O'Reilly AUTO PARTS

RANDOLPH, MA 02368

47 MEMORIAL PKWY



SHEET INDEX

C.S.	COVER SHEET

ARCHITECTURAL

A0.1	EGRESS PLAN
A0.2.1	ARCHITECTURAL SITE PLAN
A0.2.3	SITE DETAILS
A0.3	GENERAL NOTES
A1.1	DEMOLITION PLAN
A1.2	FLOOR PLAN
A1.3	FINISH PLAN
A1.4	REFLECTED CEILING PLAN
A1.5	FIXTURE PLAN
A2.1	INTERIOR ELEVATIONS
A2.2.1	EXTERIOR DEMOLITION ELEVATIONS
A2.2.2	EXTERIOR ELEVATIONS
A3.1	EXTERIOR SECTIONS AND DETAILS
A3.1.1	EXTERIOR DETAILS
A4.1.1	ENLARGED ACCESSIBLE RESTROOMS
A4.1.2	ENLARGED ACCESSIBLE RESTROOMS
A4.2	ENLARGED VESTIBULE
A5.1	WALL DETAILS
A5.4	STOREFRONT DETAILS
A6.1	DOOR SCHEDULE

STRUCTURAL

S0	GENERAL STRUCTURAL NOTES
S1	FOUNDATION PLAN
S2	EQUIPMENT SUPPORT PLAN
S3	STRUCTURAL DETAILS
S4	ENTRY FRAMING PLAN AND DETAILS

MECHANICAL

M1	HVAC PLAN
M2	HVAC SCHEDULES
M3	HVAC DETAILS

ELECTRICAL

E1	LIGHTING PLAN DETAILS
E1.1	LIGHTING PLAN
E2	POWER PLAN DETAILS
E2.1	POWER PLAN DETAILS
E3	ELECTRICAL SCHEDULES
E4	ELECTRICAL NOTES
VS1	EMS SHEETS
VS2	EMS SHEETS

PLUMBING

P1	PLUMBING PLAN
P2	PLUMBING DETAILS

FIXTURE CALCULATIONS

26-2121-A	LIGHT DUTY STORAGE (FIXTURE #1A)
26-2121-B	LIGHT DUTY STORAGE (FIXTURE #2A)
26-2121-C	GRAVITY RACK (FIXTURE #3A)
26-2121-D	LAYOUT

PROJECT INFORMATION

BUILDING ADDRESS:	47 MEMORIAL PKWY RANDOLPH, MA 02368
CONSTRUCTION TYPE:	II-B
DESCRIPTION OF USE:	M - MERCANTILE / RETAIL
OCCUPANCY CLASSIFICATION:	EXISTING - M PROPOSED - M / S-1
OCCUPANCY LOAD:	100 OCCUPANTS (REFER TO SHEET A0.1 FOR CALCS)
SPRINKLERED BUILDING:	YES
FIRE ALARM SYSTEM:	YES
NUMBER OF FLOORS:	1
BUILDING HEIGHT:	±24'-0"
AREA OF WORK:	14,681 SF
TENANT:	O'REILLY AUTO ENTERPRISES, LLC 233 S PATTERSON AVENUE SPRINGFIELD MO 65802 CONTACT: 417.862.2674
ARCHITECT:	CASCO 12 SUNNEN DRIVE | SUITE 100 ST. LOUIS, MO 63143 CONTACT: MIKE CHURA | 314.602.8160
MEP ENGINEER:	CASCO 12 SUNNEN DRIVE | SUITE 100 ST. LOUIS, MO 63143 CONTACT: MARY LISTHARTKE | 314-821-1100 (MECH & PLUMB) BRAD GILMORE | 314-821-1100 (ELECT)
STRUCTURAL ENGINEER:	VAA, LLC 301 CARLSON PARKWAY | SUITE 500 MINNETONKA, MN 55305 CONTACT: MOUNIR NAJM & TERRENCE J. MAHR | 763.577.9165

PROJECT DESCRIPTION

REMODEL OF AN EXISTING SPACE. DEMOLITION OF CEILING, LIGHTING, POWER/DATA, SINGLE RESTROOM, RESTROOM FIXTURES AND ACCESSORIES IN THE MULTI USER RESTROOMS, INTERIOR WALLS, AND MEZZANINE. CONSTRUCTION OF NEW OFFICE, CEILINGS FOR NEW SPACES, LIGHTING, POWER/DATA, FINISHES, DUCTWORK DISTRIBUTION, RESTROOM FIXTURES AND ACCESSORIES, NEW VESTIBULE, AND SECONDARY EGRESS DOOR. EXTERIOR DEMOLITION TO INCLUDE WALL PACKS, RAILINGS AT RAISED DOCK, REMOVE EXISTING ENTRY AND EXIT DOORS, AND FRONT SIGN TOWER AS REQUIRED FOR MODIFICATIONS. CONSTRUCTION OF MODIFIED SIGN TOWER, NEW STOREFRONT ENTRY/EXIT DOOR AND SECONDARY EGRESS DOOR, STOREFRONT INFILL AS REQUIRED, CONCRETE WALKWAY FOR SECONDARY EGRESS DOOR, NEW GUARDRAILS/HANDRAILS AT RAISED DOCK, WALL PAINT, NEW PAINT AT DOORS ON THE FRONT ELEVATION.

LANDLORD SCOPE OF WORK

- i. INSTALL AND UPDATE FIRE SUPPRESSION, IF REQUIRED BY LEGAL CODE FOR THE DEMISED PREMISES IN THEIR CONDITION AS OF THE DATE OF THIS LEASE
- ii. PROVIDE TENANT WITH ITS OWN ELECTRICAL SERVICE OF 400 AMPS WITH GAS OR 600 AMPS
- iii. REMOVE ALL ACTIONABLE LEVELS HAZARDOUS SUBSTANCES, INCLUDING BUT NOT LIMITED TO ASBESTOS, IN COMPLIANCE WITH ALL ENVIRONMENTAL LAWS
- iv. REMOVE PREVIOUS TENANT'S FIXTURES, EQUIPMENT, INVENTORY AND IF APPLICABLE, BUILDING SIGNAGE, COOLERS OR COOLER ROOMS, FLOOR COVERINGS (INCLUDING MASTIC), TRASH, AND DEBRIS
- v. DELIVER THE DEMISED PREMISES IN A BROOM-CLEAN AND WATER-TIGHT CONDITION

BIDDING INFORMATION

REFER TO O'REILLY CONSTRUCTION'S WEBSITE FOR ADDITIONAL REQUIREMENTS:
HTTP://WWW.OREILLYPLANROOM.COM
REFER TO CURRENT PROJECTS LIST, LOCATED AT BOTTOM OF SIGN IN PAGE, FOR INVITED GENERAL CONTRACTORS.

- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK AMONG SUBCONTRACTORS BASED ON THE COMPLETE SET OF CONSTRUCTION DOCUMENTS. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR BIDDERS OR SUPPLIERS WHO RELIED ON INCOMPLETE OR PARTIAL DOCUMENTS IN PREPARING THEIR BIDS. IN THE EVENT OF ANY INCONSISTENCIES OR DISCREPANCIES WITHIN THE DOCUMENTS, THE MOST STRINGENT REQUIREMENT SHALL GOVERN. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ARCHITECT UPON DISCOVERY OF SUCH DISCREPANCIES.

- REFER TO PLANS, SECTIONS, AND DETAILS FOR CONSTRUCTION OF FIRE RATED ASSEMBLIES. WHERE UNDERWRITERS LABORATORY (UL) TEST NUMBERS ARE REFERENCED, CONTRACTOR SHALL PROVIDE CONSTRUCTION MATERIALS, MEANS AND METHODS TO COMPLY WITH TESTED ASSEMBLY.

- REFER TO ALL INDEXED CONSULTANTS FOR ADDITIONAL REQUIREMENTS.

- O'REILLY CONSTRUCTION PROVIDED AND INSTALLED FURNISHINGS AND FIXTURES SHOWN FOR REFERENCE ONLY.

- CONTRACTOR TO PROVIDE PORTABLE FIRE EXTINGUISHERS DURING CONSTRUCTION AS REQUIRED TO PROTECT THE WORK AREA AND EACH STORAGE UNIT AND JOB TRAILER PER THE FIRE CODE.

- CONTRACTORS SHALL BE RESPONSIBLE FOR KNOWING THE QUALITY AND PUBLIC SAFETY REGULATIONS SET FORTH IN THE GOVERNING CODES AND OTHER APPLICABLE REGULATIONS OF LOCAL AND STATE AGENCIES HAVING JURISDICTION WHICH GOVERN EACH CONTRACTOR'S WORK.

- FIELD VERIFY EXISTING CONDITIONS BY DETAILED INSPECTION PRIOR TO SUBMITTING BID AND BEGINNING WORK. NOTIFY THE ARCHITECT AND/OR ENGINEER OF RECORD IF EXISTING CONDITIONS DEVIATE SUBSTANTIALLY FROM THOSE INDICATED HEREIN

- REFER TO PROJECT MANUAL, SECTION 01 45 16 - QUALITY CONTROL PROCEDURES, FOR ADDITIONAL REQUIREMENTS.

- WHERE REQUIRED, O'REILLY CONSTRUCTION SHALL PROVIDE THE SERVICES OF AN INDEPENDENT TESTING LABORATORY TO PERFORM TESTING AND SPECIAL INSPECTIONS INDICATED.

- ALL SUB-CONTRACTOR BIDS TO BE SUBMITTED TO INVITED GENERAL CONTRACTORS ONLY.

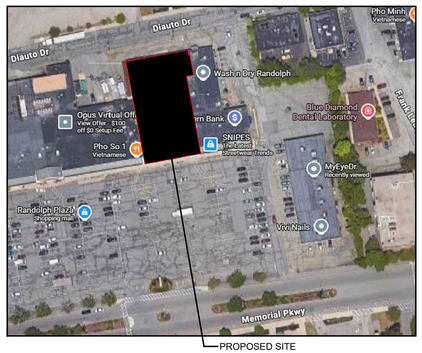
- CONTACT O'REILLY CONSTRUCTION'S DESIGNATED REPRESENTATIVE FOR ADDITIONAL PROJECT INFORMATION

- THE ARCHITECT AND/OR ENGINEER OF RECORD INDICATED HEREIN ARE PROVIDING A LIMITED SERVICE AND NOT PROVIDING CONTRACT ADMINISTRATION SERVICES FOR THIS PROJECT WHICH IS THE RESPONSIBILITY OF OTHERS. THE ARCHITECT AND/OR ENGINEER ARE NOT RESPONSIBLE FOR FIELD ACTIVITIES ON THIS PROJECT WITHOUT DIRECT INSPECTION OF THE WORK IN PROGRESS. IF FIELD CONDITIONS ARE UNCOVERED THAT REQUIRE A CHANGE OR ADDITIONAL INFORMATION, THE ARCHITECT AND/OR ENGINEER DOES NOT DELEGATE AUTHORITY TO ANYONE ELSE FOR DETERMINING THE MEANING OF PLANS OR SPECIFICATIONS AS AUTHENTICATED HEREIN.

