEIR OWN MEASUREMENTS AND VERIFICATION OF ALL CONDITIONS.
- CONTRACTOR SHALL CHECK FIELD LAYOUT AND VERIFY ALL GRADES PRIOR TO INSTALLING SIDEWALKS. IF ANY ADJUSTMENT IS REQUIRED DUE TO DIFFERENT EXISTING GRADES FOUND IN THE FIELD, THE CONTRACTOR SHALL NOTIFY AND OBTAIN THE APPROVAL OF THE ENGINEER PRIOR TO PERFORMING THE WORK.
- THE AREAS ADJACENT TO THE SIDEWALK (BUFFER ZONE) SHALL BE BACKFILLED AND GRADED TO A MAXIMUM SLOPE OF 1V:4H (25%) TO BLEND TO EXISTING GROUND, WHERE GRADING IS NOT FEASIBLE DUE TO LIMITED R-O-W OR PHYSICAL CONSTRAINT, A BACK CURB SHALL BE INSTALLED. THE BUFFER ZONE SHALL BE RESTORED WITH 4" TOPSOIL, SEED, AND MULCH TO REPAIR ANY DAMAGE TO THE GROUND CAUSED BY THE CONTRACTOR'S OPERATIONS.
- WHERE EXISTING ROADWAYS ARE SAWCUT TO INSTALL CURBING AND/OR SIDEWALK, THE ROADWAY SHOULD BE SAWCUT AT LEAST 2'-0" FROM THE PROPOSED CURB LINE TO ALLOW FOR ADEQUATE COMPACTION OF ASPHALT. IF SAWCUT IS LESS THAN 2'-0" FROM PROPOSED CURB LINE, THEN THE ROADWAY SHALL BE REBUILT USING 4000 PSI CONCRETE.
- CONTRACTOR SHALL PROVIDE NECESSARY TRAFFIC CONTROL, BARRICADES, AND SIGNAGE TO MAINTAIN ACCESS TO AND WITHIN THE PROPERTY AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE BARRICADES AROUND WORK AREAS FOR PEDESTRIAN SAFETY AND SHALL COORDINATE A SIDEWALK CLOSURE PLAN WITH THE CITY.

STANDARD CONSTRUCTION NOTES:

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT SPECIFICATIONS AND STANDARD DETAILS OF THE CITY OF DETROIT.
- CALL MISS DIG (1-800-647-7344 / 1-800-MISS DIG) A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING UNDERGROUND UTILITIES CAUSED BY HIS OPERATIONS.
- TRENCHES UNDER OR WITHIN 3 FT. OF EXISTING OR PROPOSED PAVEMENTS, DRIVEWAYS, AND/OR SIDEWALKS SHALL BE BACKFILLED AND COMPACTED WITH MDOT CLASS II SAND.
- WHERE UTILITIES CROSS, PROVIDE POROUS BACKFILL TAMPED IN 12" LAYERS TO THE UNDERSIDE OF THE HIGHER UTILITY. A 6" MIN. SAND CUSHION SHALL BE PROVIDED BETWEEN UTILITIES.
- ALL SEWER CONSTRUCTION SHALL HAVE MDOT CLASS II BEDDING UNLESS OTHERWISE SPECIFIED ON THE PROFILES.
- ALL ELEVATIONS SHOWN ARE BASED ON CITY OF DETROIT DATUM.
- ALL DISTURBED AREAS BE PROMPTLY RESTORED BY THE CONTRACTOR.
- ALL DRIVEWAYS, DRAIN TILE, CULVERTS AND OTHER FACILITIES REMOVED, DESTROYED, DAMAGED OR OTHERWISE DISTURBED BY THE WORK SHALL BE REPLACED AND/OR RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR.
- ALL SOIL EROSION AND SILT MUST BE CONTROLLED AND CONTAINED ON SITE.
- THE CONSTRUCTION MUST MAINTAIN ALL TRAFFIC AT ALL TIMES AS REQUIRED BY THE CURRENT MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTC), OAKLAND COUNTY, AND/OR MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT).
- THE CONTRACTOR SHALL AT ALL TIMES PROVIDE EMERGENCY ACCESS TO PROPERTY FOR THE POLICE, FIRE DEPARTMENT, AMBULANCES OR OTHER EMERGENCY VEHICLES TO PROTECT LIFE, HEALTH AND PROPERTY.
- PAVED STREET AND DRIVEWAYS MUST BE MAINTAINED IN A REASONABLE STATE OF CLEANLINESS AND THE CONTRACTOR SHALL REMOVE ACCUMULATIONS OF DEBRIS CAUSED BY CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL HAVE AN OPERATING SWEEPER BROOM AND CLEAN THE EXISTING PAVEMENT AT THE CLOSE OF EACH DAYS OPERATION AND AS OFTEN AS NECESSARY. FAILURE TO COMPLY SHALL CAUSE TO STOP CONSTRUCTION. CONTRACTOR SHALL COMPLY WITH THE STATE AIR POLLUTION CONTROL REGULATIONS AND OAKLAND COUNTY SOIL EROSION AND SEDIMENTATION CONTROL (SESC).
- CONTRACTOR MUST PROVIDE ALL NECESSARY SHEETING, SHORING, DEWATERING, BRACING, TRENCH BOXES, ETC. TO PERFORM WORK SAFELY AND PROTECT EXISTING UTILITIES AND IMPROVEMENTS IN ACCORDANCE TO MICHIGAN OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (MIOSHA).

