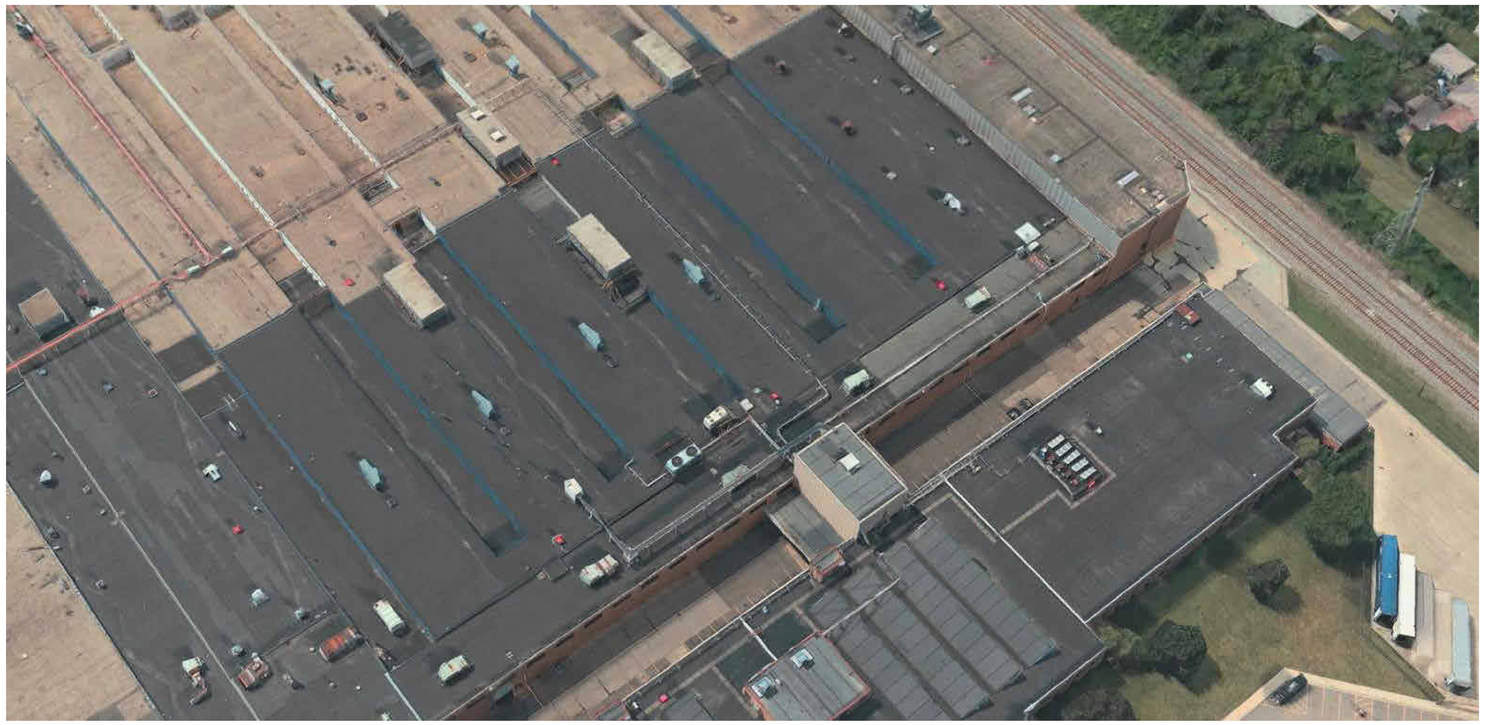
Detroit Diesel Corporation



Detroit Diesel M1 Met Lab Renovation

12200 Telegraph Rd
Redford Charter Twp, MI 48239

Addendum 2

05/28/2026

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2025-DD016-001

CORE Design Group
Engineering / Consultants

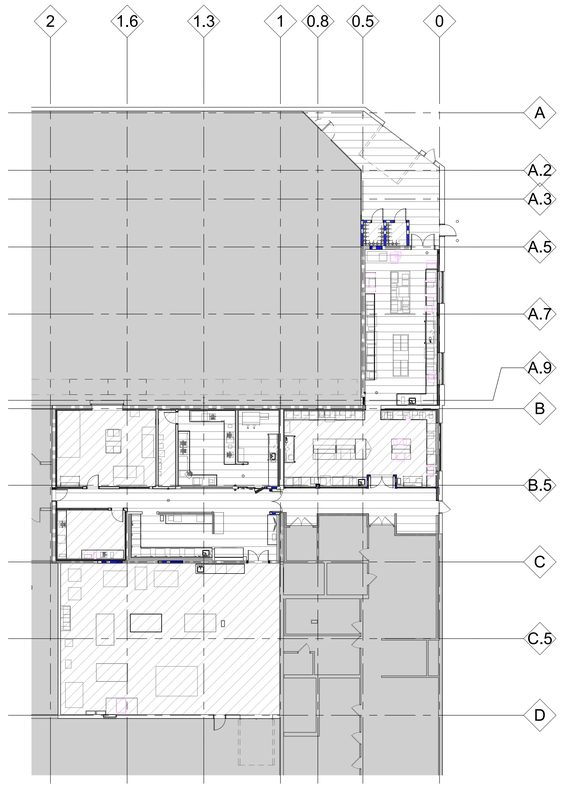
5/28/2026 8:51:52 AM

WORK AREA LEGEND

NO MODIFICATION TO BUILDING

LEVEL 1 ALTERATION (3,933 S.F.)

LEVEL 2 ALTERATION (3,085 S.F.)



1 LEVEL 1 DEMO PLAN - SECTOR A

1/16" = 1'-0"

PLAN REVIEW DATA

BUILDING CODE
2021 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS INCORPORATING THE 2021 EDITION OF THE INTERNATIONAL EXISTING BUILDING CODE (IN EFFECT 4/9/2025)

PLUMBING CODE
2021 MICHIGAN PLUMBING CODE INCORPORATING THE 2021 EDITION OF THE INTERNATIONAL PLUMBING CODE WITH STATE AMENDMENTS, PART 7 RULES (IN EFFECT 3/12/2024)

MECHANICAL CODE
2021 MICHIGAN MECHANICAL CODE INCORPORATING THE 2021 EDITION OF THE INTERNATIONAL MECHANICAL CODE WITH STATE AMENDMENTS, PART 9a RULES (IN EFFECT 3/12/2024)

ELECTRICAL CODE
2023 MICHIGAN ELECTRICAL CODE INCORPORATING THE 2023 EDITION OF THE NATIONAL ELECTRICAL CODE, NFPA 70 WITH STATE AMENDMENTS, PART 8 RULES (IN EFFECT 3/12/2024)

ACCESSIBILITY
2021 MICHIGAN BUILDING CODE INCLUDING MICHIGAN BARRIER FREE AND ICC/ANSI A117.1-2017

ENERGY CODE
2021 MICHIGAN ENERGY CODE, PART 10a INCORPORATING THE 2021 IECC AND ANSI/ASHRAE/IESNA 90.1-2019 (IN EFFECT 4/22/2025)

FIRE CODE
2021 INTERNATIONAL FIRE CODE AS REFERENCED IN THE 2021 MICHIGAN BUILDING CODE WITH LOCAL AMENDMENTS

FIRE ALARM
2019 EDITION OF NFPA 72 AS REFERENCED IN THE 2021 MICHIGAN BUILDING CODE

FIRE SUPPRESSION
2019 EDITION OF NFPA 13 AS REFERENCED IN THE 2021 MICHIGAN BUILDING CODE

USE GROUP
B-BUSINESS/ F-1 FACTORY: NON SEPARATED MIXED USE
LOADING DOCK/SHIPPING & RECEIVING AREA, ACCESSORY STORAGE TO F-1

TYPE OF CONSTRUCTION
IIB - NONCOMBUSTIBLE / UNPROTECTED
FIRE PROTECTION SYSTEM PROVIDED FOR 100% OF BUILDING CONSTRUCTION

BUILDING AREA (SCOPE OF WORK)

CATEGORY	EXISTING	NEW	RENOVATED	TOTAL
OFFICE AREA	414,000 SF	0 SF	7,018 SF	414,000 SF
PLANT AREA	2,550,000 SF	0 SF	0 SF	2,550,000 SF
OUT BUILD'S	122,439 SF	0 SF	0 SF	122,439 SF.

PROJECT FLOOR AREA
ALTERATION LEVEL 2: 7,144 +/- G.S.F. OF 2,287,600 G.S.F. TOTAL (EXISTING)

PROJECT DESCRIPTION
THIS PROJECT INVOLVES THE RENOVATION OF APPROXIMATELY 7,144 S.F. OF METALLURGICAL AND CHEMISTRY LAB.

ALTERATION LEVEL
2021 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS.

ALTERATION LEVEL 1 (SECTION 503.1)

LEVEL 1 ALTERATIONS INCLUDE THE REMOVAL AND REPLACEMENT OR THE COVERING OF EXISTING MATERIALS, ELEMENTS, EQUIPMENTS, OR FIXTURES USING NEW MATERIALS. ELEMENTS, EQUIPMENT, OR FIXTURES THAT SERVE THE SAME PURPOSE.

ALTERATION LEVEL 2 (SECTION 504.1)

LEVEL 2 ALTERATIONS INCLUDE THE RECONFIGURATION OF SPACE, THE ADDITION OR ELIMINATION OF ANY DOOR OR WINDOW, THE RECONFIGURATION OR EXTENSION OF ANY SYSTEM OR THE INSTLLATION OF ANY ADDITIONAL EQUIPMENT.

OCCUPANT LOAD

THIS PROJECT DOES NOT ALTER THE EXISTING FACILITY OCCUPANT LOAD.

TRAVEL DISTANCE

250'-0" (MAXIMUM) WITH AUTOMATIC SPRINKLER SYSTEM (TABLE 1017.2)
100'-0" (MAXIMUM) COMMON PATH OF TRAVEL (TABLE 1006.2.1)

DEAD END CORRIDOR (SECTION 1020.4)

50'-0" (MAXIMUM)

FIRE EXTINGUISHERS (TABLE 906.3)

1 PER 11,250 SF
75'-0" (MAXIMUM) TRAVEL DISTANCE

ACCESSIBLE ROUTES (ICC A117.1-2009, CHAPTER 4)

403.5 CLEAR WIDTH:
THE CLEAR WIDTH OF AN ACCESSIBLE ROUTE SHALL BE 36 INCHES MINIMUM.

PLUMBING FIXTURE COUNT

PER 2015 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS SECTION 810, PLUMBING:

WHERE THE OCCUPANT LOAD OF THE STORY IS INCREASED BY MORE THAN 20 PERCENT, PLUMBING FIXTURES FOR THE STORY SHALL BE PROVIDED IN QUANTITIES SPECIFIED IN THE INTERNATIONAL PLUMBING CODE BASED ON THE INCREASED OCCUPANT LOAD.

NO ADDITIONAL FIXTURES REQUIRED.

AUTOMATIC FIRE SUPPRESSION

.ALL RENOVATED AREAS WITHIN THE PROJECT SCOPE ARE FULLY SPRINKLERED.

CONTROL AREAS

REFER TO MAQ AND CONTROL AREA PLAN FOR FIRST FLOOR.