DEFERRED SUBMITTAL

- FIRE SPRINKLERS
- FIRE ALARM SYSTEM
- EXTERIOR SIGNS

LOCATION PLAN



REGISTERED ARCHITECT
Michael S. Sundermeyer
#52005
St. Louis
Missouri
STATE OF MISSOURI
8/20/26
Michael S. Sundermeyer
License #952005
Exp. Date: 08/31/26
Professional of Record

CASCO
12 Sunnen Drive, Suite 100,
St. Louis, MO 63143
T: 314.821.1100

PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

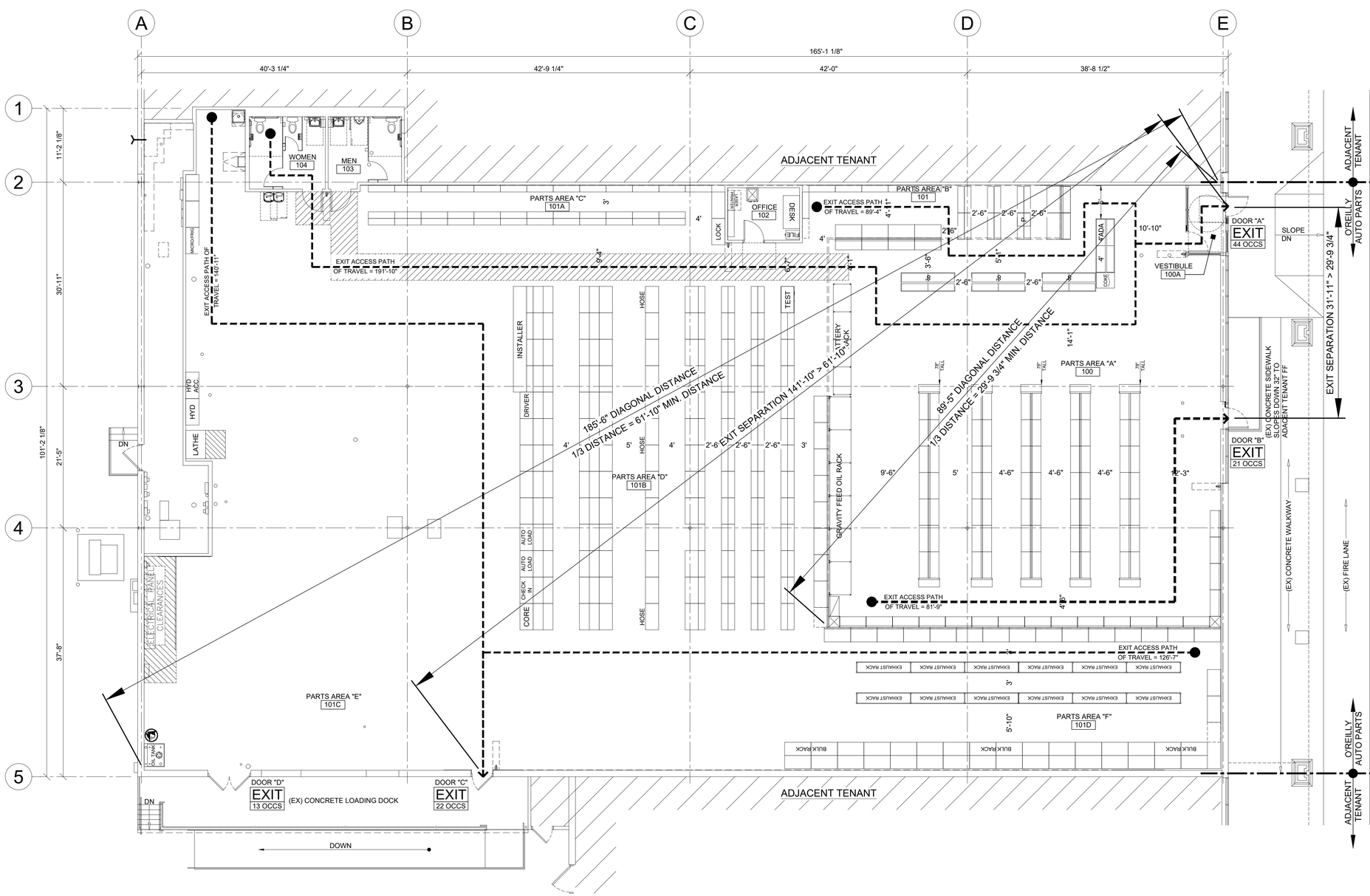
SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

COVER SHEET

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

DRAWN BY: JLB
CHECKED BY: KWH
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: C.S.



2 EGRESS PLAN (NO CHANGE IN BUILDING SQUARE FOOTAGE)

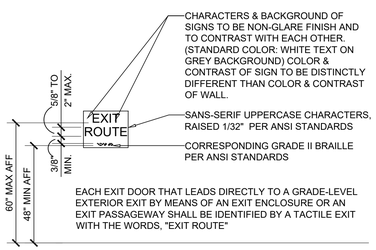
SCALE: 1/8" = 1'-0"

N

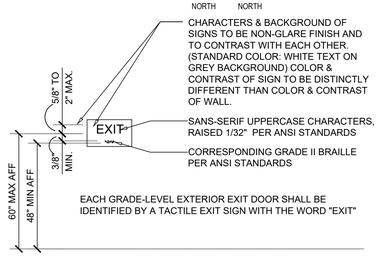
PLAN NORTH

N

TRUE NORTH



"EXIT ROUTE" TACTILE SIGNAGE



"EXIT" TACTILE SIGNAGE

INTERNATIONAL SYMBOL OF ACCESSIBILITY

3 TACTILE EGRESS SIGNAGE

SCALE: NTS

GENERAL NOTES:

1. SIGNS SHALL COMPLY WITH & CONFORM TO ANSI ICC-A117.1-2017 STANDARDS FOR ACCESSIBLE DESIGN OR BY LOCAL ACCESSIBILITY GUIDELINES WHICHEVER IS MORE STRINGENT.
2. ALL ENTRANCES THAT ARE ACCESSIBLE AND USABLE BY PERSONS WITH DISABILITIES SHALL BE IDENTIFIED WITH A MINIMUM OF ONE "INTERNATIONAL SYMBOL OF ACCESSIBILITY".
3. ACCESSIBLE SIGNS TO BE INSTALLED ON THE LATCH SIDE OF THE DOOR, OR IF NO SPACE, ON THE NEAREST WALL PREFERABLY ON THE RIGHT. ALL SIGNS MUST BE A DISTINCTLY DIFFERENT FROM ITS MOUNTING SURFACE IN COLOR/CONTRAST.
4. GENERAL CONTRACTOR TO PROVIDE TACTILE "EXIT" SIGNS AT ALL GRADE LEVEL EXIT DOORS. UNLESS OTHERWISE REQUIRED BY LOCAL AUTHORITY, INSTALL PER ADA COMPLIANT ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR WITH CONTRASTING AND RAISED PICTOGRAPH, SANS SERIF LETTERING AND GRADE 2 BRAILLE.

EGRESS LEGEND

EXIT ### OCCS	OCCUPANT LOAD SERVED BY EXIT (NOT COUNTED IN TOTAL OCCUPANT LOAD)
FE	FIRE EXTINGUISHER (SURFACE MOUNTED), MOUNTED AT 27" MAX TO BOTTOM OF TANK. SPEC: UL LISTED; ABC TYPE; WITH 10 LBS CAPACITY. PROVIDE BACKING IN WALL, AS REQUIRED.
	EMERGENCY EXIT SIGN
	COMMON PATH OF EGRESS TRAVEL
	EXIT ACCESS TRAVEL DISTANCE

BUILDING CODE

780 CMR - MA STATE BUILDING CODE (10TH EDIITION)
2021 INTERNATIONAL MECHANICAL CODE AS ADOPTED BY 780 CMR
527 CMR 12.00 / NFPA 70 (NEC)
248 CMR - MA PLUMBING CODE
527 CMR 1.00 - MA COMPREHENSIVE FIRE SAFETY CODE
521 CMR - MA ARCHITECTURAL ACCESS BOARD (AAB) REGULATIONS

COMPLIANCE WITH BUILDING ENERGY EFFICIENCY REQUIREMENTS BASED UPON APPLICABLE ENERGY CODE (PERFORMANCE METHOD).

THE TENANT SPACE, THE MAIN ENTRANCES AND EXITS, PATH OF TRAVEL AND SANITARY FACILITIES SERVING THE TENANT SPACE SHALL BE ACCESSIBLE TO PERSONS WITH DISABILITIES.

CERTIFICATE OF COMPLIANCE AND CALCULATIONS TO BE PROVIDED UPON REQUEST UNDER SEPARATE COVER.

REFER TO STRUCTURAL DRAWINGS FOR APPLICABLE WIND LOADS.

JURISDICTION CONTACTS:

PLANNING DEPARTMENT |	781.961.0936
BUILDING DEPARTMENT |	781.961.0921
FIRE DEPARTMENT |	781.963.3131

HAZMAT INVENTORY STATEMENT

UPON REQUEST O'REILLY CONSTRUCTION TO PROVIDE UNDER SEPARATE COVER, PROJECT HAZARDOUS MATERIALS INVENTORY STATEMENT (HMIS) FOR COMMODITY TYPES, HAZARD CLASS, AND QUANTITIES.

O'REILLY CONSTRUCTION RESPONSIBLE FOR MONITORING INVENTORY COMMODITY TYPES AND QUANTITIES TO NOT EXCEED CODE REQUIREMENTS

OCCUPANCY LOAD SUMMARY

ROOM #	AREA	AREA (SF)	LOAD FACTOR	OCCUPANTS (QTY)
100A	VESTIBULE	67	N/A	N/A
100	PARTS AREA "A"	3,717	60	62
101	PARTS AREA "B"	357	300	2
101A	PARTS AREA "C"	1,430	300	5
101B	PARTS AREA "D"	4,967	300	17
101C	PARTS AREA "E"	1,442	300	5
101D	PARTS AREA "F"	2,316	300	8
102	OFFICE	99	150	1
103	MEN	136	N/A	N/A
104	WOMEN	149	N/A	N/A
	TOTAL OCCUPANCY	14,681		100

EXIT DOOR CLEARANCE

100 TOTAL OCCUPANCY / 4 = 25
25 x 0.2 = 5" DOOR CLEARANCE REQUIRED

PROVIDED:
DOOR "A" = 32" CLEARANCE
DOOR "B" = 32" CLEARANCE
DOOR "C" = 32" CLEARANCE
DOOR "D" = 67" CLEARANCE
TOTAL = 163" CLEARANCE

PLUMBING FIXTURE CALCULATIONS

MINIMUM NUMBER OF REQUIRED FIXTURES PER 248 CMR 10, 10.10 TABLE 1

100 TOTAL OCCUPANTS, PER ABOVE CALCULATIONS / 2 = 50 MALE & 50 FEMALE

REQUIRED FIXTURES
MALE:
- WATER CLOSETS: 1
- LAVATORIES: 1

FEMALE:
- WATER CLOSETS: 2
- LAVATORIES: 1

GENERAL:
- DRINKING FOUNTAIN: 1
- SERVICE SINK: 1

PROVIDED FIXTURES
MALE:
- WATER CLOSETS: 1
- LAVATORIES: 1
- URINAL: 1

FEMALE:
- WATER CLOSETS: 2
- LAVATORIES: 1

GENERAL:
- DRINKING FOUNTAIN: 2
- SERVICE SINK: 1

REGISTERED ARCHITECTS — COMMONWEALTH OF MASSACHUSETTS
Michael S. Sundermeyer
#32005
St. Louis
Missouri
8/20/26
Michael S. Sundermeyer
License #952005
Exp. Date: 08/31/26
Professional of Record