RESTORATION REQUIREMENTS:

ALL DISTURBED LAWN AREAS SHALL BE RESTORED AS FOLLOWS IF NOT LANDSCAPED WITHIN 10 DAYS OF FINAL GRADING:

- FINISH SUBGRADE.
- PLACE 3" THICKNESS CLEAN TOPSOIL TO ATTAIN THE FINISHED GRADE. TOPSOIL MUST NOT BE CONTAMINATED AND MAY NOT BE A MIXTURE OF NATURAL UNDERLYING SOILS, SUBBASE MATERIALS, OR OTHER MATERIALS. IT MUST CONSIST OF NATURAL LOAM, SANDY LOAM, SILTY LOAM, OR CLAY LOAM HUMUS-BEARING SOIL ADAPTED TO THE SUSTENANCE OF PLANT LIFE. TOPSOIL MUST NEITHER BE EXCESSIVELY ACIDIC OR EXCESSIVELY ALKALINE. IT MUST BE OF MINERAL ORIGIN, EXCLUSIVE OF ANY PEAT OR MUCK.
- APPLY SEED AND FERTILIZER. FERTILIZER TO CONFORM TO M.DOT REQUIREMENTS FOR SEEDING AND SODDING FERTILIZERS, CLASS A AND SHALL BE APPLIED PER THE MANUFACTURER'S RECOMMENDATIONS.
- APPLY FRESH STRAW OR MARSH HAY MULCH IN AN AIR-DRY CONDITION TO ALL SEEDED AREAS OVER THE SURFACE TO A UNIFORM THICKNESS AT 2 TONS PER ACRE.
- MULCH SHALL BE ANCHORED IN PLACE WITH A BIO-DEGRADABLE NETTING NOT LARGER THAN 1.5" BY 2" OR SMALLER THAN 0.5" BY 0.5".
- THE CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THE GROWTH OF ALL SEEDED AREAS - INCLUDING WATERING - AND SHALL RE-SEED AS NECESSARY TO ACCOMPLISH THIS.

TRAFFIC CONTROL AND BARRICADING NOTES:

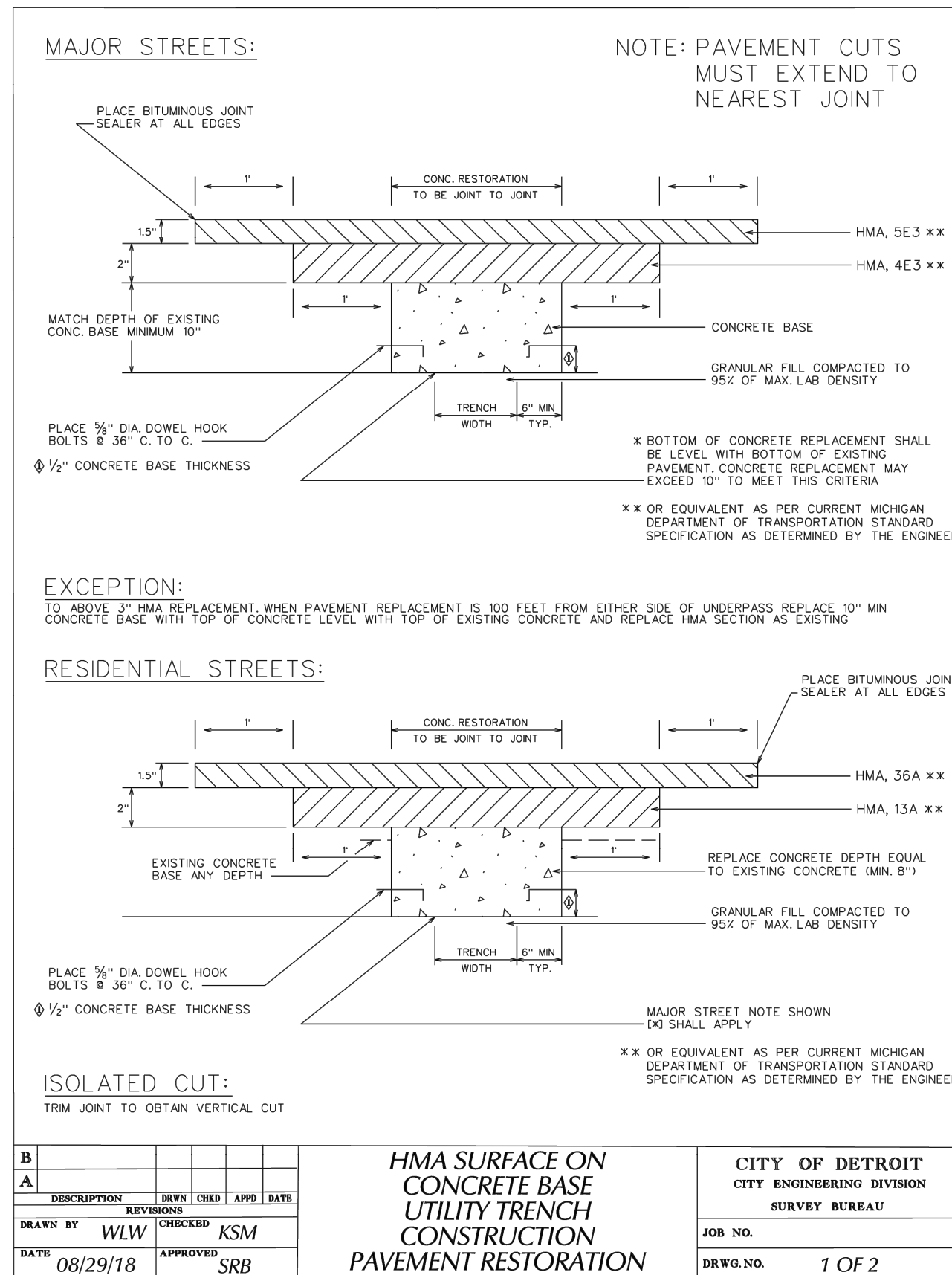
CONTRACTOR TO INSTALL AND MAINTAIN ALL TEMPORARY ROAD AND SIDEWALK CLOSURE, TRAFFIC CONTROL, AND PEDESTRIAN ACCESS SIGNAGE AND BARRICADES IN ACCORDANCE WITH CURRENT M.M.U.T.C.D. STANDARDS.

MAINTENANCE OF TRAFFIC:

DURING THE PROGRESS OF THE WORK THE CONTRACTOR SHALL ACCOMMODATE BOTH VEHICULAR AND PEDESTRIAN TRAFFIC IN THE ROAD RIGHTS OF WAY. THE CONTRACT'S EQUIPMENT AND OPERATIONS ON PUBLIC STREETS SHALL BE GOVERNED BY ALL APPLICABLE LOCAL, COUNTY AND STATE ORDINANCES, REGULATIONS AND LAWS. THE CONTRACTOR SHALL OBTAIN AND SATISFY ANY AND ALL PERMIT REQUIREMENTS BY THE LOCAL, COUNTY AND STATE GOVERNMENTAL AGENCIES.