GENERAL NOTES

1. THE CONSTRUCTION CONTRACT IS FOR A COMPLETE AND FULLY FUNCTIONING INSTALLATION. THESE DOCUMENTS DESCRIBE THE DESIGN INTENT AND SPECIFIC REQUIREMENTS OF THE INSTALLATION. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. THESE DOCUMENTS ARE NOT MEANT TO SHOW EVERY ITEM REQUIRED TO CONSTRUCT THE WORK. ITEMS SUCH AS, BUT NOT LIMITED TO, FASTENERS, CONNECTORS, FILLERS, MISCELLANEOUS CLOSURE ELEMENTS, ANCILLARY CONTROL WIRING AND POWER WHERE REQUIRED FOR THE CONTROL OR OPERATION OF THE PROVIDED EQUIPMENT, ETC. ARE NOT ALWAYS SHOWN BUT ARE CONSIDERED TO BE INCLUDED IN THE SCOPE OF THE WORK. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A FULLY FUNCTIONING INSTALLATION WHICH MEETS THE DESIGN INTENT, INCLUDING BUT NOT LIMITED TO THE SPECIFIC REQUIREMENTS IN THESE DOCUMENTS.
2. THESE DOCUMENTS DESCRIBE WORK UNDER A SINGLE CONSTRUCTION CONTRACT. THE USE OF SUB-CONTRACTORS IS THE ELECTION OF THE GENERAL CONTRACTOR. IT IS NOT THE INTENT OF THE DOCUMENTS TO DIVIDE THE WORK AMONG SUB-CONTRACTORS. WHERE THE DOCUMENTS IDENTIFY WORK WITH SUCH NOTES AS "NOT IN MECHANICAL WORK" OR "NOT IN ELECTRICAL WORK" OR "SEE STRUCTURAL DRAWINGS," IT MEANS THAT THE WORK IS NOT FURTHER DESCRIBED OR SPECIFIED ON THE DRAWING WHERE SUCH NOTES APPEAR. IT DOES NOT PRECLUDE THE CONTRACTOR FROM DELEGATING THE WORK TO ENTITIES OF HIS ELECTION. IN ADDITION, THE DIVISION OF THE CONTRACT DOCUMENTS INTO ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND MECHANICAL OR OTHER DESIGN DISCIPLINES IS FOR CONVENIENCE ONLY, AND IS NOT INTENDED TO DIVIDE THE WORK AMONG VARIOUS SUB-CONTRACTORS, OR IMPLY THAT ALL OF THE WORK FOR A PARTICULAR TRADE IS SHOWN ONLY IN THOSE DRAWINGS OR SPECIFICATIONS.
3. REFERENCE TO "CONTRACTOR" IN THESE DOCUMENTS SHALL BE INTERPRETED AS REFERRING TO THE GENERAL CONTRACTOR OR TO ANY SUB-CONTRACTOR TO THE GENERAL CONTRACTOR, COLLECTIVELY OR AS INDIVIDUAL ENTITIES. FURTHER, REFERENCE TO A PARTICULAR SUB-CONTRACTOR IS FOR CONVENIENCE ONLY, AND IS NOT INTENDED TO LIMIT THE SCOPE OF THE WORK TO THAT TRADE OR LIMIT THE RESPONSIBILITIES OF THE GENERAL CONTRACTOR TO COORDINATE THE WORK OF ALL TRADES AS DEFINED BY THE OWNER/CONTRACTOR AGREEMENT.
4. THE DRAWINGS AND PROJECT MANUAL ESTABLISH DETAILED MINIMUM REQUIREMENTS FOR THE DESIGN AND CONSTRUCTION OF THE PROJECT. PARTIAL OR OUTDATED SETS OF CONTRACT DOCUMENTS SHOULD NOT BE DISTRIBUTED OR UTILIZED.
5. WORK IS TO COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES AND REGULATIONS IN FORCE AT THE TIME OF CONSTRUCTION.
6. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FEES FOR PERMITS PRIOR TO STARTING CONSTRUCTION. PERMITS ARE TO BE POSTED IN A CONSPICUOUS PLACE ON THE PROJECT SITE AS REQUIRED BY AUTHORITY HAVING JURISDICTION.
7. UNLESS SPECIFICALLY NOTED AS BEING RE-USED, MATERIALS FURNISHED AT THE JOB SITE SHALL BE NEW AND FREE FROM DEFECTS, AND SHALL BE STORED AT THE SITE IN SUCH A MANNER AS TO PROTECT THEM FROM DAMAGE. ALL WORK SHALL BE BEST PRACTICE OF EACH TRADE.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLETELY COORDINATE WORK AS REQUIRED TO MEET THE DESIGN INTENT AS DEFINED BY THE DOCUMENTS. THE CONTRACTOR SHALL LAY OUT AND SEQUENCE THE INSTALLATION OF WORK SO THAT THE DIFFERENT SYSTEMS DO NOT OBSTRUCT INSTALLATION OF SUBSEQUENT WORK. IN GENERAL, SYSTEMS INSTALLED FIRST SHOULD BE AS HIGH AND AS TIGHT TO THE STRUCTURE AS POSSIBLE TO ALLOW SPACE FOR SYSTEMS WHICH FOLLOW.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SUB-CONTRACTORS TO REVIEW DRAWINGS, PROJECT MANUAL, ADDENDA, BULLETINS, ETC. IN ORDER TO ENSURE COMPLETE COORDINATION OF WORK. FAILURE TO REVIEW AND COORDINATE ALL CONTRACT DOCUMENTS BY THE GENERAL CONTRACTOR WITH THE SUB-CONTRACTORS FOR APPLICABLE PORTIONS OF THE WORK DOES NOT RELIEVE ANY PARTY FROM PROVIDING MATERIALS AND WORK REQUIRED FOR A COMPLETE INSTALLATION.
10. THE PROJECT MANUAL, WHICH INCLUDES THE GENERAL CONDITIONS, SUPPLEMENTAL CONDITIONS, AND TECHNICAL SPECIFICATIONS, AND THE DRAWINGS, ARE COMPLEMENTARY AND TOGETHER DESCRIBE THE PROJECT REQUIREMENTS. WHERE THERE ARE DISCREPANCIES BETWEEN THE PROJECT MANUAL AND THE DRAWINGS, THE CONTRACTOR SHALL ADVISE THE ARCHITECT OF SUCH AND REQUEST CLARIFICATION. IN GENERAL, THE PROJECT MANUAL TAKES PRECEDENCE OVER DRAWINGS. LARGE SCALE DETAILS TAKE PRECEDENCE OVER SMALL SCALE DETAILS.
11. THE GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL VISIT THE SITE PRIOR TO BIDDING IN ORDER TO FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND THE IMPACT OF THE PROPOSED WORK INDICATED ON THE DRAWINGS AND SPECIFICATIONS ON THESE CONDITIONS. ANY QUESTIONS REGARDING THE COORDINATION OF NEW WORK WITH EXISTING CONDITIONS MUST BE SUBMITTED TO THE ARCHITECT IN WRITING PRIOR TO THE BID SUBMISSION AND WITH ADEQUATE TIME FOR RESPONSE TO ALL BIDDERS. THE ARCHITECT WILL RESPOND TO TIMELY QUESTIONS WITH A WRITTEN RESPONSE TO ALL BIDDERS.
12. ALL WORK NOTED "NIC" IS NOT IN CONTRACT. CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS ON SITE PER REQUIREMENT ESTABLISHED BY OWNER.
13. EXISTING DIMENSIONS AND CONDITIONS INDICATED IN THESE DOCUMENTS ARE FROM ELECTRONIC CAD INFORMATION PROVIDED BY THE OWNER AND ARE ASSUMED TO BE ACCURATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF SUCH INFORMATION PRIOR TO THE START OF CONSTRUCTION, AND ADVISE THE ARCHITECT OF ANY DEVIATIONS OR CONFLICTS WITH THE INFORMATION SHOWN ON THE DRAWINGS.
14. DRAWINGS ARE NOT TO BE SCALED. CONTRACTOR SHALL REFER TO THE DIMENSIONS INDICATED ON THE ACTUAL SIZES OF CONSTRUCTION ITEMS. WHERE NO DIMENSION OR METHODS OF DETERMINING A LOCATION EXISTS, VERIFY DIMENSION WITH ARCHITECT PRIOR TO LAYOUT AND INSTALLATION.
15. THE DRAWINGS AND REFERENCED DETAILS HAVE BEEN DIMENSIONED IN ORDER TO ESTABLISH THE CONTROL AND GUIDELINES FOR FIELD LAYOUT. WHERE DISCREPANCIES EXIST BETWEEN THE DRAWINGS AND FIELD CONDITIONS THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF SUCH PRIOR TO START OF WORK.
16. DIMENSIONS ON DOCUMENTS ARE TO FACE OF FINISH MATERIALS UNLESS OTHERWISE INDICATED.
17. WHERE DIMENSIONS INDICATED ARE NOTED AS VERIFY IN FIELD (VIF) THE DIMENSION SHOWN IS THE BASIS OF DESIGN, BUT MAY DIFFER FROM ACTUAL CONDITIONS. CONTRACTOR SHALL VERIFY THESE DIMENSIONS WHILE LAYING OUT THE WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING. WHERE DIMENSIONS ARE NOTED AS "+/-" FIELD DIMENSIONS MAY VARY FROM THE NOTED DIMENSIONS BY MINOR AMOUNTS. DISCREPANCIES OF MORE THAN 1" SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CONFIRMATION. DIMENSIONS NOTED AS "HOLD" OR "CLEAR" ARE TO BE ACCURATE TO WITHIN 1/4".
18. DETAILS ARE KEYED TO THE PLANS AT TYPICAL LOCATIONS. TYPICAL DETAILS APPLY TO ALL LOCATIONS WHICH ARE SIMILAR BUT ARE NOT NECESSARILY KEYED TO EVERY LOCATION TO WHICH THEY APPLY. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE LOCATION OF ALL TYPICAL DETAILS AND INSTALL THE WORK INDICATED. FEATURES NOT SHOWN IN THEIR ENTIRETY SHALL BE COMPLETELY PROVIDED AS IF SHOWN IN FULL. IF DISCREPANCIES EXIST, CONTRACTOR IS TO REQUEST CLARIFICATION BY THE ARCHITECT OF SUCH CONDITIONS.
19. FINISH FLOOR ELEVATIONS REFER TO TOP OF CONCRETE SLAB, UNLESS NOTED OTHERWISE. WHERE CONCRETE SLAB IS DEPRESSED TO ACCOMMODATE SETTING BEDS, RAISED ACCESS FLOOR, OR OTHER SIMILAR FLOOR ASSEMBLIES, FINISH FLOOR ELEVATIONS ARE TO TOP OF FINISH FLOOR ASSEMBLY INDICATED.
20. FIRE RATING "TAPES" INDICATED ON FLOOR PLANS SHOW EXTENT OF FIRE RATED PARTITIONS, BARRIERS AND FIRE WALLS. RATING IN A PARTITION SHALL BE CONTINUOUS AND SHALL CONTINUE OVER DOORS AND OVER AND BELOW WINDOWS WHETHER OR NOT THEY ARE SHOWN AS SUCH ON THE PLANS. REFER TO PARTITION DETAILS FOR REQUIREMENTS OF THE RATED ASSEMBLIES.
21. VERIFY AND COORDINATE SIZES, LOCATION AND MOUNTING REQUIREMENTS OF ALL EQUIPMENT AND FIXTURES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE REQUIRED BLOCKING, BACKING, SLEEVES, ETC. FOR A COMPLETE, NEAT INSTALLATION. COORDINATE INSTALLATION OF ALL SLEEVES AND OPENINGS AS REQUIRED THROUGH ALL EXISTING OR NEW CONSTRUCTION.
22. DETAILS INDICATE DESIGN INTENT OF WORK IN PLACE. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS OR DIMENSIONS AND ARE TO BE INCLUDED AS PART OF THE WORK.
23. PROVIDE PROTECTION FOR PEDESTRIANS OR OCCUPANTS OF ADJACENT AREAS OF THE BUILDING AS NECESSARY AND AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
24. MAINTAIN THE PREMISES CLEAN AND FREE OF TRASH AND DEBRIS. PROTECT PROJECT, THE SITE, AND PERSONAL PROPERTY FROM DAMAGE.
25. PROTECT WORK AREAS AND EXISTING ADJACENT AREAS, INCLUDING EXISTING UTILITIES, FROM DAMAGE. REPAIR, REPLACE, OR PATCH ANY DAMAGE DUE TO CONSTRUCTION. REPAIRED CONSTRUCTION IS SUBJECT TO REVIEW AND ACCEPTANCE BY ARCHITECT.
26. PROVIDE REQUIRED TEMPORARY UTILITIES, BRACING, SUPPORTS, SHORING, ETC. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN ADEQUACY AND SAFETY OF ERECTION.
27. CONTRACTOR SHALL MAINTAIN CURRENT UPDATED RECORD DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES.
28. CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO SITE SAFETY AND SECURITY FOR WORKERS AND GENERAL MEMBERS OF THE PUBLIC.
29. METAL FABRICATIONS AND SUPPORT ASSEMBLIES WHETHER SHOWN OR NOT SHALL BE PROVIDED FOR THE STRUCTURAL SUPPORT OF MISCELLANEOUS ELEMENTS. GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ENGINEERED STRUCTURAL ASSEMBLIES AND CALCULATIONS SHOWING COMPLIANCE WITH CODE REQUIREMENTS AND ACCOUNTING FOR STATIC AND DYNAMIC LOADS INCLUDING ANY WIND OR SEISMIC LOADS, THERMAL MOVEMENT OF SUPPORTING STRUCTURE AND DIMENSIONAL TOLERANCES OF THE BUILDING.
30. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL STIFFENERS, BRACING, BACK-UP PLATES AND SUPPORTING BRACKETS REQUIRED FOR APPROPRIATE INSTALLATION OF ALL TOILET ROOM ACCESSORIES AND PARTITIONS, AND ALL WALL MOUNTED OR SUSPENDED MECHANICAL, ELECTRICAL OR MISCELLANEOUS EQUIPMENT.
31. PIPE SLEEVES IN MECHANICAL EQUIPMENT ROOMS EXTEND 2" ABOVE THE FLOOR LINE. FILL THE ANNULAR SPACES OF PIPE SLEEVES THROUGH THE FLOOR OR THROUGH RATED WALLS WITH FIRE SAFING AND SMOKE SEAL COMPOUND AS INDICATED ON THE SPECIFICATION, AND AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
32. SIZES OF MECHANICAL EQUIPMENT PADS AND BASES SHOWN ON PLAN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY DIMENSIONS OF ALL PADS AND BASES WITH THE APPROPRIATE EQUIPMENT MANUFACTURERS. CONTRACTOR SHALL COORDINATE MOUNTINGS WITH APPROPRIATE EQUIPMENT MANUFACTURERS. PADS AND BASES SHALL BE INDICATED ON SUBMITTALS AND BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO LAY-OUT OF REINFORCING STEEL OR STEEL DECK.
33. PROVIDE ACCESS PANELS FOR MECHANICAL AND ELECTRICAL EQUIPMENT AS REQUIRED BY APPLICABLE CODES. ALL ACCESS PANELS IN GYP BOARD SHALL BE CONCEALED, MUD-IN TYPE. ELECTRICAL J-BOXES, PLUMBING CLEANOUTS, FIRE DAMPERS AND OTHER SIMILAR ITEMS REQUIRING ACCESS ARE NOT TO BE LOCATED ABOVE GYPSUM BOARD OR SIMILAR NON-ACCESSIBLE CEILING.