CASCO
12 Sunnen Drive, Suite 100,
St. Louis, MO 63143
T: 314.821.1100

SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

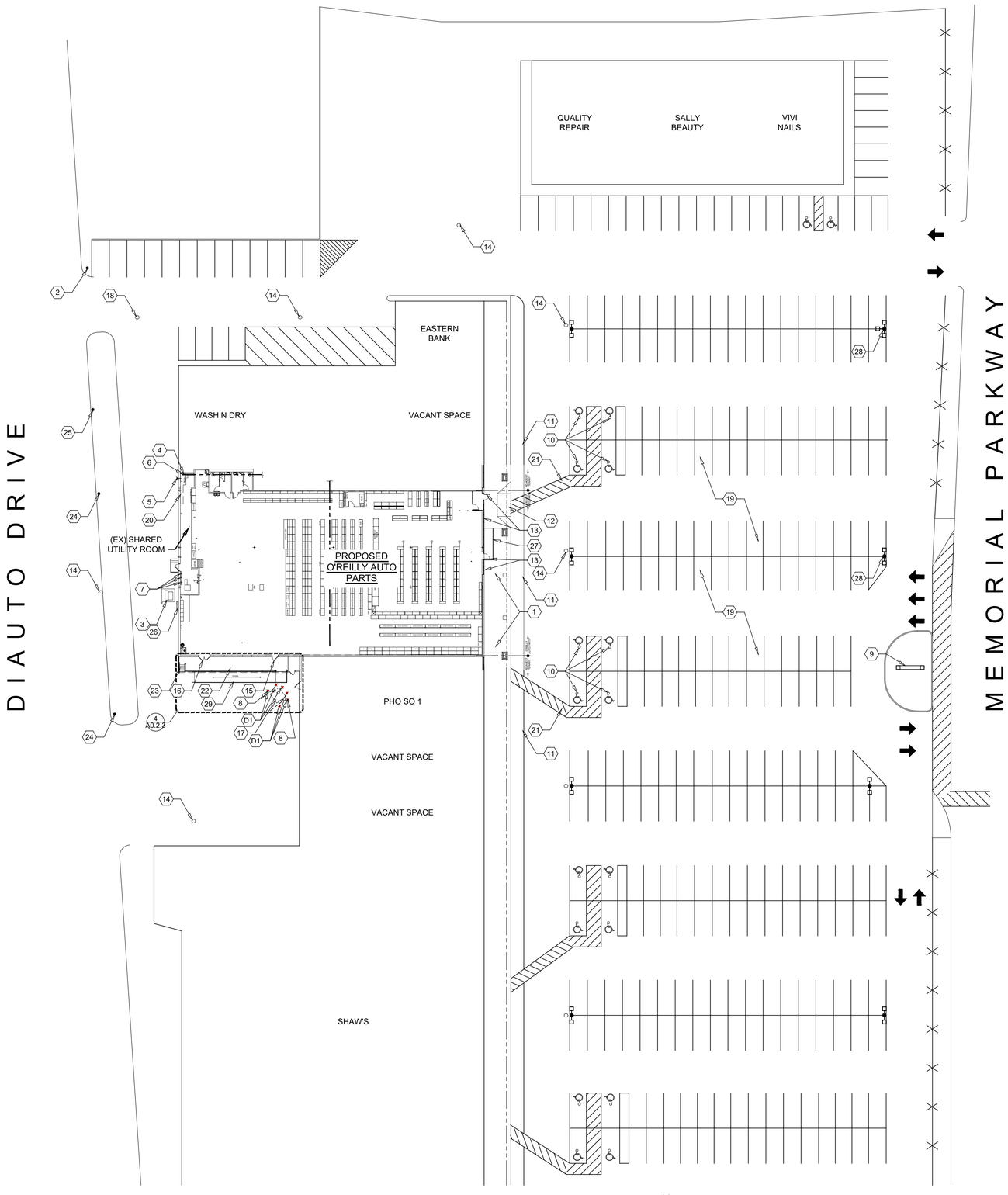
PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
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DRAWN BY: JMC
CHECKED BY: KWH
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: A0.1

EGRESS PLAN



3 SITE PLAN (NO CHANGE IN BUILDING SQUARE FOOTAGE OR PARKING)
SCALE: 1" = 30'

N PLAN NORTH — N TRUE NORTH

SYMBOLS LEGEND

- EXISTING CONDITIONS TO BE REMOVED
- PROPERTY LINE
- ACCESSIBLE PATH OF TRAVEL
- LIGHT POLE

GENERAL NOTES

A. A LAND SURVEY HAS NOT BEEN PROVIDED. EXISTING SITE CONDITIONS INDICATED HEREIN ARE DIAGRAMMATIC ONLY AND PROVIDED FOR GENERAL REFERENCE.

B. SITE DIMENSIONS TO FACE OF BUILDING, SIDEWALK, CURB GUTTER LINE, PROPERTY LINE, OR CENTER LINE OF STRIPING UNLESS OTHERWISE NOTED.

C. EXISTING CONSTRUCTION TO REMAIN TO BE PROTECTED AS REQUIRED. REPLACE AND/OR REPAIR EXISTING CONSTRUCTION DAMAGED DUE TO CONTRACTOR ACTIVITIES.

D. ALL DEMOLITION MATERIALS SHALL BECOME PROPERTY OF CONTRACTOR FOR PROPER DISPOSAL UNLESS OTHERWISE NOTED.

E. PROVIDE SMOOTH ELEVATION AND GRADING TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING CONSTRUCTION TO REMAIN.

F. CONTRACTOR TO ENSURE EXISTING LANDSCAPING IS FREE OF WEEDS, FREE OF OVERGROWTH AND IS WELL MANICURED.

(DX) SITE DEMOLITION KEYNOTES

D1 NEW BOLLARD LOCATION: CORE DRILL 18" DIA. X 36" MIN. DEPTH AT PAVEMENT FOR INSTALLATION OF NEW PROPOSED BOLLARD, REFER TO **4/A0.2.3** FOR LOCATION.

(X) SITE KEYNOTES

1. EXISTING CONCRETE WALKWAY
2. EXISTING POWER POLE WITH TRANSFORMER
3. EXISTING UTILITY TRANSFORMER ON RAISED CONCRETE PAD WITH BOLLARD PROTECTION
4. EXISTING WATER METER
5. EXISTING FDC
6. EXISTING FIRE RISER
7. EXISTING ELECTRICAL METERS, TYP.
8. NEW BOLLARDS, TYP. - SEE DETAIL **2/A0.2.3**
9. EXISTING ILLUMINATED SHOPPING CENTER POLE SIGN. SIGN TEAM TO REFACE PANEL ON EXISTING MULTI-TENANT SIGN.
10. EXISTING ACCESSIBLE PARKING SPACES WITH SIGNAGE ON BOLLARDS, TYP.
11. EXISTING 'NO PARKING FIRE LANE' AREA
12. EXISTING CONCRETE ACCESSIBLE CURB RAMP
13. EXISTING / MODIFIED STOREFRONT SYSTEM WITH NEW STOREFRONT ENTRY / EXIT DOOR AND NEW EGRESS DOOR.
14. EXISTING STORM DRAIN
15. EXISTING DOOR AT CONC. LOADING DOCK
16. EXISTING 8' HIGH DOUBLE DOORS AT CONC. LOADING DOCK
17. EXISTING DUMPSTER AREA
18. EXISTING SANITARY MANHOLE
19. EXISTING ASPHALT PARKING, TYP.
20. EXISTING GAS METER BANK
21. EXISTING CROSSWALK, TYP.
22. EXISTING CONC. LOADING DOCK WITH NEW GUARDRAILS. SEE **A1.2** AND **A2.2.2** FOR ADDITIONAL INFORMATION.
23. EXISTING CONC. STAIRS WITH NEW STEEL HANDRAILS AND GUARDRAILS. SEE **A1.2** AND **A2.2.2** FOR ADDITIONAL INFORMATION.
24. EXISTING POWER POLE WITH STREET LIGHT
25. EXISTING POWER POLE
26. EXISTING ELECTRICAL
27. NEW LEVEL CONC. WALKWAY WITH HANDRAIL. SEE **A1.2** AND **A0.2.3** FOR ADDITIONAL INFORMATION.
28. EXISTING LIGHT POLE, TYP.
29. NEW METAL RAMP WITH HANDRAILS/GUARDRAILS BY METAL RAMP MANUFACTURER.

SITE PLAN GENERAL NOTE:

SITE PLAN PROVIDED FOR GENERAL REFERENCE OF EXISTING CONDITIONS. SCOPE OF WORK IS IDENTIFIED IN KEYNOTES ON THIS SHEET.

PARKING LAYOUT AS SHOWN, DRIVE AISLES, PUBLIC WALKWAYS, ADJACENT STRUCTURES, PARKING LAYOUT GRADE SLOPES, ETC. ARE EXISTING CONDITIONS AND NOT VERIFIED. NO NEW PARKING SITE LAYOUT SCOPE.

ENVIRONMENTAL GENERAL NOTES

AN ENVIRONMENTAL ANALYSIS HAS NOT BEEN PERFORMED ON THE EXISTING SITE.

IF THIS PROJECT CONTAINS HAZARDOUS MATERIALS, CONTRACTOR TO PROVIDE WORK REQUIRED FOR PROPER REMOVAL, HANDLING, AND DISPOSAL PER ENVIRONMENTAL ANALYSIS RECOMMENDATIONS.

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

CAUTION:
INFORMATION ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

COMMONWEALTH OF MISSOURI — Michael S. Sundermeyer — #52005 — St. Louis, Missouri — REGISTERED ARCHITECT
8/20/26
Michael S. Sundermeyer
License #952005
Exp. Date: 08/31/26
Professional of Record

CASCO
12 Sunnen Drive, Suite 100,
St. Louis, MO 63143
T: 314.821.1100

PROJECT:
O'REILLY AUTO PARTS STORE - RL1
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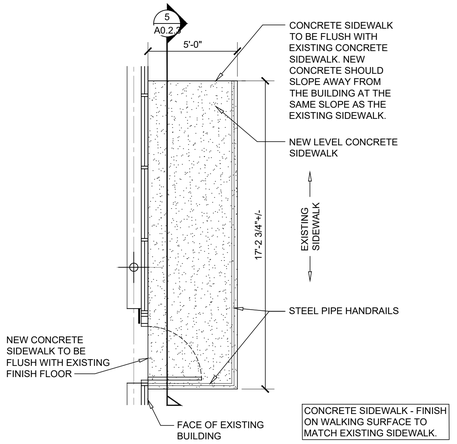
SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

ARCHITECTURAL SITE PLAN

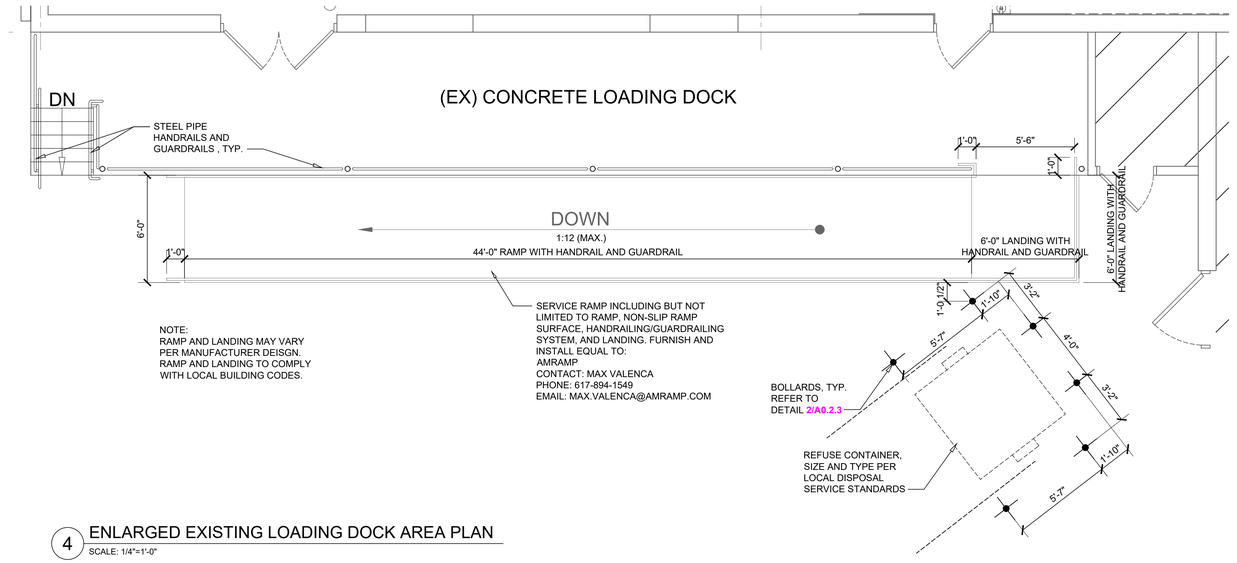
O'Reilly AUTO PARTS

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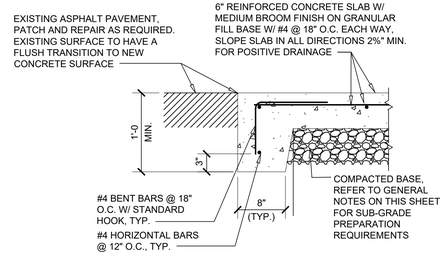
DRAWN BY: JLB
CHECKED BY: KWH
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: A0.2.1