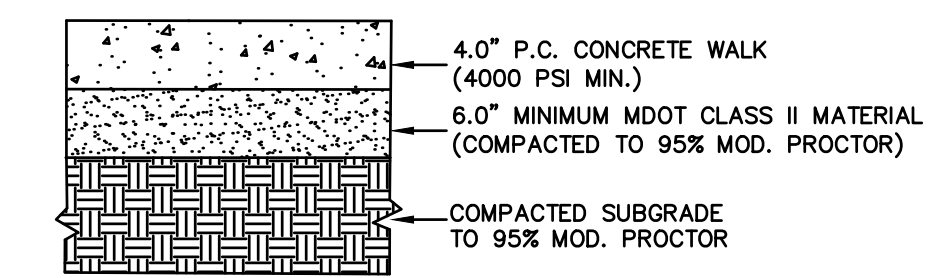
IN ADDITION, WHERE THE WORK REQUIRES THE CLOSURE OF ONE OR MORE LANES OR IS WITHIN THE INFLUENCE OF THE ROAD OR PEDESTRIAN RIGHT OF WAY, THE CONTRACTOR SHALL PROVIDE ALL SIGNS, BARRICADES, FLAG PERSONS AND OTHER TRAFFIC CONTROL MEASURES AS REQUIRED BY MDOT, THE COUNTY, OR THE COMMUNITY HAVING JURISDICTION OF THE ROAD AND IN CONFORMANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

COMPENSATION FOR TRAFFIC CONTROL SHALL BE CONSIDERED INCLUDED IN THE CONTRACT PRICE(S) UNLESS SPECIFIC TRAFFIC CONTROL ITEMS ARE INCLUDED IN THE ACCEPTED BID PROPOSAL.



CITY OF DETROIT NOTES:

- MILL (REMOVE) HMA PAVEMENT WITHIN AND BEYOND THE AREA OF TRENCH PAVEMENT REMOVAL IN ORDER TO DETERMINE LOCATION OF UNDERLYING CONCRETE BASE PAVEMENT JOINTS. MILL MINIMUM TO 1' BEYOND NEAREST CONCRETE JOINTS.
- EXTEND UTILITY TRENCH CONCRETE PAVEMENT REMOVAL TO ALL CONCRETE PAVEMENT JOINTS AND / OR CURBS ADJACENT TO THE TRENCH AREA. REMOVAL SHALL BE "JOINT TO JOINT".
- CONCRETE PAVEMENT CUTS SHALL BE MINIMUM 3' WIDE.
- ALL PAVEMENT CUTS SHALL BE MINIMUM 1' WIDER THAN TRENCH WIDTH.
- ALL REMOVALS SHALL BE SAWCUT STRAIGHT AND SQUARE (90 DEGREES).
- CONCRETE RESTORATION PAVEMENT SHALL BE MDOT P1 MIX (3,500 PSI).
- RESTORED CONCRETE PAVEMENT SHALL MATCH THICKNESS OF EXISTING CONCRETE PAVEMENT IN CONFORMANCE WITH MDOT STANDARDS DETAIL R-44-F.
- RESTORED CONCRETE SHALL BE ANCHORED TO EXISTING CONCRETE PAVEMENT IN CONFORMANCE WITH MDOT STANDARD DETAIL R-44-F.
- APPLY HMA TACK COAT PER MDOT STANDARD SPECIFICATIONS SECTION 904.
- RESTORE HMA PAVEMENT 3/2" TO MATCH EXISTING, IN 2 LIFTS:
1ST LIFT - 2" MDOT HMA 4E3 (13A RESIDENTIAL), COMPACTED, EXTENDED 1' BEYOND BASE CONCRETE REPAIR.
2ND LIFT - 1/2" MDOT HMA 5E3 (36A RESIDENTIAL), COMPACTED, EXTENDED 1' BEYOND 1ST LIFT..
- BITUMINOUS JOINT SEALER SHALL BE PLACED AT ALL FINISHED HMA JOINTS.
- ALL DISTURBED PAVEMENT MARKINGS AND OTHER ASSETS, INCLUDING BIKE LANE DELINEATORS, WILL HAVE TO BE REPLACED AT THE COST OF THE PERMIT HOLDER, AND SHALL CONFORM TO THE LATEST CED / TED STANDARDS.
- FOR OTHER RELATED SPECIFICATIONS (BACKFILL COMPACTION, MATERIALS, ETC...), REFER TO DIVISION 15 OF THE STANDARD SPECIFICATIONS FOR PAVING AND RELATED CONSTRUCTION.
- NOTIFY THE CITY OF DETROIT ENGINEERING DEPARTMENT 24 HOURS PRIOR TO STARTING CONSTRUCTION.
- ANY OPEN EXCAVATIONS ARE TO BE STEEL PLATED. IF EXCAVATIONS ARE IN THE PAVEMENT, THE PLATES ARE TO BE SPIKED AND RAMPED WITH COLD PATCH. CONTACT THE CITY WITH LOCATION OF THE STEEL PLATE.
- THE CITY OF DETROIT REQUIRES ALL CONCRETE WORK TO BE STAMPED WITH A CONTRACTORS IDENTIFICATION STAMP.