ABBREVIATIONS

ADJ	ADJACENT, ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
BLDG	BUILDING
CIP	CAST-IN-PLACE
CJ	CONSTRUCTION JOINT, CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR, CLEARANCE
CMU	CONCRETE MASONRY UNIT(S)
COL	COLUMN
CONC	CONCRETE
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DWG	DRAWING
EA	EACH
EF	EXHAUST FAN
EJ	EXPANSION JOINT
EL	ELEVATION (GRADE)
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXP	EXPOSED
EXT	EXTERIOR
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FFE	FURNITURE, FIXTURES & EQUIPMENT
FIN	FINISH, FINISHED
FR	FIRE RATED, FIRE RETARDANT
FRTW	FIRE RETARDANT TREATED WOOD
GA	GAUGE
GALV	GALVANIZED
GYP BD	GYPSUM BOARD
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT
INT	INTERIOR
LP	LOW POINT
MAX	MAXIMUM
MFR	MANUFACTURER
MIN	MINIMUM
MO	MASONRY OPENING
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OH	OPPOSITE HAND
OPP	OPPOSITE
OS	OVERFLOW ROOF SUMP
PL	PROPERTY LINE
PPT	PRESERVATIVE PRESSURE TREATED
PR	PAIR
PSF	PER SQUARE FOOT
RD	ROOF DRAIN
RS	ROOF SUMP
SC	SCUPPER
SF	SQUARE FOOT
SIM	SIMILAR
SPEC	SPECIFICATIONS
TYP	TYPICAL
UL	UNDERWRITER'S LABORATORIES
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT

GENERAL		
SHEET NUMBER	SHEET NAME	ISSUED FOR
GENERAL		
G-000	Coversheet	Addendum 2
G-011	Sheet Index	Addendum 2

STRUCTURAL		
SHEET NUMBER	SHEET NAME	ISSUED FOR
STRUCTURAL		
S-101	Crane Framing Plan and Notes	Addendum 2
S-102	Section and Details	Addendum 2

ARCHITECTURAL		
SHEET NUMBER	SHEET NAME	ISSUED FOR
ARCHITECTURAL		
AC101	Level 1 Life Safety Plan	Bids
AD101	Level 1 Demo Plan - Overall	Addendum 1
A-101	Partial First Floor Plan	Addendum 1
A-121	Partial First Floor Ceiling Plan	Bids
A-141	First Finish Plan	Bids
A-191	Roof Plan - Overall	Bids
A-201	Exterior Elevations	Addendum 1
A-571	Partition Types	Bids
A-601	Schedules	Addendum 2

LABORATORY		
SHEET NUMBER	SHEET NAME	ISSUED FOR
LAB		
AQ-001	Lab Details	Addendum 1
AQ-002	Lab Details	Bids
AQ-101A	First Floor Lab Area - A	Addendum 1
AQ-101B	First Floor Lab Area - B	Bids
AQ-411	Lab Elevations	Addendum 1
AQ-412	Lab Elevations	Addendum 1
AQ-600	Lab Equipment Schedule - Overall W	Addendum 1
AQ-601	Lab Equipment Schedule - Overall E	Bids
AQ-602	Lab Equipment Schedule	Bids

MECHANICAL		
SHEET NUMBER	SHEET NAME	ISSUED FOR
MECHANICAL		
M-001	Mechanical Notes, Legends & Abbreviations	Addendum 1
MD101A	Level 1 Mechanical Demo Plan - Sector A	Addendum 1
MD101B	Level 1 Mechanical Demo Plan - Sector B	Addendum 1
MD191	Roof Mechanical Demo Plan - Overall	Addendum 1
MH101	Level 1 HVAC Control and Pressurization Plan	Addendum 1
MH101A	Level 1 HVAC Plan - Sector A	Addendum 1
MH101B	Level 1 HVAC Plan - Sector B	Addendum 1
MH191	Roof HVAC Plan	Addendum 1
M-501	Mechanical Details	Addendum 1
M-521	Mechanical Support Details	Addendum 1
M-522	Mechanical Support Details	Addendum 1
M-601	Mechanical Schedules	Addendum 1
M-801	Control Diagrams	Addendum 1
M-802	Control Diagrams	Addendum 1

FIRE PROTECTION		
SHEET NUMBER	SHEET NAME	ISSUED FOR
FIRE PROTECTION		
F-001	Fire Protection General Notes	Bids
F-101	Level 1 Plan - Overall	Bids

PLUMBING		
SHEET NUMBER	SHEET NAME	ISSUED FOR
PLUMBING		
P-001	Plumbing Notes, Legends & Abbreviations	Addendum 1
PD101A	Level 1 Demo Plan - Sector A	Addendum 1
PD101B	Level 1 Demo Plan - Sector B	Addendum 1
P-101A	Level 1 Plumbing Plan - Sector A	Addendum 1
P-101B	Level 1 Plumbing Plan - Sector B	Addendum 1
P-501	Plumbing Details	Addendum 1
P-601	Plumbing Schedules	Addendum 1

ELECTRICAL		
SHEET NUMBER	SHEET NAME	ISSUED FOR
ELECTRICAL		
E-001	Electrical General Notes & Abbreviations	Bids
E-002	Electrical Legends	Bids
E-003	Electrical Legends	Bids
ED101	Level 1 Demo Plan	Bids
EL101	Level 1 Lighting Plan	Bids
EP101	Level 1 Power Plan	Bids
EP102	Roof Demo & Power Plan	Addendum 1
E-401	Enlarged Plans	Addendum 1
E-501	Details, One Line Diagrams	Bids
E-502	Lighting Fixture Schedule and Control Matrix	Bids
E-601	Panel Schedules	Addendum 1
E-801	Electrical Specifications	Bids
E-802	Electrical Specifications	Bids

REFERENCE - FIRE ALARM	
SHEET NUMBER	SHEET NAME
REFERENCE - FIRE ALARM	
MET-01	Drawing Index & Cover Sheet
MET-02	Partial System Riser M1 Lab Renovation Area
MET-03	SLC Wiring Details
MET-04	Duct Detector Details
MET-05	Strobe Power Supply (NAC) Detail
MET-06	Floor Plan Area -A
MET-07	Floor Plan Area -B

REFERENCE - GAS DETECTION	
SHEET NUMBER	SHEET NAME
REFERENCE - GAS DETECTION	
MET-GD	Gas Detection

DETROIT

Detroit Diesel Corporation

Detroit Diesel M1 Met Lab Renovation

12200 Telegraph Rd
Redford Charter Twp, MI 48239

Date	Issued For
06/18/2025	D.D. 50%
10/03/2025	C.D. 75%
12/12/2025	C.D. 100%
03/19/2026	Bid Set
04/24/2026	Bids
05/21/2026	Addendum 1
05/28/2026	Addendum 2

HED

125 West 5th St
Royal Oak, Michigan
48067 USA

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WWW.HED.CO

STAMP AND SEAL LOCATION WHEN JURISDICTION STAMP AT TOP

2025-DD016-001

Sheet Index

G-011

GENERAL STRUCTURAL STEEL NOTES / Division 5

1. STRUCTURE STABILITY: The structure is designed to be stable and self-supporting ONLY after all components are completely installed. Erector is solely responsible for determining erection sequence and procedure to ensure stability during construction. This shall include all temporary shoring and bracing, to remain in place until all components are in place and complete.

2. STANDARDS: Fabrication, and erection of steel work shall conform to the latest edition AISC 'Specification for Structural Steel Buildings' (ANSI/AISC 360) – Allowable Stress Design; 'Code of Standard Practice (AISC 303); RCSC 'Specification for Structural Joints Using High Strength Bolts (AISC 348)'; and 'Structural Welding Code -Steel' (AWS D1.1).