1 NEW CONCRETE SIDEWALK
SCALE: 1/4"=1'-0"



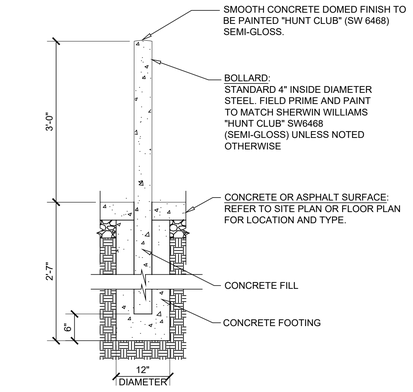
4 ENLARGED EXISTING LOADING DOCK AREA PLAN
SCALE: 1/4"=1'-0"



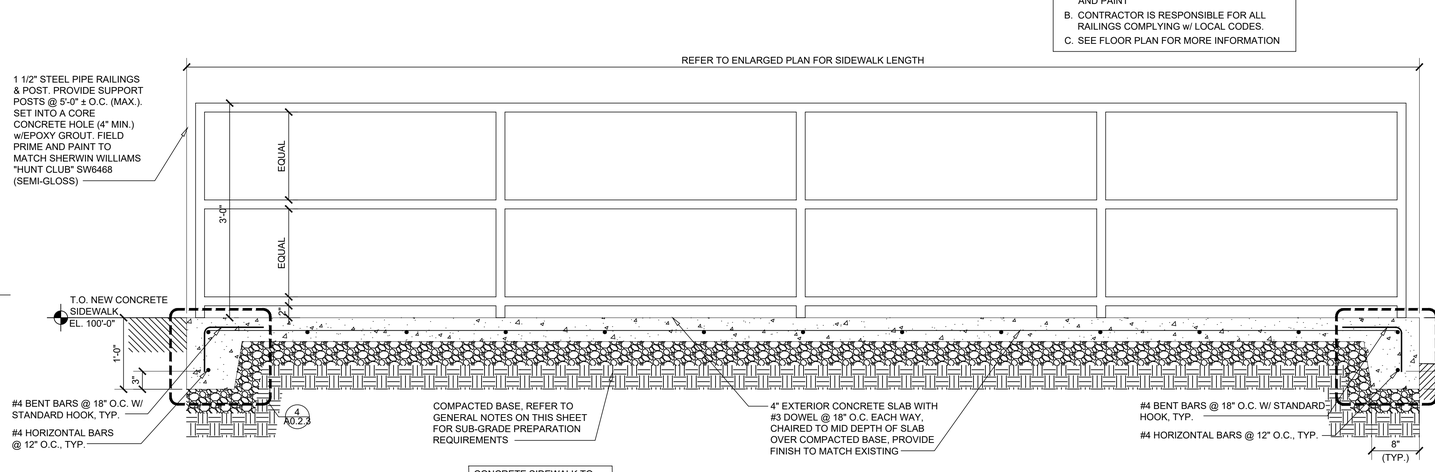
4 SLAB EDGE AT CONCRETE PAD
SCALE: 1"=1'-0"

GENERAL NOTES:

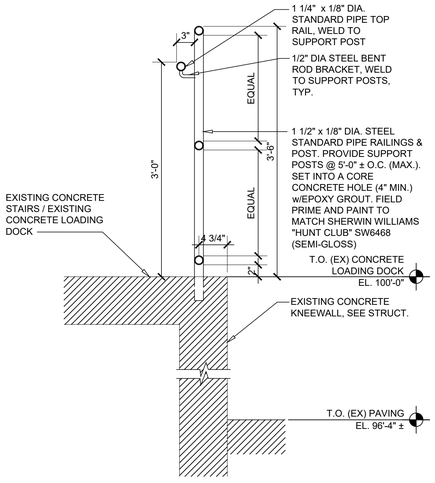
A. GRIND ALL WELDED JOINTS SMOOTH. PRIME AND PAINT
B. CONTRACTOR IS RESPONSIBLE FOR ALL RAILINGS COMPLYING w/ LOCAL CODES.
C. SEE FLOOR PLAN FOR MORE INFORMATION



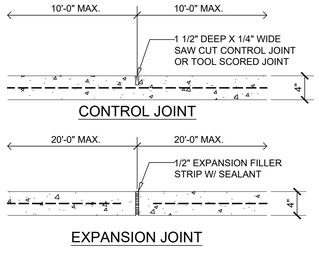
2 BOLLARD DETAIL
SCALE: 3/4"=1'-0"



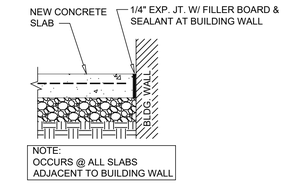
5 SIDEWALK AT EXIT DOOR
SCALE: 1"=1'-0"



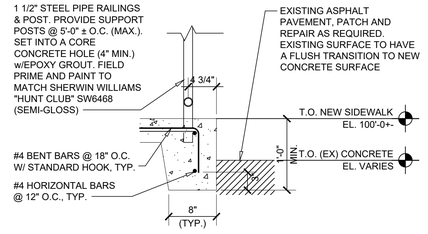
3 GUARDRAIL AND HANDRAIL DETAIL
SCALE: 1"=1'-0"



6 TYPICAL CONCRETE SLAB JOINTS
SCALE: 1"=1'-0"



ISOLATION JOINT @ BUILDING WALLS



9 EDGE OF NEW SIDEWALK DETAIL
SCALE: 1"=1'-0"

GENERAL NOTES

A. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.
B. DIMENSIONS ARE TO ROUGH FACE OF CONCRETE, FRAMING, OR CENTER LINE OF STRUCTURE UNLESS OTHERWISE INDICATED.
C. REFER TO ARCHITECTURAL SITE PLAN AND FLOOR PLAN FOR ADDITIONAL REQUIREMENTS.
D. REFER TO EXTERIOR FINISH SCHEDULE FOR ADDITIONAL MATERIAL TYPES, COLORS, AND FINISHES.
E. FIELD VERIFY EXISTING CONDITIONS BY DETAIL INSPECTION PRIOR TO SUBMITTING BID AND BEGINNING CONSTRUCTION. NOTIFY ARCHITECT IF EXISTING CONDITIONS DEVIATE SUBSTANTIALLY FROM THOSE INDICATED HEREIN.
F. SUB-GRADE PREPARATION:
ALL EXPOSED AND/OR DISTURBED GRANULAR BASE AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% OF OPTIMUM DENSITY IN ACCORDANCE W/ASTM D 1557 AT OPTIMUM MOISTURE CONTENT AND TO A MINIMUM DEPTH OF 8" - ALL SUBGRADE SOIL AREAS EXPOSED BY EXCAVATIONS AND GRADING SHALL BE COMPACTED TO A MINIMUM OF 95% OF OPTIMUM DENSITY IN ACCORDANCE W/ASTM D 1557 AT OPTIMUM MOISTURE CONTENT AND TO A MINIMUM DEPTH OF 12" - FILL WHERE REQUIRED SHALL BE PLACED IN LIFTS NOT TO EXCEED 8" LOOSE MEASURE AND SHALL BE COMPACTED AS OUTLINED ABOVE - THE ON SITE TESTING COMPANY SHALL PROVIDE TESTING AND INSPECTION OF THE SOIL WORK PRIOR TO PLACING CONCRETE.

REGISTERED ARCHITECT
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PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

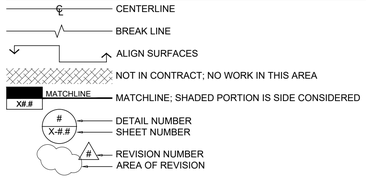
SITE DETAILS

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

DRAWN BY: JLB
CHECKED BY: KWH
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: A0.2.3

ARCHITECTURAL LEGEND



ABBREVIATIONS

ACT	ACOUSTIC CEILING TILE
AFF	ABOVE FINISHED FLOOR
APPV	APPROVED
ARCH	ARCHITECTURAL
AVG	AVERAGE
BD	BOARD
BKG	BACKING
BLDG	BUILDING
BLKG	BLOCKING
CLR	CLEAR
CONC	CONCRETE
CONF	CONFERENCE
CR	CARD READER
CT	CERAMIC TILE
CTR	CENTER
DBL	DOUBLE
DF	DRINKING FOUNTAIN
DIM	DIMENSION
DN	DOWN
DW	DISHWASHER
E or (E)	EXISTING
EA	EACH
ELEV	ELEVATION
ELEC	ELECTRICAL
EQ	EQUAL
EP	ELECTRICAL PANEL
ETR	EXISTING TO REMAIN
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FACE
FLR	FLOOR
FO	FACE OF
GA	GAUGE
GC	GENERAL CONTRACTOR
GD	GARBAGE DISPOSAL
GL	GLASS
GYP	GYPSUM
HDWR	HARDWARE
HM	HOLLOW METAL
HO	HOLD OPEN
HOR	HORIZONTAL
HVAC	HEATING VENTILATION & AIR CONDITIONING
INCL	INCLUDING
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
ISA	INTERNATIONAL SYMBOL OF ACCESSIBILITY
JAN	JANITOR
J-BOX	JUNCTION BOX
LAV	LAVATORY
LH	LEFT HANDED
LVT	LUXURY VINYL TILE
MDF	MEDIUM DENSITY FIBERBOARD
MECH	MECHANICAL
MTL	METAL
MFR	MANUFACTURER
MW	MICROWAVE
N or (N)	NEW
NIC	NOT IN CONTRACT
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
OC	ON CENTER
OPP	OPPOSITE
OPNG	OPENING
ORIG	ORIGINAL
OVHD	OVERHEAD
PC	PIECE
PERP	PERPENDICULAR
PL	PLATE
P-LAM	PLASTIC LAMINATE
PR	PAIR
QTY	QUANTITY
QUAL	QUALITY
R or (R)	RELOCATED
RCP	REFLECTED CEILING PLAN
REF	REFERENCE
REV	REVISION/REVISED
RH	RIGHT HAND
RM	ROOM
RO	ROUGH OPENING
SC	SOLID CORE
SF	SQUARE FEET
SIM	SIMILAR
SPEC(S)	SPECIFICATION(S)
STD	STANDARD
STRL	STRUCTURAL
TBD	TO BE DETERMINED
TEMP	TEMPERED
THRES	THRESHOLD
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
VERT	VERTICAL
VCT	VINYL COMPOSITION TILE
W/	WITH
WC	WALLCOVERING
WD	WOOD
WH	WATER HEATER
W/O	WITHOUT
WP	WATERPROOF
YD	YARD

DRAFTING CONVENTION NOTES

PRECEDENCE:

LARGE SCALE DRAWINGS TAKE PRECEDENCE OVER SMALL SCALE DRAWINGS. DETAILS TAKE PRECEDENCE OVER ALL. NOTIFY ARCHITECT OF CONFLICTS OR DISCREPANCIES IN WRITING.

DIMENSION CONVENTIONS:

HORIZONTAL DIMENSIONS ARE SHOWN FROM FACE OF FINISH, UNO.

DIMENSIONS NOTED "CLEAR" OR "CLR" MUST BE PRECISELY MAINTAINED, ALLOWING FOR THICKNESS OF MATERIALS.

DIMENSIONS ARE NOT ADJUSTABLE WITHOUT ARCHITECT'S APPROVAL, UNO.

DIMENSIONS TO EXTERIOR WINDOW WALL ARE TO INSIDE FINISHED FACE OF THE WALL UNO.

DIMENSIONS TO EXTERIOR GLAZING ARE TO THE INSIDE FACE OF THE EXTERIOR GLAZING.

VERTICAL DIMENSIONS ARE FROM THE TOP OF THE FINISHED FLOOR, UNO.

DO NOT SCALE DRAWINGS. IF ANY ITEM OF WORK CANNOT BE LOCATED, DO NOT PROCEED WITH THE WORK BEFORE CLARIFYING WITH ARCHITECT.

VERIFY DIMENSIONS MARKED "VIF" PRIOR TO START OF CONSTRUCTION. REPORT INCONSISTENCIES TO ARCHITECT.

DEFINITIONS OF TERMINOLOGY:

TYPICAL MEANS IDENTICAL FOR ALL CONDITIONS, UNO.

SIMILAR MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITIONS NOTED. VERIFY DIMENSIONS AND ORIENTATION ON PLANS AND ELEVATIONS.