ON-SITE SIDEWALK DETAIL / CROSS-SECTION
NOT TO SCALE

SIDEWALK NOTES:

- IF ANY OF THE EXISTING BASE CANNOT BE UTILIZED, IT SHALL BE REMOVED AND REPLACED WITH MDOT CLASS II MATERIAL.
- BROOM FINISH SURFACE.
- IF NOT INDICATED ON THE PLAN THE CONTRACTOR SHALL SUBMIT A JOINTING PLAN PRIOR TO PLACEMENT OF CONCRETE PAVEMENT.
- JOINTS SHALL BE SAWCUT AS SOON AS PAVEMENT CAN SUPPORT MACHINE.
- AN EXPANSION JOINT SHALL BE PLACED BETWEEN NEW WALKS AND EXISTING PAVEMENT AND/OR BUILDINGS.
- APPLY SILENCER SRT (OR APPROVED EQUIVALENT) ACRYLIC CURING COMPOUND AND SLOXANE SEALER ON ALL CONCRETE PAVING, CURBS, AND WALKS (APPLY PER MANUFACTURER RECOMMENDATIONS).
- CONTRACTOR SHALL REFER TO LANDSCAPE PLANS FOR ALL SIDEWALK SCORING AND JOINTING.

STRUCTURE COVER NOTES:

STRUCTURE COVERS FOR PRIVATE UTILITIES SHALL NOT CONTAIN THE CITY OF DETROIT LOGO OR NAME; ONLY PUBLIC UTILITY STRUCTURE COVERS SHALL.

DETROIT WATER & SEWERAGE DEPARTMENT (DWS) NOTES:

- DWS RECORDS INDICATE THAT THERE ARE WATER MAINS AND SEWERS WHICH ARE LOCATED IN THE VICINITY OF THE PROPOSED PROJECT LIMITS. THE LOCATIONS MUST BE FIELD VERIFIED TO MAINTAIN OUR REQUIRED CLEARANCES.
- USUALLY WATER MAINS HAVE 5' TO 6' COVER AND SEWERS HAVE 8' TO 30' COVER AS APPROVED BY DWS, DEPENDING ON THE LOCATION.
- NO UTILITIES ARE ALLOWED TO BE INSTALLED ALONG THE LENGTH OF THE WATER MAIN OR SEWER.
- IT IS DWS'S REQUIREMENT THAT ANY PROPOSED UTILITY CROSSING DWS WATER MAINS OR SEWERS PERPENDICULARLY MUST MAINTAIN A MINIMUM OF 1.5 FEET VERTICAL CLEARANCE BELOW DWS ASSETS. ALSO, ANY PROPOSED UTILITY RUNNING ADJACENT TO DWS WATER MAINS AND SEWERS MUST MAINTAIN A MINIMUM OF 3.5 FEET HORIZONTAL CLEARANCE FROM ANY CONDUIT AND/OR MANHOLE OUTSIDE WALL. NO UTILITY IS ALLOWED TO RUN ALONG THE TOP OF THE WATER MAIN OR SEWER.
- THERE ARE POSSIBILITIES OF SEVERAL WATER AND SEWER SERVICE LINES CROSSING IN THE VICINITY OF PROPOSED WORK. FIELD VERIFY THEIR LOCATION AND DEPTH TO MAINTAIN OUR REQUIRED CLEARANCE.
- DETROIT WATER AND SEWERAGE DEPARTMENT (DWS) PROHIBITS THE USE OF HEAVY CONSTRUCTION EQUIPMENT (BULLDOZERS, BACKHOES, EXTREMELY LARGE ROLLERS, ETC.) AND OR STORAGE OF BUILDING MATERIAL DIRECTLY OVER OR NEAR OUR MAINS OR SEWERS. DWS ALSO PROHIBITS THE USE OF CRANES AND BALLS OR HYDRAULIC RAMS FOR PAVEMENT REMOVAL WHERE THE DWS FACILITIES ARE INVOLVED. IF THE WATER MAIN OR SEWER FACILITIES ARE BROKEN OR DAMAGED AS A RESULT OF ANY ACTION ON THE PART OF THE CONTRACTOR, THEN THE CONTRACTOR SHALL BE LIABLE FOR ALL COSTS INCIDENTAL TO THE REPAIR OF SUCH BROKEN OR DAMAGED WATER MAIN/SEWER FACILITIES AND APPURTENANCES. THE CONTRACTOR SHALL WAIVE ALL CLAIMS FOR DAMAGES UNDER SUCH CIRCUMSTANCES.
- FOR ANY PROPOSED WORK THAT INVOLVES DWS UTILITY ASSETS (WATER MAINS AND/OR SEWERS), AN APPROVAL AND A PERMIT IS REQUIRED FROM DWS BEFORE THE COMMENCEMENT OF WORK.
- ONLY DWS PERSONNEL/CONTRACTORS ARE ALLOWED TO OPERATE DWS GATE VALVES UNLESS PERMISSION IS GRANTED.
- ONLY DWS PERSONNEL/CONTRACTORS ARE ALLOWED TO OPERATE HYDRANTS UNLESS A PERMIT IS OBTAINED.
- PRESSURE TESTING OF THE PIPING SYSTEM IS REQUIRED BEFORE CONSTRUCTING TO THE DWS SYSTEM.
- BACTERIALOGING TESTING BY DWS IS REQUIRED BEFORE INSTALLING A METER AND CONNECTING THE PIPE TO THE DWS SYSTEM.
- WINTER WORK ON WATER MAINS/SERVICES DEPENDS ON PROVIDING PROPER CONDITIONS SUCH AS WARM GASKETS, HEATED WATER, HEATED SAND/CONCRETE MATERIAL, ETC AND IS SUBJECT TO DWS'S REPRESENTATIVE'S APPROVAL.