3. MATERIALS: Miscellaneous steel and framing angles shall conform to ASTM A36: Wide flange steel shapes ASTM A992 (Fy=50 ksi): Hollow sections ASTM A500 Gr C (Fy=46 ksi for rounds, Fy=50 ksi for square and rectangular); High Strength Bolts ASTM F3125 Grade A325; Anchor Rods and Anchor Bolts ASTM F1554 Grade 36 or 55/51; Headed shear studs ASTM A1044, minimum 3/4"diameter, Nelson S3L for shear connectors, H4L for concrete anchors of Nelson Stud Welding, or approved equal.

4. STEEL DECKING (If required for Patching): Design, manufacture and erection of all steel deck shall be in accordance with the latest edition SDI 'Design Manual for Composite Decks, Form Decks and Roof Decks'. Material shall be minimum 20 gage (0.0358"), Fy=33 ksi, G30 galvanized material, unless noted otherwise. Roof decking shall be 1-1/2" wide rib (Type B) sized for (3) span condition. Fasten to steel supports per SDI guidelines with minimum (3) connections per sheet at each support, maximum 12" c/c (pattern 36/4) and (1) sidelap fastener per span. Sidelaps shall be nested. Provide weld washers for material less than 0.028" thick (24 gage). Fastener strength shall be equivalent to 5/8" diameter puddle welds at spacing noted. For galvanized deck use mechanical fasteners. Adjust spacing as required to maintain strengths noted.

5. CONNECTIONS: Shop connections shall be welded, field connections bolted. Work point shall be at intersection of member centerlines unless noted otherwise. Connections to existing steel shall be field drilled and bolted, u.n.o. Beam connections shall support minimum 15,000 Lb. capacity. Minimum (2) 3/4" diameter high strength bolts in bearing type connection with threads included in shear plane (type N). Extend bottom of connection below member centerline, with top of connection within 3" of the top of member, unless noted. All bolts shall have heavy hex nuts (ASTM A563) and hardened washers (ASTM F436) where required. Lock washers are NOT permitted. Provide minimum 3/8" thick material where single angle or plate connections are used.

6. BOLTS AND WELDS: Tighten bolts 'snug-tight', unless noted otherwise in bolt spec. Welding shall conform to AWS standards using certified operators, with E70xx electrode (u.n.o.). Minimum fillet weld size 3/16" for all strength welds unless otherwise indicated in reference specification. All welds shall be continuous unless noted otherwise. Exposed exterior construction shall have continuous seal welds at all joints in addition to strength welds. Obtain Owner approval and burn permit prior to field welding or cutting. Maintain continuous fire watch during all field welding and cutting operations.

7. CONCRETE ANCHORS: Minimum 3/4" diameter epoxy adhesive type or coarse thread screw anchor as indicated. Unless noted otherwise provide manufacturers standard embedment for each type; minimum 6 5/8" for epoxy type, or 4" for screw anchor type. Epoxy anchors 'HAS Standard rod with HVA Adhesive' or 'HIT HY-200; Coarse thread screw anchors 'Kwik HUS-EZ'. Products of Hilti Corporation, or approved equal. All anchors within 8" of an edge shall be epoxy type.

8. MASONRY ANCHORS: Hollow masonry wall face shell anchors minimum 3/4" diameter, 'HIT HY-70' of Hilti Corporation, or approved equal.

9. LEVELING BEDS: Grout miscellaneous items as required to level at proper elevation with cementitious non-shrink grout conforming to ASTM C-1107, grade C. Minimum 28-day compressive strength 7,000 psi; 'Five Star Grout' or 'Five Star Instant Grout' of Five Star Products., or approved equal.

10. GRATING: Light duty welded steel bar type with plain 3/4" x 3/16" bearing bars @ 19/16" c/c, cross bars 4" c/c (Type 19-W-4), with trim banding. Finish to be standard black.

11. ANCHORS FOR BUILT IN WORK: Anchors for embedded steel shall be strap anchors minimum 3/16 x 2 x 6 with 2" returns or 3/4" diameter x 6" long headed studs (ASTM A108) spaced at 24" c/c, u.n.o.

12. LOOSE STEEL LINTELS: Provide (1) steel angle lintel for each 4" of masonry width. For openings less than 5'-0", L6 x 3 1/2 x 3/8 LLV and for openings up to 8'-4", unless noted otherwise. Lintels shall have minimum 8" bearing, u.n.o. Fill cores minimum (3) courses below bearing plates with grout. Grout bearing pockets solid after installation of steel framing.

13. OPENINGS: Frame free edges of all roof openings larger than 24" x 24" with C6x8.2 frame, u.n.o. Use L4x4x1/4 frame for smaller openings. Reinforce openings smaller than 12" per metal deck specifications. Coordinate with other trades for exact size and location prior to fabrication. As an alternate pre-fabricated deck support frames may be used as manufactured by 'QuickFrames' or approved equal.

14. MISCELLANEOUS FRAMING: Provide shelf angles at top of columns, spandrel beams and elsewhere as required to support free edges of metal deck. Refer to architectural and other trades drawings for additional clips and plates required for miscellaneous framing.

15. PREPARATION: Clean steel of all mill scale, loose rust, spatter, slag, and foreign matter per SSPC SP-2, SP-3 or SP-6 prior to painting. For exterior applications use SP-6 only. Lead paint removal and disposal at existing construction shall be performed per all federal and local regulations. Shop prime paint all structural steel except surfaces to be cast against concrete, with 2.0 mil minimum thickness of rust-inhibitive lead and chromate free primer paint, SSPC Paint 25, light grey or white, (PPG QAP-111). Coordinate with galvanizing applicator for additional requirements as required.

16. FABRICATION: Conform to tolerances of referenced specifications. All members shall be continuous for entire length between supports, u.n.o. NO members may be spliced without Engineer's written approval, and ONLY outside middle 1/3 of span. Fabricate members with the natural camber up. Cut member ends square. Compression members shall be milled for full contact at bearing ends. Double angles shall be long legs vertical (LLV), back to back. Holes shall be cut, punched or drilled perpendicular to surface, burning is NOT permitted.

17. DETAILING: Unless indicated otherwise use standard hole size and spacing for all connections. Holes shall be 13/16" diameter for 3/4" bolts, 11/16" diameter for 5/8" bolts. Space adjacent fasteners 3" center-center, on standard member gage lines. End distance 1 1/4".

18. FIELD WORK: Members shall NOT be altered in the field from that shown on design and fabrication drawings without Engineer's written approval. Mismatched holes shall be reamed to a larger diameter.

19. GALVANIZED FINISHES: Hot dip galvanize members all exterior and exposed members (including lintels in exterior walls) and where indicated (coordinate with architecture). ASTM A123 for fabricated steel products; ASTM A153 Class C hardware, ASTM B695 Class 50 for fasteners. Do NOT quench items noted to be painted after galvanizing. Touch up damaged galvanized surfaces with hand applied galvanizing repair paint, SSPC Paint 20.

20. FINISHING: Erector shall apply touch up paint after erection to areas where shop coating has been damaged, to all field bolts, welds, and other unpainted areas using same paint as shop coat. Finish members with minimum 2.0 mil thickness of full gloss alkyd-enamel paint, minimum (2) coats (FS-TT-E-489). Colors as selected by Owner from manufacturers' standard color charts. Unless otherwise directed, guarding shall be 'Safety Yellow', and other work shall match adjacent existing finishes.

21. QUESTIONS: Response will ONLY be made to written or email requests for information. Direct and route all questions to the Engineer and Owner's Agent;

ENGINEER: Mr. Frank Schwarzkopf FSchwarzkopf@COREdg.net 248.613.5091

GRAPHIC SCALES

CRANE SYSTEM SPECIFICATIONS / Division 14

1. SCOPE: Provide the following system including all splices, track, header steel, trolleys, connectors, cable, junction boxes, brackets, clamps, and end stops required for complete installation.

2. STANDARDS: Installation and testing shall comply with the latest requirements of CMAA Specification No. 74, ANSI/ASME HST Hoist Performance and B30 Safety Standards, ANSI/MMA MH 27.1 Underhung Crane and Monorail Standard Michigan OSHA and 29 CFR Part 1910 (General Industry) and Part 1926 (Construction).

3. SUBMITTALS: Catalog cuts of each component indicating clearances, weights, wheel loads and other pertinent data. Layout drawings of each system indicating locations of utility connections, track splices, and actual component travel for hook pickup.

4. FINISHING: Erector shall apply touch up paint after erection to areas where shop coating has been damaged, to all field bolts, welds, and other unpainted areas using same paint as shop coat. Finish members with minimum 2.0 mil thickness of full gloss alkyd-enamel paint, minimum (2) coats (FS-TT-E-489). Colors as selected by Owner from manufacturers' standard color charts to match adjacent existing finishes. On crane systems provide allowable rated load markings on all components clearly visible from operator position, each side of each runway and bridge girder,as required by referenced specifications. Typical finish colors;

Header Steel	White (PPG QAP-111)
Enclosed Rail Cranes	International Orange
Patented Track Runways	Manufacturer's standard Gray-Green

5. RATED CAPACITY: Designed for 1-Ton (2,200 Lb.) capacity.

PENDANT CONTROLS: (4) function electric pendant control (hoist up/down and system on/off switch) including an 'ON' indicator light and red colored emergency 'OFF' switch.

HOIST: Multiple speed, standard headroom, electric chain hoist with chain container (minimum Duty Class H3) and side open (Bullard) safety hook with self-closing gate. Minimum 16'-0" lift, top hook for mounting to clevis, 24/6 fpm lift speed, upper and lower limits, overload device, and pendant controls.
'Demag DC-Pro' series as manufactured by Terex or approved equal
Headroom = 26", Weight = 125 Lbs.

CARRIER: Plain manual trolley with bolts or clevis for hoist hook mount. Trolley wheels shall be compatible with track.

BRIDGE: Manual underhung single girder crane, with overhangs as indicated and double end stops plus safety cables each end, standard wheelbase bridge end trucks compatible with runways.
'ETA-8' Enclosed aluminum runway (8" @ 8.16 plf) with steel I-beam 'Strongback' cap
as manufactured by Unified Industries. Combined section weight 12.5 plf
Bridge overhang 22" each end.
End truck minimum wheelbase 12". Minimum overall end truck length 21". Weight 60 Lbs.

RUNWAY: Patented track with brackets for power supply as required, and double end stops with safety cables each end or where indicated. Supplier shall cut track to final length and punch holes for all end stops, splices, and electrification attachments. Holes for top flange and web connections shall be installed by final installation Contractor. Splice track ONLY at supports.
'Cleveland-Tramrail 'TARCA track series 5100 (12.5" @ 33 plf, Top Flange 8 1/2" x 1/2")

ELECTRICAL POWER: Provide flat cable and carriers as required along bridge and runway for component travel. Furnish terminal end connection at end of runway for connection to power supply furnished by Others. Coordinate with Owner for power requirements and location of disconnects.electrical

Arrange electrical power supply to allow for the following maximum hoist pickup areas:

North Crane – Maximize hoist pickup at North and West ends.
Power assumed to begin from NE runway end

South Crane – Maximize hoist pickup at South and East ends.
Power assumed to begin from SE runway end.
Crane hook must cover saw table shown on plan.

Both Cranes – Hoist hook coverage for both cranes shall overlap below common center runway to allow for parts drop and transfer between systems.