PROVIDE MEANS FURNISH AND INSTALL, COMPLETE AND IN PLACE.

FURNISH MEANS FURNISH ONLY. INSTALLATION BY O'REILLY CONSTRUCTION, UNO.

INSTALL MEANS PUT INTO PLACE. SUPPLIED BY O'REILLY CONSTRUCTION, UNO.

ALIGN MEANS ACCURATELY LOCATE FINISH FACES IN THE SAME PLANE.

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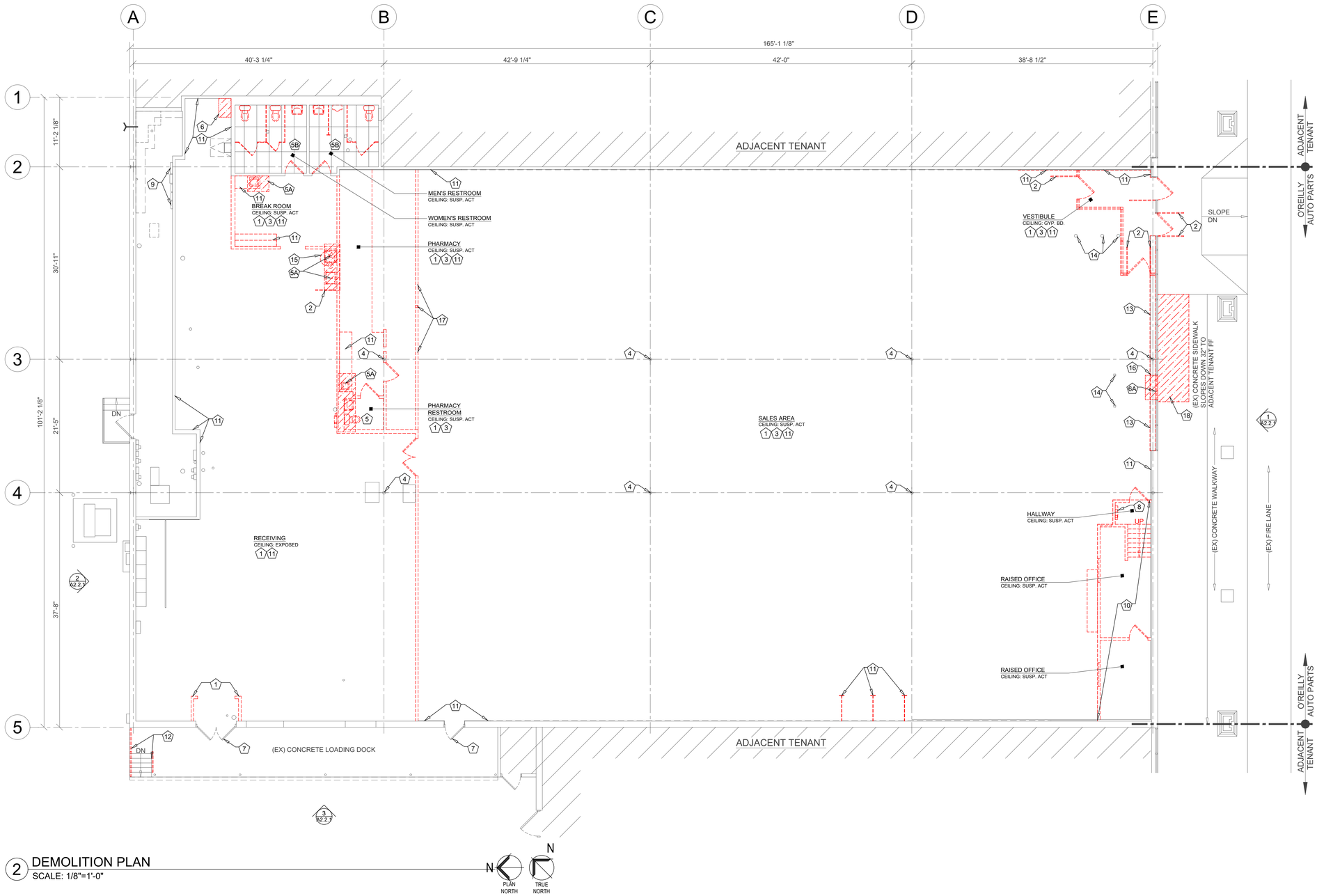
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RANDOLPH SHOPPING CENTER

GENERAL NOTES

O'Reilly AUTO PARTS

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SHEET NUMBER: A0.3



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

LEGEND

- EXISTING WALL TO BE REMOVED
- EXISTING DOOR AND FRAME TO BE REMOVED UNO.
- SAW CUT AND REMOVE PORTION OF EXISTING CONCRETE FLOOR SLAB AS REQUIRED FOR PROPOSED NEW WORK SCOPE.

GENERAL NOTES

A. INTENT OF THE DRAWING IS TO SHOW EXISTING BUILDING CONDITIONS WITH INFORMATION DEVELOPED FROM AVAILABLE DOCUMENTS.

B. CONTRACTOR TO MAINTAIN CLEAR UNOBSTRUCTED PATH OF EGRESS AND EXITS AT ALL TIMES BUILDING IS OCCUPIED DURING CONSTRUCTION. PROVIDE TEMPORARY EMERGENCY LIGHTING, EXIT SIGNS AND FIRE EXTINGUISHING SYSTEMS AS REQUIRED.

C. EXISTING CONSTRUCTION TO REMAIN TO BE PROTECTED AS REQUIRED. REMOVE AND REPLACE ANY DAMAGED CONSTRUCTION DUE TO CONTRACTOR'S ACTIVITIES.

D. EXISTING CONSTRUCTION TO BE REWORKED AS REQUIRED FOR INSTALLATION OF NEW CONSTRUCTION. PATCH AND REPAIR EXPOSED SURFACES OF EXISTING CONSTRUCTION TO REMAIN AT LOCATIONS WHERE CONSTRUCTION IS TO BE REMOVED. WORK SHALL INCLUDE REMOVAL OF ALL ATTACHMENT DEVICES (SHOT PINS, ANCHORS, LAB BOLTS, NAILS, NAILERS, SHIMS, ETC.)

E. PROVIDE TEMPORARY SHORING OR BRACING OF EXISTING STRUCTURAL SYSTEM AS REQUIRED FOR INSTALLATION OF NEW CONSTRUCTION.

F. PROVIDE TEMPORARY DUST PROTECTION AS REQUIRED.

G. ALL REMOVED MATERIAL OTHER THAN ITEMS TO BE SALVAGED OR REUSED SHALL BECOME CONTRACTORS PROPERTY UNO, AND SHALL BE REMOVED FROM O'REILLY CONSTRUCTION'S PROPERTY. CLEAN UP AND DISPOSE OF DEBRIS PROMPTLY AND CONTINUOUSLY AS THE WORK PROGRESSES. SECURE AND PAY FOR REQUIRED HAULING PERMITS, PAY DUMPING FEES AND CHARGES.

H. UNLESS OTHERWISE INDICATED IN CODE SUMMARY DRAWING, EXISTING CONSTRUCTION MATERIALS ARE ASSUMED TO BE CLASSIFIED AS NON-COMBUSTIBLE. IF CONTRACTOR ENCOUNTERS EXISTING MATERIALS CLASSIFIED AS COMBUSTIBLE OR NON-FIRE RATED GYPSUM BOARD IS FOUND IN REQUIRED FIRE RATED ASSEMBLIES, NOTIFY ARCHITECT IMMEDIATELY FOR ADDITIONAL WORK MODIFICATIONS REQUIREMENTS OR POTENTIAL BUILDING CODE CONSTRUCTION TYPE RECLASSIFICATION.

I. PRIOR TO MODIFICATIONS OF EXISTING CONCRETE CONSTRUCTION, INCLUDING BUT NOT LIMITED TO CUTTING, DRILLING OR ROUTING, CONTRACTOR SHALL PROVIDE THE SERVICES OF A QUALIFIED CONCRETE SCANNING OR TESTING AGENCY TO SUBMIT A REPORT TO THE ARCHITECT ILLUSTRATING THE EXISTING CONDITIONS AND REINFORCEMENT LOCATIONS WITHIN THE PLANNED AREA OF WORK. EXISTING CONCRETE CONSTRUCTION SHALL NOT BE MODIFIED UNTIL ARCHITECT REVIEWS THE REPORT AND PROVIDES A WRITTEN DIRECTIVE.

J. ALL EXISTING UNUSED ELECTRICAL SYSTEMS TO BE COMPLETELY REMOVED AND PROPERLY TERMINATED, UNLESS OTHERWISE INDICATED. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

K. ALL EXISTING PLUMBING SYSTEMS TO BE PROVIDED OR PROPERLY TERMINATED, UNLESS OTHERWISE INDICATED. CAP ALL WATER LINES AT ROOF. SANITARY SEWER SHALL BE CUT AT FLOOR AND PROVIDE CAP OR CLEAN OUT. CAP ALL VENT LINES AT ROOF AND SEAL VENT PIPES ABOVE ROOF. CONTRACTOR TO CAMERA SCOPE EXISTING SANITARY SEWER PIPES TO BE REUSED TO VERITY PROPER OPERATION PRIOR TO BEGINNING CONSTRUCTION AND NOTIFY ARCHITECT/ENGINEER IF DEFECTIVE CONDITIONS ARE DISCOVERED. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL REQUIREMENTS.

L. CONTRACTOR TO ASSESS CONDITION OF WALLS TO BE REMOVED AND/OR NEW OPENINGS TO BE CUT, FOR HIDDEN STRUCTURAL COMPONENTS, PRIOR TO DEMO. ADVISE O'REILLY CONSTRUCTION OF FINDINGS.

M. ALL EXISTING DIFFUSERS, REGISTERS, GRILLS, AND DUCTWORK TO BE COMPLETELY REMOVED, UNLESS OTHERWISE INDICATED. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

ALTERNATE KEYNOTES

REFER TO FIRE PROTECTION DRAWINGS FOR ADDITIONAL INFORMATION.