Julian J. Wargo, Jr.

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| ISSUED FOR | DATE | ISSUED FOR | DATE | ISSUED FOR | DATE | ISSUED FOR | DATE | ISSUED FOR | DATE |
| PERMIT | 5-9-25 | | | | | | | | |
| BIDS | 6-24-25 | | | | | | | | |

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CONSTRUCTION NOTES AND DETAILS
CABOT APARTMENTS
DETROIT WAYNE COUNTY MICHIGAN

| | | |
|-------------|---------------|---------------|
| DATE | SCALE | HOR: 1" = 20' |
| 5-9-25 | VER: 1" = N/A | |
| DESIGNED BY | JLW | JOB NO. 25114 |
| DRAWN BY | PTG | SHEET C.201 |

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PLAN VIEW OF COVER

SECTION A-A

NOTES:
 1. FIBER REINFORCED POLYMER (FRP) COMPOSITE MAN-HOLE FRAME AND COVER, AS NOTED IN SECTION 7.1.1 AND 7.1.3 OF AASHTO M306 HIGHWAY LOADING.
 THE SEATING FACE OF THE COVER & SEAT FOR SAME ON THE FRAME SHALL BE MACHINE FINISHED, OR THE EQUIVALENT THERE OF, SO THAT THE COVER SHALL HAVE AN EVEN BEARING ON ITS SEAT AT ALL POINTS WITHOUT ROCKING OR TILTING.
 2. EAST JORDAN COM32006A01 PRESSURE TIGHT COVER AND FRAME OR APPROVED EQUAL.

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| REV | DESCRIPTION | DATE |
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GATE WELL FRAME AND COVER WITH LOGO - WATERMAIN

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
 SCALE NONE SHEET 1 OF 1
 DATE 9/20/18 DWG. No. 330561-11