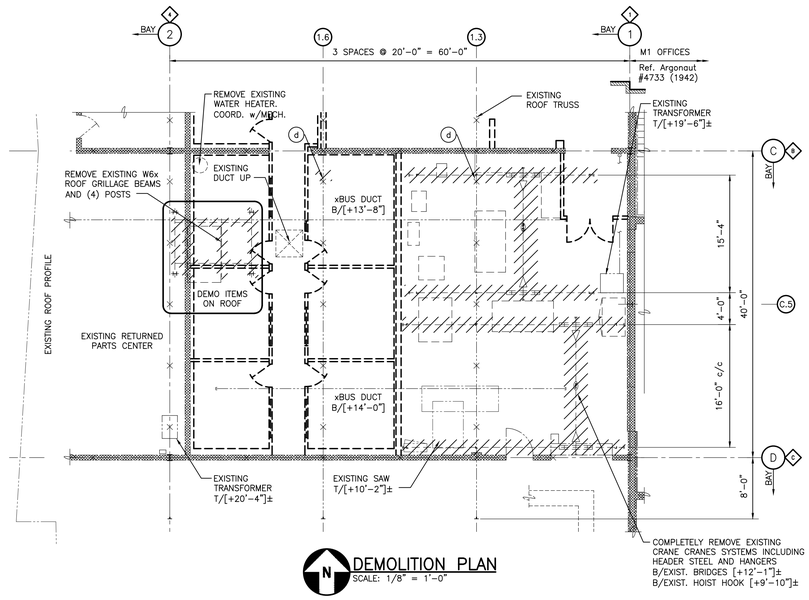
Disconnect – Provide disconnect per Owner's requirements at floor level assumed along South wall.

CRANE LOAD DATA

LIVE LOAD	Net System Rated Load	2,2000 Lbs. (1-Ton)	
DEAD LOADS	Hoist and Trolley	300 Lbs.	Estimated
	Total Bridge Self Weight	500 Lbs.	Estimated
VERTICAL IMPACT	Minimum 15% of applied load for powered components Design of supports is based on Loads indicated. Crane supplier shall adjust final design based on actual component loads unless noted otherwise.		

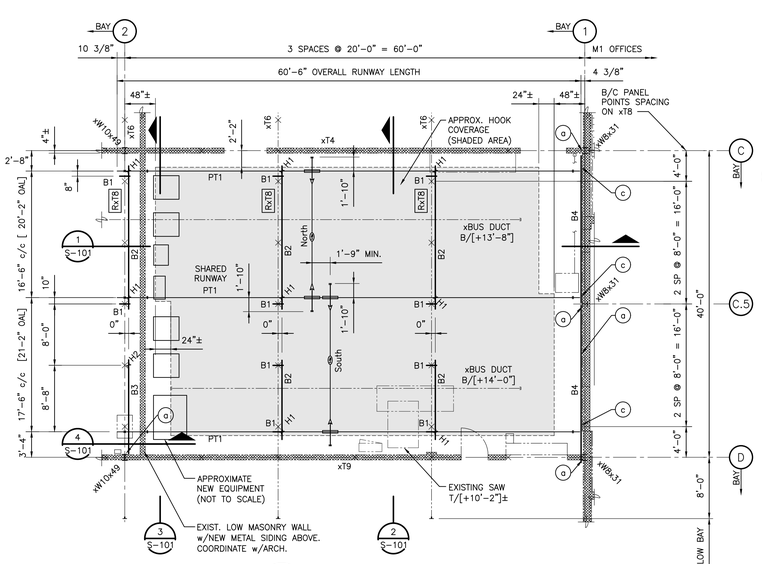
MATERIAL SCHEDULE

MARK	SHAPE	MATERIAL	TOP ELEV.	NOTES	Depth	Gage
B1	I	W8 x 28	+22'-10 3/4"	UPPER FILL. CLAMP TO B/xTRUSS	8"	3 1/2"
B2	I	W8 x 28	+22-2 3/4"	UPPER SPREADER. T/FLUSH w/BOT. B1		
B3	I	W8 x 28	+14'-8"	B/FLUSH w/TOP PT1. LOW HEADER (WEST)		
B4	I	W16 x 36	+14'-1 1/2"	DIRECTLY BOLTED TO xCOLUMNS. EAST LOW HEADER	15 7/8"	3 1/2"
PT1	T	Patented Track	+14'-0"	SEE Division 14 NOTES	12 1/2"	3 1/2"
H1 H2	+	(2)-L3x3x1/4		TYPICAL HANGER w/(2) ROWS HS BOLTS, DIRECT BOLT BOTTOM, CLAMP TOP FOR ADJUSTMENT	3"	1 3/4"
K1-K4	⌐	L3x3x1/4		TYPICAL DIAGONAL BRACING w/(1) HS BOLT EA. END		
RF1	[	C6 x 8.2		TYPICAL MISC. ROOF OPENING FRAME		
		Note: HISTORIC SHAPE DESIGNATIONS USED FOR DETAILING AT EXISTING MEMBERS				
xP1	I	W10 x 15	+28'-5 3/4"± (HP)	TYPICAL ROOF PURLIN	–	–
xB12	I	W12 x 25	+27'-7"±	TYPICAL Line 1 SPANDREL BEAM	–	–
xB14	I	W14 x 30	–	B/+16'-0"± South B/+16'-6"± North	13 7/8"	3 1/2"
xT4 xT4a	ROOF TRUSS (RIVETED)		B/+18'-2 3/4"±	B/CHORD (2)-L4 x 3 1/2 x 3/8, LLV + PL 3/8 x 8 (Horiz), 24'-0" LONG (Centered) at Bottom		
xT6			B/+22'-10 3/4"±	B/CHORD (2)-L4 x 3 x 1/4, LLH		
xT8				B/CHORD (2)-L3 1/2 x 3 x 1/4, LLH		
xT9			B/+19'-5 3/4"±	B/CHORD (2)-L4 x 3 x 3/8, LLV + PL 3/8 x 8 (Horiz), 24'-0" LONG (Centered at Bottom)		



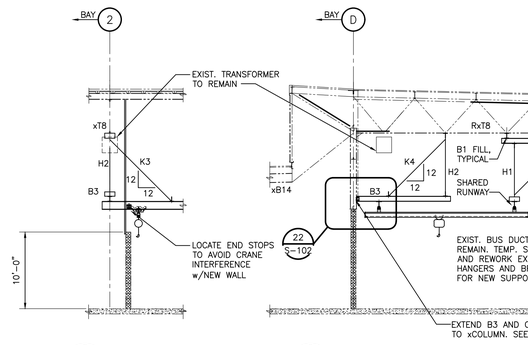
DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

Note: EXISTING WALLS TO BE REMOVED ARE FOR REFERENCE ONLY. SEE ARCHITECTURAL FOR ACTUAL EXTENT.



NEW CRANE LAYOUT PLAN
SCALE: 1/8" = 1'-0"

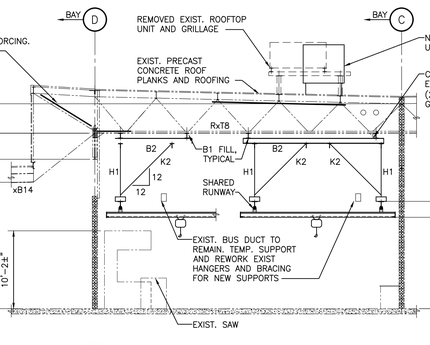
Notes:
1. ELEVATIONS NOTED [+ or -] FROM REFERENCE FINISH FLOOR ELEVATION 148'-6" = 0'-0" UNLESS NOTED OTHERWISE.
2. REFERENCE ORIGINAL Argonaut AEC JOB #1755 DATED 1937 FOR AREA WEST OF COLUMN LINE 1. SEE PLAN NOTE FOR M1 OFFICE AREAS EAST OF LINE 1.
3. EXISTING TRUSS B/CHORD ELEVATION [+22'-10 3/4"]± UNLESS NOTED OTHERWISE.
4. REFERENCE CORE Design Group JOB 17-120.DDC FOR EXISTING CRANES IN BAYS B2-C2.
5. NEW CRANE SYSTEMS DESIGNED FOR 1-Ton (2,200 Lb.) CAPACITY BASED ON Kellerin Equipment PROPOSAL 250403-3R DATED 16 April 2025.



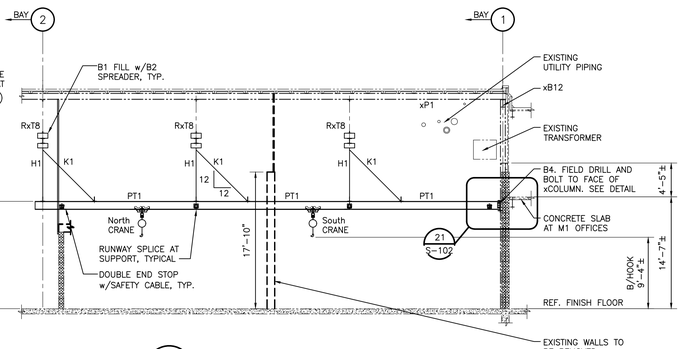
4 SECTION
S-101 SCALE: 1/8" = 1'-0"

SEAL ALL WALL PENETRATIONS. COORDINATE w/ARCH.

3 ELEVATION LOOKING WEST AT LINE 2
S-101 SCALE: 1/8" = 1'-0"



2 ELEVATION LOOKING WEST
S-101 SCALE: 1/8" = 1'-0"



1 SECTION LOOKING NORTH
S-101 SCALE: 1/8" = 1'-0"

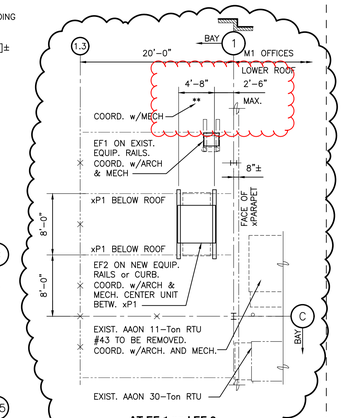
Note: DIAGONAL BRACES K1-K4 ARE TYPICAL AND SHALL BE PROVIDED AT EACH HANGER WHERE NOTED. MEMBERS ARE NOT SHOWN ON PLAN FOR CLARITY

LEGEND:

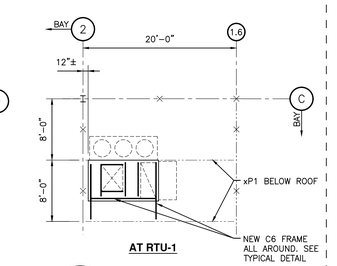
- COLUMN MARK ON ORIGINAL REFERENCE DRAWINGS, TYP.
- CURRENT COLUMN LINE DESIGNATION, TYPICAL
- 'x PREFIX = EXISTING CONSTRUCTION
- EXISTING CONSTRUCTION
- NEW CONSTRUCTION
- HIDDEN or DEMOLITION (AS NOTED)
- DEMOLITION
- TRUSS PANEL POINT
- BRIDGE GIRDER w/END TRUCK AND DOUBLE END STOPS
- HOIST ON BRIDGE GIRDER
- SECTION # ON SHEET / TITLE / SCALE: NONE / SHEET WHERE CUT OR DRAWN

ABBREVIATIONS

AFF	ABOVE FINISH FLOOR
B/	BOTTOM OF....
c/c	CENTER TO CENTER
EL	ELEVATION
FS	FAR SIDE
FV	FIELD VERIFY
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
NIC	NOT IN CONTRACT
NS	NEAR SIDE
NTS	NOT TO SCALE
OAL	OVERALL LENGTH
T/	TOP OF.....
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
WP	WORK POINT



AT EF-1 and EF-2



AT RTU-1

PARTIAL ROOF PLANS
SCALE: 1/8" = 1'-0"

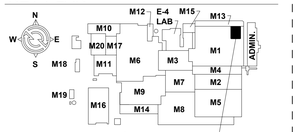
RTU-1new equipment design based on AAON 20 Ton AIR COOLED CONDENSING UNIT
MODEL RN-020-3-0-GAAY-YO-21-000-A.
Footprint Area = 54" x 97"
Operating Weight = 2,885 Lbs.