DEMOLITION KEYNOTES

1. INTERIOR WALL CONSTRUCTION TO BE REMOVED TO INCLUDE: DOOR ASSEMBLY, ELECTRICAL DEVICES, INTERIOR WINDOW GLAZING/ FRAME, ETC.
2. RAILING TO BE REMOVED. PATCH AND REPAIR CONCRETE SIDEWALK/FLOOR SLAB AS REQUIRED. PREP FOR NEW FINISH.
3. CEILING ASSEMBLY TO BE REMOVED TO INCLUDE: CEILING SUPPORTS AND ELECTRICAL / MECHANICAL DEVICES.
4. STEEL BUILDING COLUMN TO REMAIN: REMOVE ALL PROTECTION GUARDS, DECALS, FINISHED ENCLOSURES, ETC. COLUMN TO BE FULLY EXPOSED (FULL HEIGHT) AND PREPARE TO RECEIVE NEW PAINT FINISH.
5. TOILET ROOM TO BE REMOVED TO INCLUDE: REMOVE PLUMBING FIXTURE(S) IN THEIR ENTIRETY, WALL ACCESSORIES, TOILET PARTITIONS, ETC. (ALL SANITARY LINES SHALL BE REMOVED, CAPPED AND SEALED TO BELOW SLAB). WHERE THE EXISTING PLUMBING FIXTURES WERE REMOVED, SAW CUT AND REMOVE PORTION OF EXISTING FLOOR SLAB AS REQUIRED TO REMOVE PLUMBING LINES AND FLOOR DRAINS. NOTE: MINIMUM SAW CUT WIDTH SHALL BE NOT LESS THAN 24".
- 5A. PLUMBING FIXTURE TO BE REMOVED IN IT'S ENTIRETY TO INCLUDE: PLUMBING FLOOR / WALL CONSTRUCTION (ALL SANITARY LINES SHALL BE REMOVED, CAPPED AND SEALED TO BELOW SLAB).
- 5B. TOILET ROOM TO BE REMOVED TO INCLUDE: REMOVE PLUMBING FIXTURE(S) IN THEIR ENTIRETY, WALL ACCESSORIES, TOILET PARTITIONS, ETC. REMOVE DRYWALL ENOUGH TO EXPOSE FIXTURE CARRIER. SEE PLUMBING FOR ADDITIONAL INFORMATION.
6. CONCRETE FLOOR SLAB TO BE REMOVED FOR NEW PROPOSED PLUMBING TO INCLUDE: SAW CUT AND REMOVE PORTION OF EXISTING FLOOR SLAB AS REQUIRED. NOTE: MINIMUM SAW CUT WIDTH SHALL BE NOT LESS THAN 24".
- 6A. ALUM. STOREFRONT TO BE REMOVED BETWEEN VERTICAL FRAMING MEMBERS. HORIZONTAL MULLION AT 9'-3 1/4"± AFF TO REMAIN. STOREFRONT SILL MEMBER, WOOD SILL AND EXTERIOR CMU KNEEWALL CONSTRUCTION TO BE REMOVED FOR NEW PROPOSED STOREFRONT DOOR. TO INCLUDE: SAW CUT AND REMOVE PORTION OF WALL CONSTRUCTION TO A MINIMUM OF 8" BELOW TOP OF FLOOR SLAB, SAW CUT AND REMOVE PORTION OF CONCRETE INTERIOR / EXTERIOR SLAB AS REQUIRED. NOTE: MINIMUM SAW CUT WIDTH SHALL BE NOT LESS THAN 24". REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND EXTERIOR DEMOLITION ELEVATIONS ON SHEET A2.2.1. COORDINATE WALL OPENING SIZE WITH PROPOSED STOREFRONT ON SHEET A5.4
7. DOOR AND FRAME TO REMAIN. DOOR HARDWARE TO BE REMOVED, PREPARE DOOR TO RECEIVE NEW DOOR HARDWARE. REMOVE ALL ATTACHED DECALS, PLAQUES, ETC. AND PREPARE DOOR AND FRAME TO RECEIVE NEW PAINT FINISH.
8. ELECTRICAL PANELS TO BE REMOVED, REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. LOCATION OF EXISTING FIRE ALARM PANEL.
10. EXISTING ELEVATED OFFICE CONSTRUCTION (±5'-2"A.F.F.), TO BE REMOVED IN IT'S ENTIRETY, INCLUDING ALL RELATED STRUCTURAL SUPPORT, FLOOR FRAMING, WALLS, SHELVES, ELECTRICAL ITEMS, STAIRS, DOORS, WINDOWS, CEILINGS, ETC.
11. WALL PANELING, MILLWORK, SHELVING AND OR ADDITIONAL MISCELLANEOUS EQUIPMENT, WALL ATTACHED FIXTURES, BLOCKING, ETC. TO BE REMOVED. PATCH AND PREP WALLS FOR NEW FINISH.
12. REMOVE EXISTING NON-COMPLIANT GUARD RAIL AND HANDRAIL. REMOVE POSTS BELOW CONCRETE AND PATCH SMOOTH WITH ADJACENT SURFACE.
13. REMOVE WOOD SILL AT KNEE WALL AND PREPARE FOR GYP. BD. FINISH.
14. REMOVE FLOOR BOLTS AND/OR ELECTRICAL BOXES. PATCH AND REPAIR AND PREP FOR NEW FINISH.
15. REMOVE WATER HEATER AND SHELF IN ITS ENTIRETY.
16. DEMO KNEE WALL AS REQUIRED FOR THE REQUIRED CLEARANCE
17. REMOVE WOOD COLUMN AND BEAM ASSOCIATED WITH BULKHEAD AND SOFFIT FRAMING
18. SAWCUT AND REMOVE WALKWAY AT AREA OF NEW LEVEL WALKWAY AS REQUIRED. REFER TO SHEET A0.2.1 AND SHEET A0.2.3.

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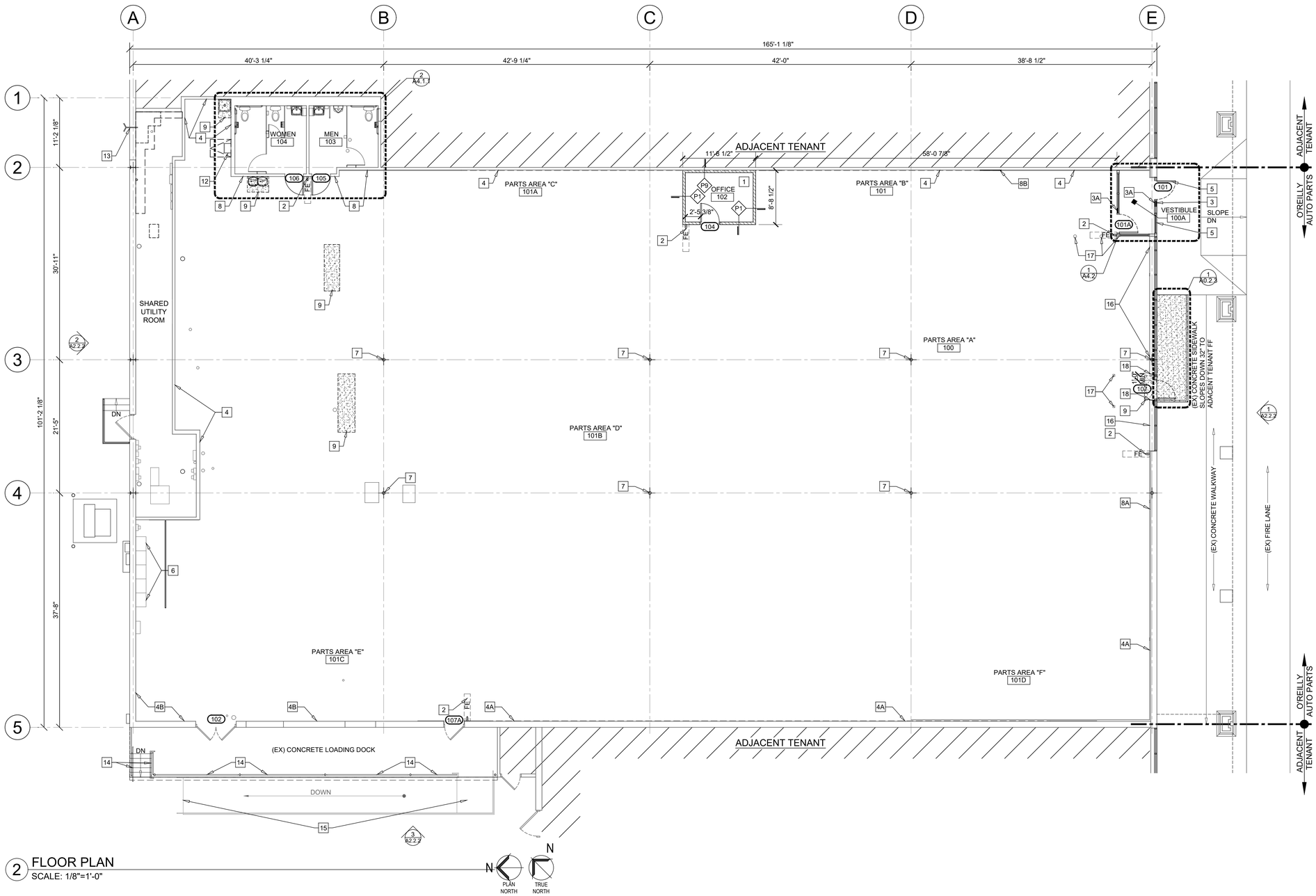
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DEMOLITION PLAN

O'Reilly AUTO PARTS

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SHEET NUMBER: A1.1



2 FLOOR PLAN
SCALE: 1/8"=1'-0"

KEYNOTES

1 CONSTRUCT NEW WALLS, AS INDICATED.

2 SURFACE MOUNTED PORTABLE FIRE EXTINGUISHER, REFER TO LEGEND ON SHEET A0.1.

3 INTERNATIONAL SYMBOL OF ACCESSIBILITY: LOCATE AT MAIN ENTRANCE, REFER TO DETAIL #3/A0.1.

3A TACTILE EXIT SIGNAGE: LOCATE ON WALL ADJACENT TO DOOR STRIKE SIDE, REFER TO DETAIL #3/A0.1.

4 EXISTING GYPSUM WALLBOARD WALL TO REMAIN, REPAIR ALL DAMAGED SURFACES INCLUDING PLUGGING ALL REMAINING HOLES. PAINT WALL SURFACE FROM CONCRETE FLOOR UP TO 6" ABOVE CEILIING, IF NO CEILING OCCURS, PAINT UP TO UNDERSIDE OF ROOF DECK (ALL EXPOSED WALL SURFACES). VERIFY WALLS ARE DRY AND FREE OF ANY MOLD.

4A EXISTING GYP. BD. AND CMU WALL TO REMAIN, REPAIR ALL DAMAGED SURFACES INCLUDING PLUGGING ALL REMAINING HOLES. PAINT WALL SURFACE FROM CONCRETE FLOOR UP TO 6" ABOVE CEILIING, IF NO CEILING OCCURS, PAINT UP TO UNDERSIDE OF ROOF DECK (ALL EXPOSED SURFACES). VERIFY WALLS ARE DRY AND FREE OF ANY MOLD.

4B EXISTING CMU WALL TO REMAIN (FULL HEIGHT), REPAIR ALL DAMAGED SURFACES INCLUDING PLUGGING ALL REMAINING HOLES. PAINT WALL SURFACE FROM CONCRETE FLOOR UP TO UNDERSIDE OF ROOF DECK (ALL EXPOSED SURFACES). VERIFY WALLS ARE DRY AND FREE OF ANY MOLD.

5 STOREFRONT DOOR AND STOREFRONT ASSEMBLY AT EXISTING OPENING, REFER TO SHEET A6.1.

6 ELECTRICAL PANELS, REFER TO ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.

7 EXISTING EXPOSED FREESTANDING STEEL COLUMN TO REMAIN, PREPARE SURFACE TO BE PAINTED, REFER TO FINISH PLAN AND SCHEDULE ON SHEET A1.3.

8 GC TO VERIFY IF EXISTING WALL ADJACENT TO OPEN CEILING EXTENDS TO THE DECK, IF NOT EXTEND WALL AND GYP. BD. FINISH UP TO DECK ABOVE, AS NEEDED. GC TO VERIFY CONDITIONS AT TIME OF DEMOLITION.

8A IF DRYWALL DOES NOT EXTEND TO CEILING WHERE MEZZANINE WAS REMOVED IN PARTS AREA "A", EXTEND FURRING TO 6" ABOVE CEILING. MATCH EXISTING WALL CONSTRUCTION SO WALL IF FLUSH.

8B INFILL GYP. BD. AS REQUIRED IN PARTS AREA "A". MATCH EXISTING WALL CONSTRUCTION SO WALL IF FLUSH.

9 WHERE EXISTING FLOOR SLAB OPENING OCCURS, OR WHERE EXISTING FLOOR CONSTRUCTION WAS REMOVED, INFILL WITH CONCRETE. REFER TO #12/A5.1 AND STRUCTURAL DRAWINGS FOR SIMILAR SLAB INFILL DETAIL. CONCRETE FINISH / COLOR TO MATCH ADJACENT SURFACE WITH A FLUSH / SMOOTH TRANSITION TO THE ADJACENT SURFACE.

10 NOT USED

11 NOT USED

12 EXISTING ROOF ACCESS LADDER AND HATCH.

13 EXISTING FDC.

14 NEW PIPE GUARDRAIL AND/OR HANDRAIL. SEE EXTERIOR ELEVATIONS.

15 NEW PRE-MANUFACTURED STEEL SERVICE RAMP.

16 NEW GYPBOARD AT REMOVED WOOD SILL.

17 PATCH AND REPAIR FLUSH WITH EXISTING FLOOR SLAB - WHERE THERE IS PREVIOUS INFILL VERIFY IT IS LEVEL AND FLUSH WITH EXISTING FLOOR SLAB.