PLAN

SECTION A-A

| HORIZONTAL BENDS, 22.5, 45 & 90 DEGREE TURNS | | | | | | | | | | |
|--|----------------|--------|-------------|--------|--------|--------|--------|--------|-------------|--------|
| SIZE OF PIPE (IN) | DEGREE OF BEND | A (FT) | B MIN. (FT) | C (FT) | D (FT) | E (FT) | F (FT) | G (FT) | H MIN. (FT) | J (FT) |
| 6 | 45 | 1.75 | 0.75 | 1.00 | 2.00 | 1.00 | 1.50 | 0.75 | 1.92 | 1.33 |
| 6 | 90 | 1.75 | 0.75 | 1.00 | 2.50 | 1.25 | 1.50 | 0.75 | 1.92 | 1.17 |
| 8 | 45 | 1.75 | 0.75 | 1.00 | 2.33 | 1.17 | 2.00 | 1.00 | 1.92 | 1.33 |
| 8 | 90 | 1.75 | 0.75 | 1.00 | 3.33 | 1.67 | 2.50 | 1.25 | 1.92 | 1.08 |
| 12 | 22.5 | 1.75 | 0.75 | 1.00 | 2.50 | 1.25 | 2.00 | 1.00 | 2.00 | 1.33 |
| 12 | 45 | 2.08 | 0.75 | 1.33 | 3.50 | 1.75 | 2.50 | 1.25 | 2.33 | 1.33 |
| 12 | 90 | 2.08 | 0.75 | 1.33 | 5.50 | 2.75 | 3.00 | 1.50 | 2.33 | 1.67 |
| 16 | 22.5 | 2.67 | 1.00 | 1.67 | 3.33 | 1.67 | 2.50 | 1.25 | 3.00 | 1.17 |
| 16 | 45 | 2.67 | 1.00 | 1.67 | 5.33 | 2.67 | 3.00 | 1.50 | 3.00 | 2.50 |
| 16 | 90 | 2.67 | 1.00 | 1.67 | 6.00 | 3.00 | 5.00 | 2.50 | 3.00 | 2.67 |

NOTE:
 1. THE THRUST BLOCK FACE SHALL BE POURED AGAINST UNDISTURBED EARTH.

| | | |
|-----|-------------|------|
| REV | DESCRIPTION | DATE |
| | | |

THRUST BLOCK, HORIZONTAL BEND (TRADITIONAL DWS D SIZING)

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
 SCALE NONE SHEET 1 OF 2
 DATE 9/20/18 DWG. No. 331413-01

PLAN

ELEVATION

| SIZE OF PIPE (IN) | A (FT) | B MIN. (FT) | C (FT) | D (FT) | E (FT) | F (FT) | G (FT) | H MIN. (FT) | J (FT) |
|-------------------|--------|-------------|--------|--------|--------|--------|--------|-------------|--------|
| 6X6 | 1.75 | 0.75 | 1.00 | 2.50 | 1.25 | 1.50 | 0.75 | 2.25 | 0.50 |
| 8X8 | 1.75 | 0.75 | 1.00 | 3.00 | 1.50 | 2.00 | 1.00 | 2.25 | 0.50 |
| 12X8 | 1.75 | 0.75 | 1.00 | 3.00 | 1.50 | 2.00 | 1.00 | 2.42 | 0.50 |
| 12X12 | 2.08 | 0.75 | 1.33 | 4.00 | 2.00 | 3.00 | 1.50 | 2.75 | 0.67 |
| 16X8 | 1.75 | 0.75 | 1.00 | 3.00 | 1.50 | 2.00 | 1.00 | 2.75 | 0.50 |
| 16X12 | 2.08 | 0.75 | 1.33 | 4.00 | 2.00 | 3.00 | 1.50 | 3.08 | 0.67 |
| 16X16 | 2.67 | 1.00 | 1.67 | 5.00 | 2.50 | 4.00 | 2.00 | 3.67 | 0.92 |

NOTE:
 1. THE THRUST BLOCK FACE SHALL BE POURED AGAINST UNDISTURBED EARTH.

CONCRETE THRUST BLOCK FOR TEES

| | | |
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| REV | DESCRIPTION | DATE |
| | | |

THRUST BLOCK, TEES (TRADITIONAL DWS D SIZING)

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
 SCALE NONE SHEET 2 OF 2
 DATE 9/20/18 DWG. No. 331413-02

CONNECTION WITH EXISTING DWS MAIN WITH TAPPING SLEEVE AND VALVE

CONNECTION AT EXISTING DWS MAIN WITH TEE / VALVE

DETAIL "A"

NOTE: POLYWRAP ALL PIPE AND FITTINGS BEFORE BACKFILLING.