**COORDINATE FINAL SIZE AND LOCATION w/CERTIFIED EQUIPMENT DRAWINGS AND MECHANICAL.

PLAN KEY NOTE LEGEND

- a EXTEND HEADER AND CONNECT TO EXISTING COLUMN. SEE DETAIL
- b EXTEND HEADER AND CONNECT TO EXISTING COLUMN FLANGE. SEE DETAIL
- c EXTEND RUNWAY AND CONNECT TO WEB OF NEW HEADER. SEE DETAIL
- d CUT AND REMOVE EXISTING GUSSET PLATE AT B/TRUSS. SEE ELEVATION.

KEY PLAN



DETROIT

Detroit Diesel Corporation

Detroit Diesel M1 Met Lab Renovation

12200 Telegraph Rd
Redford Charter Twp, MI 48239

Date	Issued For
07/18/2025	D.D. 50%
10/03/2025	C.D. 75%
12/12/2025	C.D. 100%
04/24/2026	BIDS
05/21/2026	ADDENDUM 01
05/28/2026	ADDENDUM 02

CORE Design Group
Engineering / Consultants
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Tel: 248.491.3234 / www.COREdg.net
Job #25-017.DDC / Structural Engineering

HED
125 West 5th Street
Royal Oak, Michigan
48067 USA
(248) 262-1500
WWW.HED.CO

2025-DD016-001

CRANE FRAMING PLAN AND NOTES

S-101

REINFORCING EXISTING TRUSS GENERAL NOTES

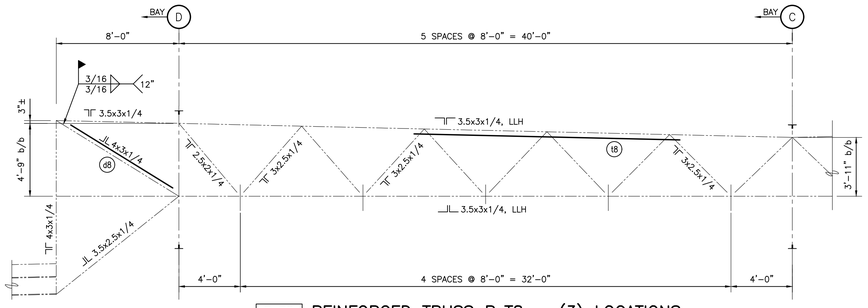
(WORK WITH GENERAL STEEL NOTES)

1. MEMBERS: All new reinforcing (plates and shapes) shall be (1) piece. For compression members mill ends at splices to provide full bearing area.
2. EXISTING LOADS: Before reinforcing existing members, remove all live load from the areas of influence.
3. PREPARATION: Before welding reinforcing to the existing members, thoroughly clean all surfaces to remove paint, dirt, and other foreign matter in the area of welding. Assume existing original paint is lead based. Include allowance for testing and abatement prior to commencing work.
4. EXECUTION: Weld reinforcing material to existing steel members before welding at joints. Material shall be continuous through joints. Where plate has to be stopped or slotted at existing gusset plates or web members, provide full penetration weld between new material and existing. In no case shall total area of steel be reduced at the joints.
5. TRUSS MEMBER ENDS: Add gusset plate to match existing where existing gusset plate is not long enough to provide required weld length on the new reinforcing or to develop the shear in the chord stem. Weld new material to existing, full length of contact, with full penetration groove or butt weld, minimum 6" long.
6. RIVET INTERFERENCE: Where existing rivet heads interfere with new reinforcement, new reinforcing shall be burned out as required to accommodate the rivet head. Weld burned area to existing steel.
7. SUBMITTALS: Fabricator shall submit shop drawings for each truss showing welding joint details for approval. Provide detail of existing end connections including work lines, bolt size, spacing and gage, and angle thickness to determine if reinforcement is required unless detailed otherwise

GENERAL CONCRETE NOTES / Division 3

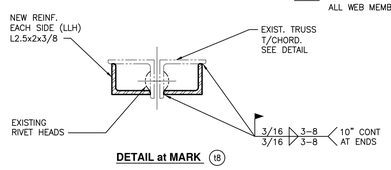
(Work with Written specification)

1. STANDARDS: Conform to the latest editions: 'Specifications for Structural Concrete for Buildings' (ACI 301), 'Building Code Requirements for Reinforced Concrete' (ACI 318); 'Guide to Hot Weather Concreting' (ACI 305); 'Guide to Cold Weather Concreting' (ACI 306); ACI 'Manual of Standard Practice for Detailing Reinforced Concrete Structures' (SP-66).
2. FILL AND/OR BACKFILL: Engineered fill consisting of approved granular materials; ASTM soil classification groups GW, GP, GM, SW, SP, and SM, or a combination of these group symbols; free of rock or gravel larger than 3" in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter, (MDOT Class II). Place at +/- 2 % of optimum moisture content in maximum lifts of 9" loose thickness. Compact to not less than 95% of the maximum dry density, determined per ASTM D1557. Slabs on grade shall bear on minimum 6" compacted fill, u.n.o.
3. FLOWABLE FILL: Controlled Low Strength Material (CLSM) may be used in place of backfill and for abandoned pits and piping. Conform to requirements of ACI 229. Minimum compressive strength of 100 psi at 7 days as measured by 2"x2" cubes. Minimum cement content of 100 Lbs. per cubic yard Portland cement, 1,450 Lbs. Type F fly ash, and water to provide minimum slump of 10".
4. CONCRETE MIX: ASTM C150 type I Portland cement. Aggregates shall be ASTM C33 normal weight aggregates, maximum 3/4", u.n.o. Fine: MDOT 2NS; Coarse: MDOT 17A (3/4"), MDOT 6AA (1"). Provide air entrainment for exterior and exposed concrete (min. 4.5%, max. 7%). Minimum 28 day compressive strength of 4,000 psi, u.n.o. Minimum cement content by weight, 6 bags per C.Y. Limit slump to 1" minimum, 4" maximum. Use of fly ash (ASTM A618 Type F), limited to less than 25% by weight of cement. GGBFS 'Slag Cement' (ASTM C989 Type 100) may only be used with prior approval from Engineer, maximum 25% by weight of cement. Submit mix designs to Engineer for approval prior to starting work.
5. STEEL REINFORCEMENT MATERIALS: Bar reinforcing ASTM A615, grade 60. Welded wire fabric reinforcement shall conform to ASTM A-185 (smooth wire Fy=60 ksi, deformed wire Fy=70 ksi), with laps of (2) wire spaces, minimum 8". Welded steel rod mat reinforcing per ASTM A184 may be submitted as alternate to steel bar reinforcing for review.
6. STEEL REINFORCEMENT DETAILS: At all openings in walls and slabs over 12" in the longest dimension, provide (2) #5 bars all around. Bars shall be diagonal at corners of floor openings. All field bending shall be done cold, heating of bars is NOT permitted.
7. SLAB ON GRADE: Where existing slab on grade is to be removed and replaced, provide new 8" slab on 6" compacted engineered fill. Reinforce with (2) layers 4x4-W4xW4 w.w.f. or #4 at 12" each way, top and bottom, u.n.o. Installer may substitute alternate reinforcing bar or wire size, gage and spacing of equivalent area.
8. CONNECTION TO EXISTING WORK: Where new work abuts existing construction, clean and roughen existing surface and coat with epoxy bonding agent (ASTM C881) prior to placing new concrete (Sika 'Sikadur 32 Hi-Mod'). Provide dowels to match size and spacing of new reinforcing, minimum #4 @ 12" c/c, 2'-0" long, drilled and grouted to existing using HILTI HVA Adhesive System. Dowels shall use manufacturer's standard embedment, minimum 4-1/4", into existing.
9. FORMS AND REINFORCING: Provide CRSI approved metal or plastic supports as required to rigidly and accurately hold reinforcing steel and built in work in place as shown to avoid displacement during concrete placement. Wood, masonry, brick or other scrap material may NOT be used for supporting reinforcing. Clean formwork of all laitence and debris and protect prior to placing concrete. All exposed edges shall have minimum 3/4", 45 degree chamfer.
10. CURING: Keep concrete wet for not less than (7) days by covering with an approved water saturated covering or any other approved method (including chemical curing and sealing compounds) that will keep all surfaces continuously (not periodically) wet.
11. FORMED SURFACES: Remove projections from all exposed surfaces and cut back all metal form ties and spreaders 1-1/2" from the surface of the concrete. All holes or honeycombs shall be pointed with patching mortar or cement.
12. FINISH: Exposed, formed surfaces shall have smooth form finish. Slabs shall receive float and steel trowel finish. Finish slabs and flatwork to minimum tolerance of F(f) 30 and F(l) 25 in accordance with ASTM E 1155.

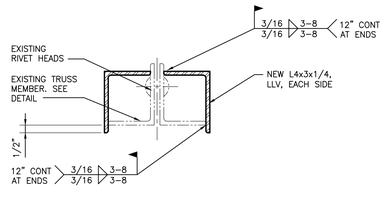


RxT8 REINFORCED TRUSS RxT8 – (3) LOCATIONS
SCALE: 1/4" = 1'-0"

NOTE: ALL MEMBERS ARE LLV, UNLESS NOTED OTHERWISE.
ALL WEB MEMBERS ⊤ 2 1/2 x 2 x 3/16, LLV, U.N.O.

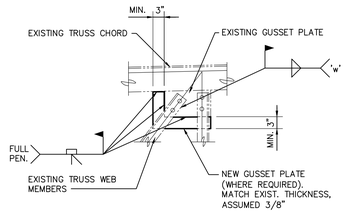


DETAIL at MARK 18



DETAIL at MARK d8

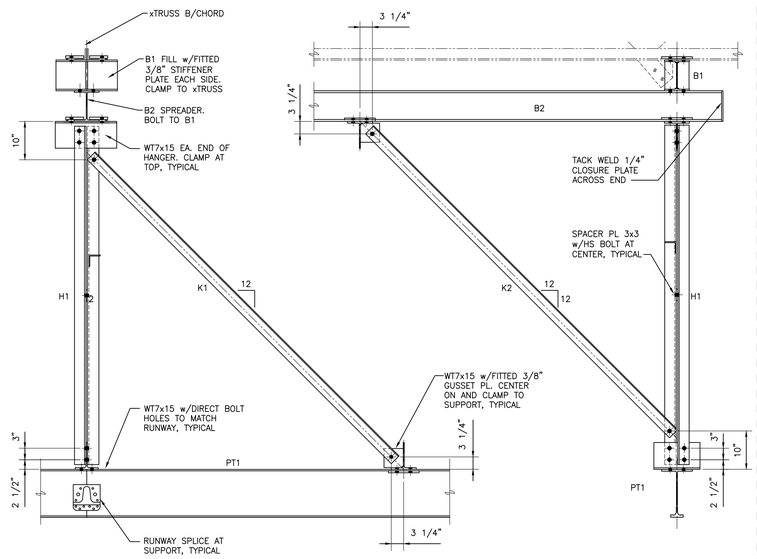
TRUSS MEMBER REINFORCING DETAILS
SCALE: 3" = 1'-0"



'w' = INDICATES CUMULATIVE WELD LENGTH (SUM OF HEAL and TOE WELDS AT ANGLE SHAPES) REQUIRED AT EACH END, OF EACH ANGLE FORMING THE EXISTING DIAGONAL OR VERTICAL TRUSS MEMBER. THE INDICATED WELD IS INTENDED TO REPLACE THE STRENGTH OF THE RIVETS.