18 FINISH ENDS OF KNEE WALL WITH GYP. BD. WHERE DEMO FOR NEW DOOR OPENING AND CLEARANCE.

WALL LEGEND

- EXISTING WALL TO REMAIN.
- NEW INTERIOR METAL STUD WALL CONSTRUCTION.
- P1 — NEW INTERIOR WALL; REFER TO DETAIL #2/A5.1
- P9 — NEW FURRING; REFER TO DETAIL #15/A5.1
- ### — DOOR DESIGNATION, REFER TO DOOR SCHEDULE ON SHEET A6.1
- E.EX.(EX) INDICATES EXISTING
- NEW CONCRETE POUR BACK
- HEADER ABOVE. REFER TO SHEET A1.4 FOR ADDITIONAL INFORMATION

GENERAL NOTES

A REFER TO SHEET A5.1 FOR WALL CONSTRUCTION DETAILS.

B ALL INTERIOR PARTITIONS SHALL BE TYPE P1, UNO, TAPED SMOOTH & SANDED TO RECEIVE NEW FINISH.

C ALL NEW CONSTRUCTION IN SUITE TO MAINTAIN CONSISTENCY WITH EXISTING (STUD SIZE, ETC.), UNO

D USE 5/8" THICK TYPE "X" GYPSUM BOARD THROUGHOUT, UNO.

E PROVIDE EXTRA STUDS AS REQUIRED TO MOUNT ELECTRICAL OR MECHANICAL CONTROLS.

F DOOR OPENINGS IN PARTITIONS NOT DIMENSIONED ARE TO HAVE THE HINGE SIDE LOCATED 4" OFF THE ADJACENT PARTITION.

G IF EXISTING, REPLACE TINTING ON WINDOWS IF DAMAGE AS REQUIRED. COORDINATE WITH ARCHITECT.

H PROVIDE BACKING IN WALLS FOR ALL WALL HUNG FIXTURES, TVS/MONITORS AND MILLWORK IF APPLICABLE.

I ALL PENETRATIONS THROUGH RATED WALLS MUST BE FIRE SEALED PER UL METHODS.

J ARCHITECT SHALL REVIEW PROVIDED SUBMITTALS FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS ONLY. REVIEW OF SUCH SUBMITTALS IS NOT FOR THE PURPOSE OF DETERMINING THE ACCURACY AND COMPLETENESS OF OTHER INFORMATION SUCH AS DIMENSIONS, QUANTITIES AND INSTALLATION OR PERFORMANCE OF EQUIPMENT OR SYSTEMS, WHICH ARE THE CONTRACTOR'S RESPONSIBILITY. THE ARCHITECT'S REVIEW SHALL NOT CONSTITUTE APPROVAL OF SAFETY PRECAUTIONS, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCE OF PROCEDURES OF CONSTRUCTION, FABRICATION, TRANSPORTATION OR INSTALLATION. REVIEW OF A SPECIFIC ITEM SHALL NOT INDICATE APPROVAL OF AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT.

K REFER TO SHEET A0.1 FOR TACTILE SIGNAGE SCOPE.

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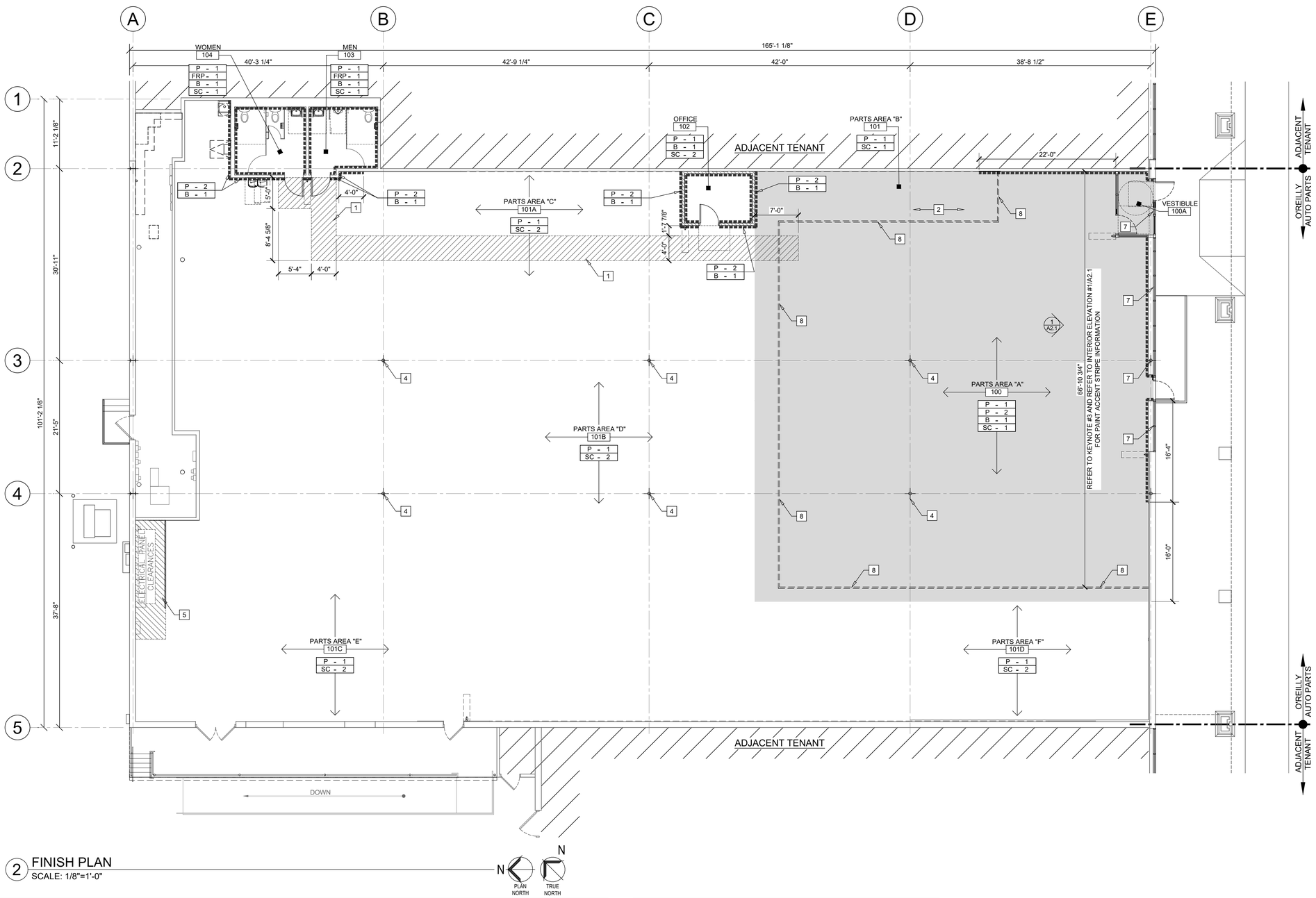
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FLOOR PLAN

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
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2 FINISH PLAN

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

N — PLAN NORTH

N — TRUE NORTH

GENERAL NOTES

A FINISH SUBSTITUTION REQUESTS REQUIRE PRIOR O'REILLY CONSTRUCTION APPROVAL.

B REFER TO SHEET A1.4 FOR CEILING TILE SPECIFICATIONS AND LAYOUT.

C FLOAT ALL AREAS WHERE SLAB IS NOT LEVEL OR TRUE PRIOR TO FLOOR FINISH INSTALLATIONS. REFER TO SHEET A1.1 FOR CONCRETE PREPARATION INFORMATION.

D BACK OF HOUSE EXPOSED STRUCTURE TO REMAIN AS-IS, UNO.

FINISH KEYNOTES

1 PROVIDE PAINTED PATH TO RESTROOMS FROM PARTS AREA "A". PATH SHALL REMAIN CLEAR OF FIXTURES AND BE MINIMUM 44" WIDE. STRIPE SPEC: 4" WIDE STRIPED OUTLINE WITH 36° STRIPED IN-FILL, SPACED 24" OC. COLOR SPEC: TO MATCH "OSHA YELLOW". COORDINATE FINAL FIXTURE LAYOUT WITH O'REILLY CONSTRUCTION.

2 PROVIDE PIECES OF 2' LENGTH BASE FOR INSTALLATION AT ENDS OF PARTS AREA "B" FIXTURES FACING PARTS AREA "A".

3 WALL TO RECEIVE HORIZONTAL ACCENT STRIPE. REFER TO INDICATED ELEVATION FOR LOCATION.

4 PREP AND PAINT ALL EXPOSED EXISTING STRUCTURAL STEEL COLUMN P-2 FROM CONCRETE FLOOR UP TO 6" ABOVE CEILING SYSTEM, IF NO CEILING OCCURS, PAINT UP TO UNDERSIDE OF ROOF DECK.

5 PROVIDE PAINTED FLOOR CLEARANCE AREA AT ELECTRICAL PANELS. STRIPE SPEC: 4" WIDE STRIPED OUTLINE WITH 36° STRIPED IN-FILL, SPACED 24" OC. COLOR SPEC: TO MATCH "OSHA YELLOW." COORDINATE FINAL FIXTURE LAYOUT WITH O'REILLY CONSTRUCTION.

6 NOT USED

7 EXISTING STOREFRONT TO REMAIN IS TO BE ELECTROSTATICALLY REFINISHED IN PLACE. REFER TO SHEET A3.0 EXTERIOR ELEVATIONS FOR FINISHING INFORMATION.

FINISH KEYNOTES

8 OUTLINE OF FIXTURE DECOR (BY FIXTURE MANUFACTURER).

FINISH SCHEDULE

NOTE: REFER TO PLAN FOR FINISH LOCATIONS

FLOORING

SC - 1 POLISHED CONCRETE FINISH
- COLOR: NATURAL CONCRETE, CLEAR
- APP: TWO COATS
- NOTES: PROJECT MANUAL - SECTION 03 35 43

SC - 2 TREATED CONCRETE FINISH
- STYLE: LIQUID DENSIFIER
- COLOR: NATURAL CONCRETE, CLEAR
- APP: TWO COATS
- NOTES: PROJECT MANUAL - SECTION 03 30 00

BASE

B - 1 RESILIENT BASE
- MFR: VPI OR EQUAL
- COLOR: BLACK/JET 01
- SIZE: 4" COVED
- APP: PER MFR SPECS
- NOTES: INDICATES LOCATION OF FINISH ON PLAN

WALLS (TO INCLUDE DOORS AND MISC. ITEMS AS INDICATED)

P - 1 PAINT
- MFR: SHERWIN WILLIAMS
- COLOR: SW7042 SHOJI WHITE
- FINISH: SEMI GLOSS LATEX SEMI GLOSS ENAMEL ON HOLLOW METAL DOOR / FRAMES
- APP: PER MFR SPECS FOR SURFACE
- NOTES: INCLUDES ALL GYP BD CEILINGS. PAINT ALL EXTERIOR NEW / EXISTING REMAINING HOLLOW METAL DOORS / FRAMES AND OVERHEAD DOOR / FRAMES (INTERIOR SIDE).

P - 2 PAINT
- MFR: SHERWIN WILLIAMS
- COLOR: SW6468 HUNT CLUB
- FINISH: SEMI GLOSS LATEX SEMI GLOSS ENAMEL ON HOLLOW METAL DOOR / FRAMES, STEEL BOLLARDS
- APP: PER MFR SPECS FOR SURFACE
- NOTES: 2' BAND AT PERIMETER OF SHOWROOM & NEW INTERIOR DOOR FRAMES.