| | | |
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| REV | DESCRIPTION | DATE |
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CONNECTION WITH EXISTING WATERMAIN

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
 SCALE NONE SHEET 1 OF 2
 DATE 10/20/18 DWG. No. 331413-08

CONNECTION WITH EXISTING WATERMAIN

NOTE: POLYWRAP ALL PIPE AND FITTINGS BEFORE BACKFILLING.

| | | |
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| REV | DESCRIPTION | DATE |
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CONNECTION WITH EXISTING WATERMAIN

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
 SCALE NONE SHEET 2 OF 2
 DATE 10/20/18 DWG. No. 331413-09

UTILITY TRENCH, WATERMAIN

| NOMINAL PIPE DIAMETER | MAXIMUM TRENCH WIDTH UP TO 12" ABOVE CROWN OF PIPE |
|-----------------------|--|
| LESS THAN 18" | 30" |
| 18" TO 24" | PIPE DIAMETER PLUS 18" |
| GREATER THAN 24" | PIPE DIAMETER PLUS 24" |

| NOMINAL PIPE DIAMETER | MAXIMUM TRENCH WIDTH UP TO 12" ABOVE CROWN OF PIPE |
|-----------------------|--|
| LESS THAN 18" | 30" |
| 18" TO 24" | PIPE DIAMETER PLUS 18" |
| GREATER THAN 24" | PIPE DIAMETER PLUS 24" |

| | | |
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| REV | DESCRIPTION | DATE |
| | | |

UTILITY TRENCH, WATERMAIN

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
 SCALE NONE SHEET 1 OF 3
 DATE 9/20/18 DWG. No. 312333-04

UTILITY TRENCH, WATERMAIN

| NOMINAL PIPE DIAMETER | MAXIMUM TRENCH WIDTH UP TO 12" ABOVE CROWN OF PIPE |
|-----------------------|--|
| LESS THAN 18" | 30" |
| 18" TO 24" | PIPE DIAMETER PLUS 18" |
| GREATER THAN 24" | PIPE DIAMETER PLUS 24" |

| NOMINAL PIPE DIAMETER | MAXIMUM TRENCH WIDTH UP TO 12" ABOVE CROWN OF PIPE |
|-----------------------|--|
| LESS THAN 18" | 30" |
| 18" TO 24" | PIPE DIAMETER PLUS 18" |
| GREATER THAN 24" | PIPE DIAMETER PLUS 24" |

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| REV | DESCRIPTION | DATE |
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UTILITY TRENCH, WATERMAIN

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
 SCALE NONE SHEET 2 OF 3
 DATE 9/20/18 DWG. No. 312333-05

UTILITY TRENCH, WATERMAIN

| NOMINAL PIPE DIAMETER | MAXIMUM TRENCH WIDTH UP TO 12" ABOVE CROWN OF PIPE |
|-----------------------|--|
| LESS THAN 18" | 30" |
| 18" TO 24" | PIPE DIAMETER PLUS 18" |
| GREATER THAN 24" | PIPE DIAMETER PLUS 24" |

| NOMINAL PIPE DIAMETER | MAXIMUM TRENCH WIDTH UP TO 12" ABOVE CROWN OF PIPE |
|-----------------------|--|
| LESS THAN 18" | 30" |
| 18" TO 24" | PIPE DIAMETER PLUS 18" |
| GREATER THAN 24" | PIPE DIAMETER PLUS 24" |

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| REV | DESCRIPTION | DATE |
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UTILITY TRENCH, WATERMAIN

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION
 SCALE NONE SHEET 3 OF 3
 DATE 9/20/18 DWG. No. 312333-06

JULIAN JAY WARGO, JR. ENGINEER No. 0201099177 PROFESSIONAL ENGINEER

Julian J. Wargo, Jr.

| ISSUED FOR | DATE | ISSUED FOR | DATE | ISSUED FOR | DATE | ISSUED FOR | DATE | ISSUED FOR | DATE |
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DWS WATER MAIN DETAILS
CABOT APARTMENTS
 DETROIT WAYNE COUNTY MICHIGAN

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| DATE | 5-9-25 | SCALE | HOR: 1" = 20' |
| DESIGNED BY | JLW | VER: | 1" = N/A |
| DATE | 9/20/18 | JOB NO. | 25114 |
| DRAWN BY | PTG | SHEET | C.302 |

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