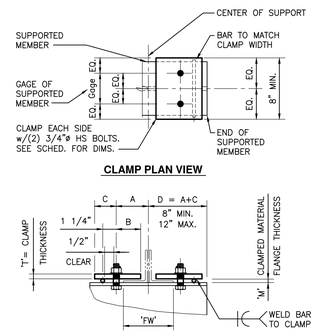
INSTALLER SHALL FIELD VERIFY EXISTING GUSSET PLATE DIMENSIONS PRIOR TO ERECTION

TYPICAL TRUSS MEMBER END REINFORCING DETAIL
SCALE: NONE



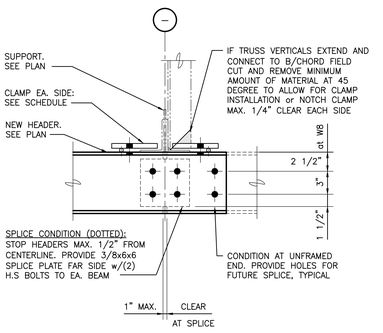
TYPICAL CLAMP HANGER AND BRACING CONNECTION DETAILS
SCALE: 3/4" = 1'-0"

Note: CONDITION AT H1 SHOWN, H2 SIMILAR
CUT pc W8 MAY BE SUBSTITUTED FOR WT7



CLAMP PLAN VIEW

CLAMP SECTION



FRAMING PERPENDICULAR TO SUPPORT CLAMP

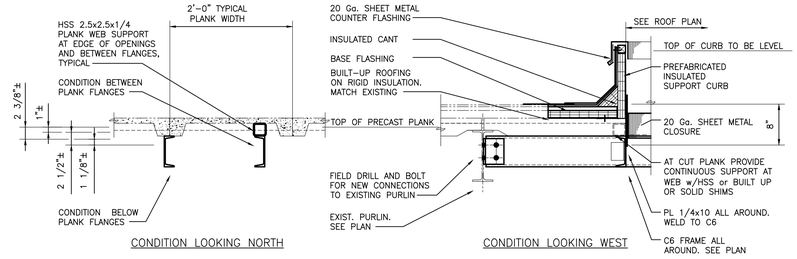
Note: CONDITION SIMILAR AT PATENTED TRACK RUNWAYS MAX. 1/16" CLEAR AND PROVIDE MANUF. SPLICE PLATES

TYPICAL CLAMP AND CONNECTION DETAILS
SCALE: 1 1/2" = 1'-0"

CLAMP SCHEDULE Note: ALL DIMENSIONS IN INCHES

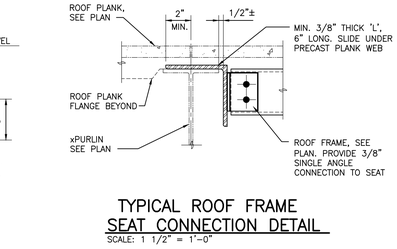
MARK	SHAPE	FW	A	B	C	M	ROD ø	k1 or k
xT8	(2)-L3 1/2 x 3 x 1/4, LLH	7 1/2	4 3/8	3 1/4	1 3/4	1/4	3/8	11/16
–	W8 x 24 Gage = 3 1/2	6 1/2	3 7/8	3 1/4		3/8	1/2	9/16
–	W8 x 28 Gage = 3 1/2					7/16	1/2	9/16
–	xW10 x 15 Gage = 2 1/4	4	2 5/8	2 1/8		1/4	3/8	7/16

Clamp Schedule Notes:
1. ALL CLAMP PLATES 5/8" THICK, 8" WIDE UNLESS NOTED OTHERWISE
2. ALL DOUBLE 'L' MEMBERS 3/8" b/b
3. CLAMPS FOR LATERAL BRACING CONNECTIONS AND TOP BEARING CONNECTIONS MAY BE REDUCED TO MINIMUM 3/8" THICKNESS
4. SEE MATERIAL SCHEDULE FOR ADDITIONAL MEMBER SIZE INFORMATION.
5. HISTORIC SHAPE DESIGNATIONS INDICATED FOR DETAILING AT EXISTING MEMBERS.



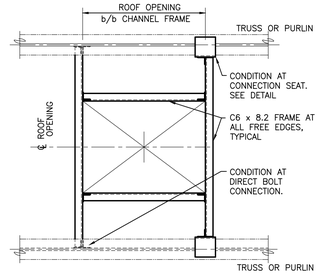
TYPICAL ROOF FRAME AND CURB DETAILS
SCALE: 1" = 1'-0"

Notes:
1. WITHIN LIMITS OF ROOF CURB BELOW NEW UNIT REMOVE ALL ROOFING AND INSULATION DOWN TO TOP OF EXISTING PRECAST CONCRETE PLANKS.
2. CUT OR DAMAGED EXISTING PRECAST CONCRETE ROOF PLANKS MAY BE REPLACED w/METAL ROOF DECK. PROVIDE ADDITIONAL INSULATION AS REQUIRED TO LEVEL TOP w/ADJACENT ROOF AREAS. SEE NOTES.



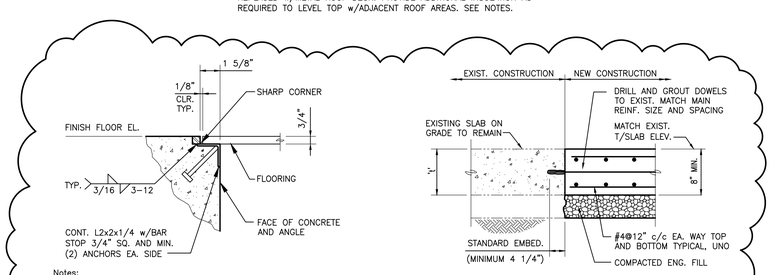
TYPICAL ROOF FRAME SEAT CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"

Note: TYPICAL EXISTING PRECAST CONCRETE ROOF PLANK 24" WIDE, APPROXIMATELY 3-3/4" THICK AT FLANGES, 1" THICK AT WEB.



TYPICAL FRAMED ROOF OPENING
SCALE: 1" = 1'-0"

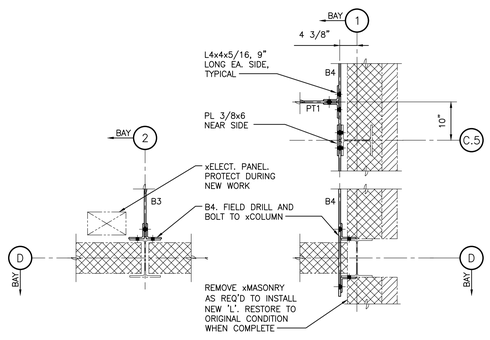
Notes:
1. COORDINATE AND VERIFY FINAL SIZE AND LOCATION OF ALL OPENINGS WITH THE TRADE REQUIRING THE OPENING.
2. SEE GENERAL NOTES FOR ALTERNATE PRE-MANUFACTURED ROOF FRAME.



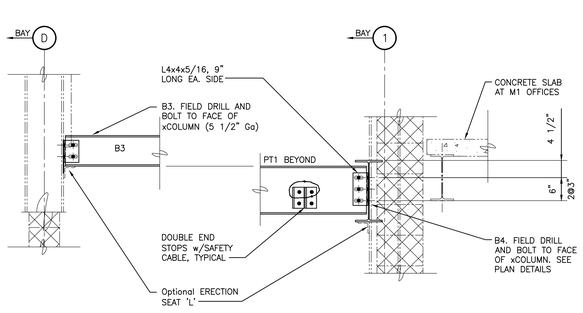
Notes:
1. SEE GENERAL NOTES FOR ANCHORS. MIN. 6" LONG 3/4"ø HEADED SHEAR STUDS OR 1/4x2 BENT STRAP ANCHORS.

TYPICAL EDGE ANGLE DETAILS
SCALE: 1 1/2" = 1'-0"

TYPICAL NEW TO EXISTING SLAB CONSTRUCTION JOINT DETAIL
SCALE: 3/4" = 1'-0"



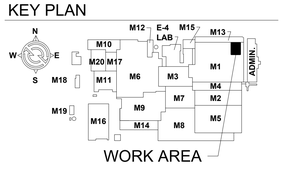
xCOLUMN CONNECTION PLAN DETAILS
SCALE: 3/4" = 1'-0"



22 S-101 DETAIL AT xCOLUMN D2
SCALE: 3/4" = 1'-0"

21 S-101 DETAIL AT xCOLUMN
SCALE: 3/4" = 1'-0"

KEY PLAN



WORK AREA

DETROIT

Detroit Diesel Corporation

Detroit Diesel M1 Met Lab Renovation

12200 Telegraph Rd
Redford Charter Twp, MI 48239

Date	Issued For
07/18/2025	D.D. 50%
10/03/2025	C.D. 75%
12/12/2025	C.D. 100%
04/24/2026	BIDS
05/21/2026	ADDENDUM 01

CORE Design Group Engineering Consultants
30773 Milford Road / Suite 144
New Hudson, Michigan 48165-8566
Tel: 248.491.3234 / www.COREdg.net
Job #25-017.DDC / Structural Engineering

HED
125 West 5th Street
Royal Oak, Michigan
48067 USA
(248) 262-1500
WWW.HED.CO

2025-DD016-001

SECTIONS AND DETAILS

S-102

5/28/2026 8:26:43 AM

FINISH MATERIALS LIST

NUMBER	MATERIAL	MANUFACTURER	STYLE	PRODUCT #	COLOR	COMMENTS
CEILING						
ACP-1	ACOUSTIC CEILING PANEL	ARMSTRONG	ULTIMA HEALTH ZONE, 70 NRC, SQUARE LAY-IN, GRID: 15/16" PRELUDE (WHITE)	1935	WHITE	24" x 24" x 3/4"
FLOORING						
EPX-1	EPOXY...	HOOVER WELLS	REZ-STONE	-	-	MATCH EXISTING COLOR AND...
WOC-1	WALK OFF CARPET	MILLIKEN	OBEX, CUTX/GRAIN	GRC154-119	DARK GREY	ASHLAR PATTERN - TOOTHIN AND MATCH EXISTING INSTALL
BASE						
EPX-1	EPOXY COVE BASE	HOOVER WELLS	REZ-STONE	-	-	MATCH FLOORING - 4" INTEGRAL COVE BASE
RB-1	RUBBER BASE	TARKETT/JOHNSONITE	MONUMENT	-	-	MATCH FINISH OF EXISTING BASE IN CORRIDOR 109.
WALL						
PT-1	PAINT	SHERWIN WILLIAMS	INTERIOR LATEX PAINT	SW 7008	ALABASTER...	
PT-2	PAINT	SHERWIN WILLIAMS	INTERIOR LATEX PAINT	SW 7646	FIRST STAR	MATCH EXISTING PAINT FINISH OF CORRIDOR 109
EP-1	PAINT	SHERWIN WILLIAMS	EPOXY PAINT	SW 7008	ALABASTER...	

DOOR SCHEDULE

MARK	DOORS SIZE WIDTH PANEL 1	PANEL 2	HEIGHT	TYPE - MTL	FINISH	GLAZING	FRAME TYPE-MTL	FINISH	GLAZING	FIRE RATING LABEL (MINS)	HEAD	JAMB	HW SET	NOTES
LEVEL 1														
101	3'-0"		7'-0"	FG-AL	FF	3/8"	001-AL1	FF	-		10/A-601(SIM.)	11/A-601 SIM.	01	8
102B	3'-0"		7'-0"	FG-AL	FF	3/8"	001-AL1	FF	-		10/A-601(SIM.)	11/A-601 SIM.	02	8
104	3'-0"		7'-0"	F-HM	PNT	-	001-HM1	PNT	-		3/A-601 (SIM.)	3/A-601	03	4
109	2'-8"	2'-8"	7'-0"	FG-AL	FF	-	001-AL1	FF	-	60	10/A-601	11/A-601	04	1, 5
110	3'-0"	3'-0"	7'-0"	FG-AL	FF	-	001-AL1	FF	-	60	10/A-601	11/A-601	05	1, 5
111	3'-0"	3'-0"	9'-0"	N-HM	PNT	1/4"	001-HM1	PNT	-	45	4/A-601(SIM.)	4/A-601	06	1,4, 8
112	3'-0"		7'-0"	G-AL	FF	-	001-AL1	FF	-	60	10/A-601(SIM.)	11/A-601 SIM.	07	1, 5
113A	2'-8"	2'-8"	7'-0"	FG-AL	FF	-	001-AL1	FF	-	60	10/A-601	11/A-601	08	5
113B	3'-0"		7'-0"	F-HM	PNT	-	001-HM1	PNT	-		4/A-601(SIM.)	4/A-601	09	1,4
114	3'-0"		7'-0"	N-HM	PNT	1/4"	001-HM1	PNT	-	45	4/A-601(SIM.)	4/A-601	10	4, 8
115	3'-0"		7'-0"	N-HM	PNT	1/4"	001-HM1	PNT	-	45	4/A-601(SIM.)	4/A-601	10	4, 8
116	3'-0"		7'-0"	G-AL	FF	IGU - 1"	001-AL1	FF	-		5/A-601 (SIM.)	5/A-601	11	2, 7

UNIT DOOR SCHEDULE

MARK	DESCRIPTION	DOOR SIZE WIDTH	HEIGHT	THK	TYPE-MTL	FINISH	GLAZING	DOOR FRAME TYPE-MTL	FINISH	GLAZING	FIRE RATING LABEL (MIN)	HEAD	JAMB	HW SET	NOTES
102A	OVERHEAD COILING DOOR	8'-0"	10'-0"	1/4"	FF-STL-1	PNT	-	FF-STL-1	PNT	-	45	6/A-601	7/A-601	-	3
103	TELESCOPING SLIDING DOOR	4'-5"	7'-0"	1 3/4"	FF-AL-1	FF	3/8"	FF-AL-1	FF	3/8"		8/A-601	9/A-601	-	1, 6, 8

DOOR SCHEDULE NOTES

1. PROVIDE FOR A CARD READER COORDINATE WITH SECURITY CONTRACTOR.
2. PROVIDE BOLLARD. REFER TO DETAIL 2/A-601.
3. MANUAL OVERHEAD COILING DOOR.
4. PAINT IS PT-1.
5. GLAZING IS PILKINGTON PYROSTOP OR APPROVED EQUAL.
6. PROVIDED PROXIMITY SENSOR AT BOTH SIDES OF DOOR. REFER TO PLAN FOR LOCATION. (BOD MS SEDCO #216-L OR APPROVED EQUAL)
7. INSULATED GLAZING UNIT W/ ARGON (IGU) MATCH GLAZING AT EXTERIOR.
8. TEMPERED GLAZING PANEL

MATERIAL LEGEND

MATERIAL (MTL)

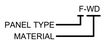
AL	ALUMINUM
EX	EXISTING
GL	GLASS
HM	HOLLOW METAL
SS	STAINLESS STEEL
STL	STEEL
WD	WOOD

FINISH

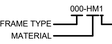
FF	FACTORY FINISH
PNT	PAINT (AS SCHEDULED)
CLR ANO	CLEAR ANODIZED ALUMINUM
PLAM	PLASTIC LAMINATE

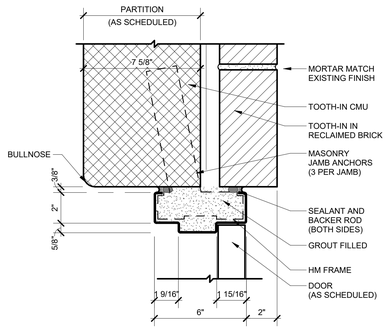
NOTE: ALL DOORS ARE UNDERCUT 5/8". PROVIDE 3/4" UNDERCUT AT CLOSET 104.

PANEL TYPES

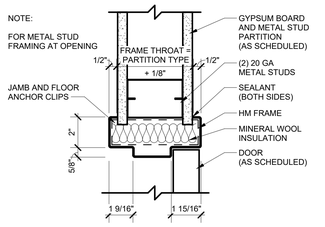


FRAME TYPES

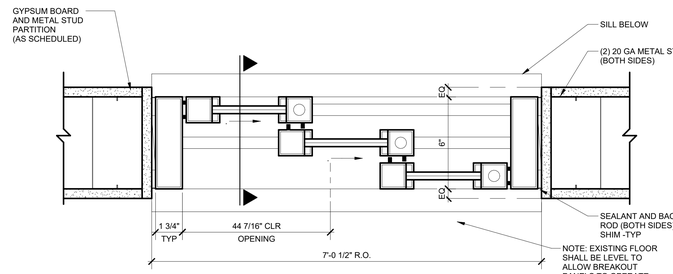




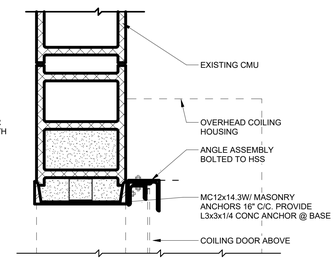
5 DOOR JAMB MASONRY
3" = 1'-0"



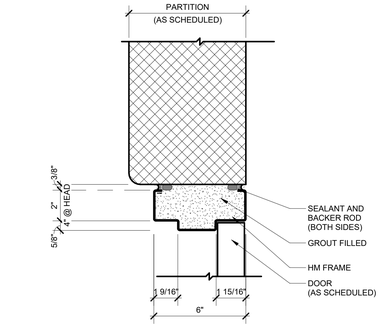
3 DOOR JAMB
3" = 1'-0"



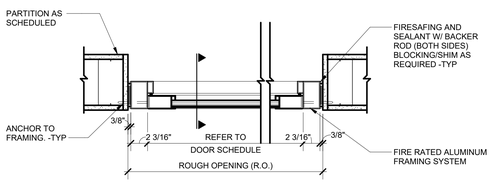
9 SLIDING DOOR JAMB
3" = 1'-0"



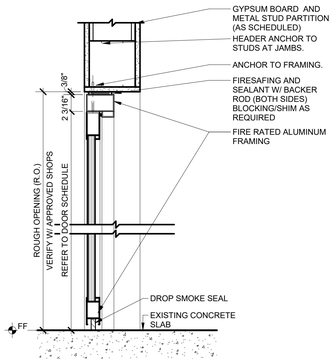
7 OVERHEAD COILING DOOR - JAMB
1 1/2" = 1'-0"



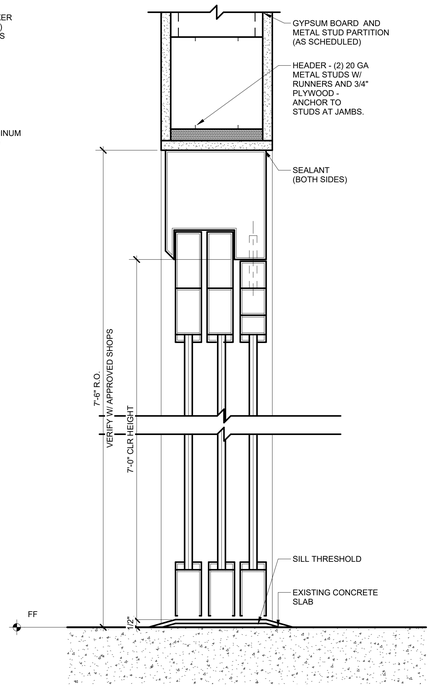
4 DOOR JAMB CMU
3" = 1'-0"



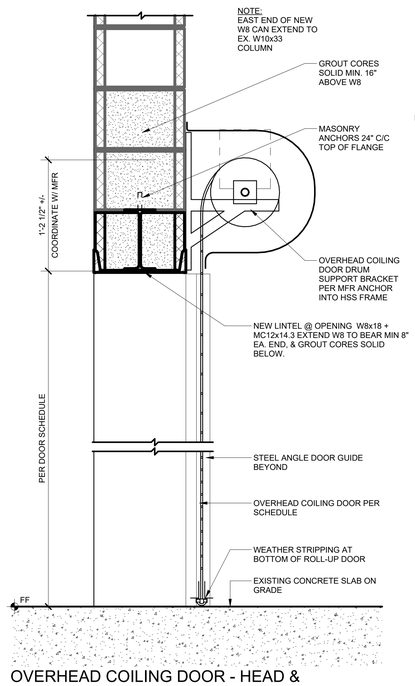
11 FIRE RATED DOOR JAMB
1 1/2" = 1'-0"



10 FIRE RATED DOOR HEAD & SILL DETAIL
1 1/2" = 1'-0"

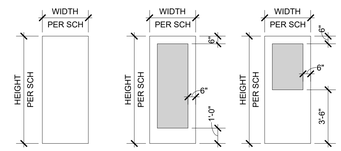


8 SLIDING DOOR HEAD & SILL DETAIL
3" = 1'-0"

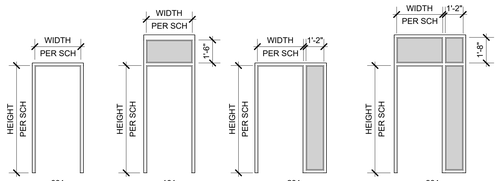


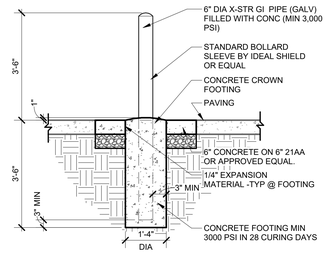
6 OVERHEAD COILING DOOR - HEAD & SILL
1 1/2" = 1'-0"

PANEL TYPES



FRAME TYPES





2 STEEL PIPE BOLLARD WITH SLEEVE
1/2" = 1'-0"

Autodesk Docs://2025-DD016-001_Detroit Diesel M1 Met Lab Renovation/2025-DD016-001_Arch_HED.rvt

DETROIT

Detroit Diesel Corporation

Detroit Diesel M1 Met Lab Renovation

12200 Telegraph Rd
Redford Charter Twp, MI 48239

Date	Issued For
12/12/2025	C.D. 100%
03/19/2026	Bid Set
04/24/2026	Bids
05/21/2026	Addendum 1
05/28/2026	Addendum 2

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Royal Oak, Michigan
48067 USA
(248) 262-1500
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STAMP AND SEAL LOCATION WHEN JURISDICTION STAMP AT TOP

2025-DD016-001

Schedules

A-601