FRP - 1 SANITARY WALL PANEL
- COLOR: WHITE
- APP: PER MFR SPECS
- NOTES: PROJECT MANUAL - SECTION 09 77 00 PROVIDE ALL REQUIRED MOULDING

SPECIALTY

WS - 1 WOOD STAIN
- MFR: FACTORY FINISHED
- COLOR: EQUAL TO "GRAHAM" #300, MEDIUM BROWN
- NOTES: REFER TO SHEET A6.1, DOOR TYPE 'C' OR 'CC'

COMMONWEALTH OF MISSOURI
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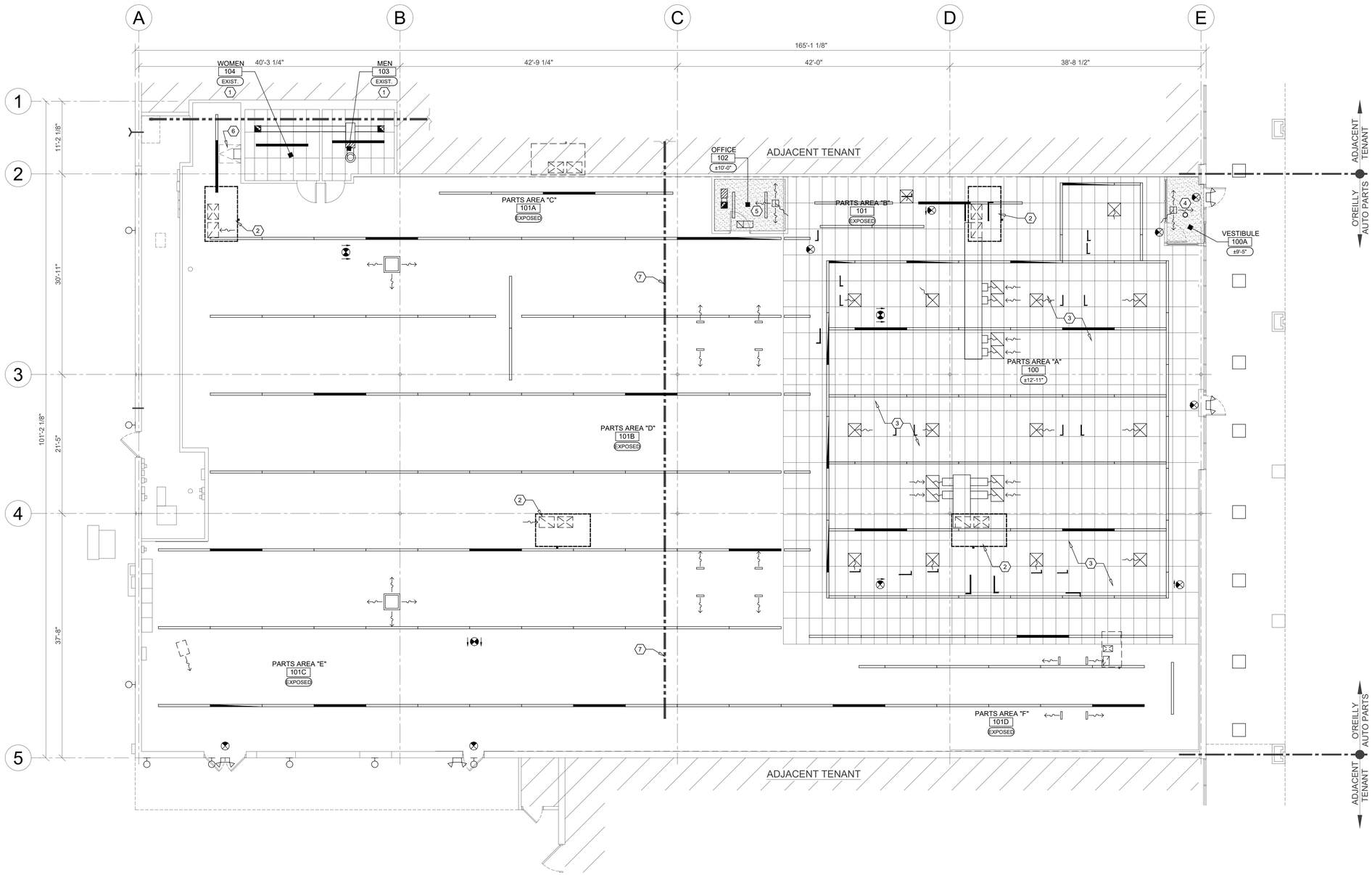
PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

FINISH PLAN

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

DRAWN BY: JMC
CHECKED BY: KWH
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: A1.3



2 REFLECTED CEILING PLAN
SCALE: 1/8"=1'-0"

REFLECTED CEILING LEGEND

- NEW / EXISTING 2X4 CEILING GRID & NEW TILES.
  GRID SPEC: ARMSTRONG, PRELUDE, 15/16", WHITE
  TILE SPEC: ARMSTRONG, FINE FISSURED - 1729, SQUARE EDGE, WHITE
- NEW GYP BD CEILING.
- +#'-#" — INDICATES CEILING HEIGHT
- ILLUMINATED DIRECTIONAL EXIT / EMERGENCY LIGHTS. REFER TO ELECTRICAL DRAWINGS.
- EXTERIOR WALL PACK LIGHT FIXTURE. REFER TO ELECTRICAL DRAWINGS.
- LINEAR LED LIGHT FIXTURE. SUSPENDED AT 12'-0" AFF OR SURFACE MOUNTED. REFER TO ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.
- EMERGENCY LINEAR LED LIGHT FIXTURE. SUSPENDED AT 12'-0" AFF OR SURFACE MOUNTED. REFER TO ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.
- RECESSED LED DOWNLIGHT. REFER TO ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.

REFLECTED CEILING GENERAL NOTES

A. THE GENERAL CONTRACTOR (GC) SHALL NOTIFY O'REILLY CONSTRUCTION OF ANY DISCREPANCIES BETWEEN ARCHITECTURAL, ELECTRICAL OR MECHANICAL DRAWINGS AND OBTAIN CLARIFICATION BEFORE COMMENCING WORK.

B. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE VARIOUS TRADE ITEMS WITHIN THE SPACE ABOVE ALL CEILINGS (INCLUDING, BUT NOT LIMITED TO: STRUCTURAL MEMBERS, MECHANICAL DUCTS AND INSULATION, CONDUITS, RACEWAYS, SPRINKLER SYSTEM, LIGHT FIXTURES, CEILING SYSTEMS, AND ANY SPECIAL STRUCTURAL SUPPORTS REQUIRED) AND SHALL BE RESPONSIBLE FOR MAINTAINING THE FINISH CEILING HEIGHT ABOVE THE FINISH FLOOR INDICATED ON THE DRAWING.

C. ALL CEILING INTERRUPTIONS, SUCH AS FURR DOWNS OR PARTITIONS, SHALL BE CHECKED AND THEIR CONSTRUCTIBILITY CONFIRMED BEFORE ANY RELATED ELEMENTS ARE CONSTRUCTED. IF THERE ARE ANY QUESTIONS REGARDING THESE OR ANY OTHER COORDINATION QUESTIONS, THE GC IS RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE O'REILLY CONSTRUCTION BEFORE PROCEEDING WITH WORK IN QUESTION OR RELATED WORK.

D. CEILING SUSPENSION SYSTEMS SHALL BE CONNECTED AND BRACED DIRECTLY TO THE STRUCTURE AT THE MEANS OF EGRESS SERVING AN OCCUPANT LOAD OF 30 OR MORE. SPACING OF VERTICAL HANGERS SHALL NOT EXCEED 2'-0" ON CENTER ALONG THE ENTIRE LENGTH OF THE MEANS OF EGRESS OR LOBBY WHEN THE DISTANCE BETWEEN THE STRUCTURAL DECK AND THE SUSPENDED CEILING EXCEEDS 4'-0".

E. POSITIVE BRACING TO THE STRUCTURE SHALL BE PROVIDED AT CHANGES IN THE CEILING PLANE ELEVATION OR AT DISCONTINUITIES IN THE CEILING GRID SYSTEM.

(#) REFLECTED CEILING KEYNOTES

1. EXISTING CEILING GRID WITH NEW 24" X 48" ACOUSTICAL CEILING TILES.
2. OUTLINE OF ROOF TOP UNIT, REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. SUSPENDED 24" X 48" ACOUSTICAL CEILING GRID AND TILES. MATCH EXISTING HEIGHT.
4. GYPSUM CEILING (VESTIBULE: 5/8" TYPE "X" GYPSUM BOARD CEILING, REFER TO VESTIBULE SECTION 3/A4.2.
5. GYPSUM CEILING, 5/8" TYPE "X" GYPSUM BOARD CEILING, REFER TO WALL SECTION 2/A5.1.
6. EXISTING ROOFTOP HATCH TO REMAIN.
7. EXISTING FIRE MAIN AT 13'-3 1/2"± AFF.

COMMONWEALTH OF MISSOURI
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PROJECT:
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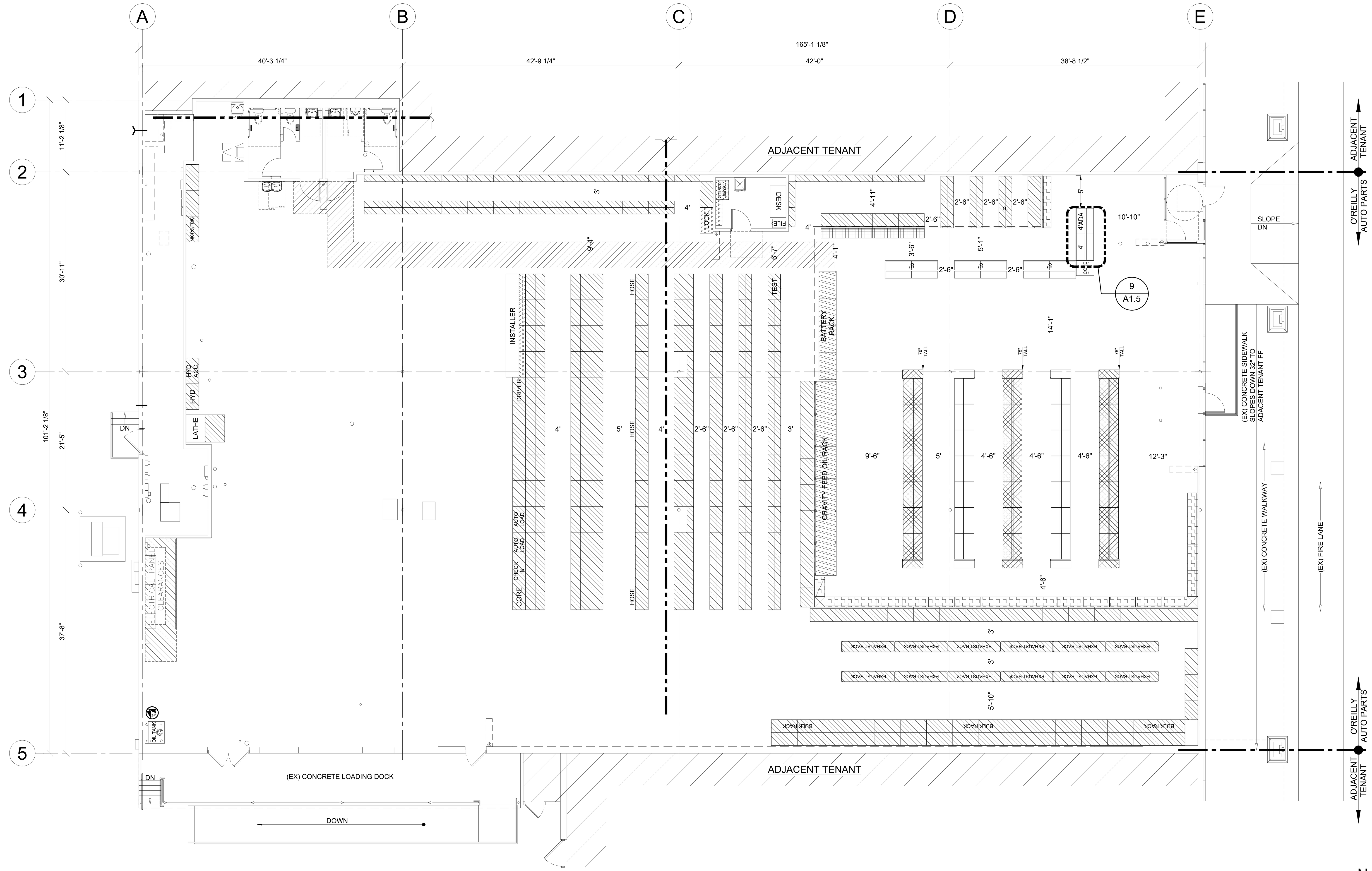
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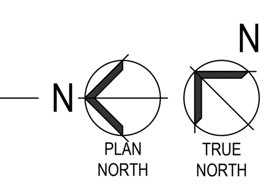
REFLECTED CEILING PLAN

O'Reilly AUTO PARTS

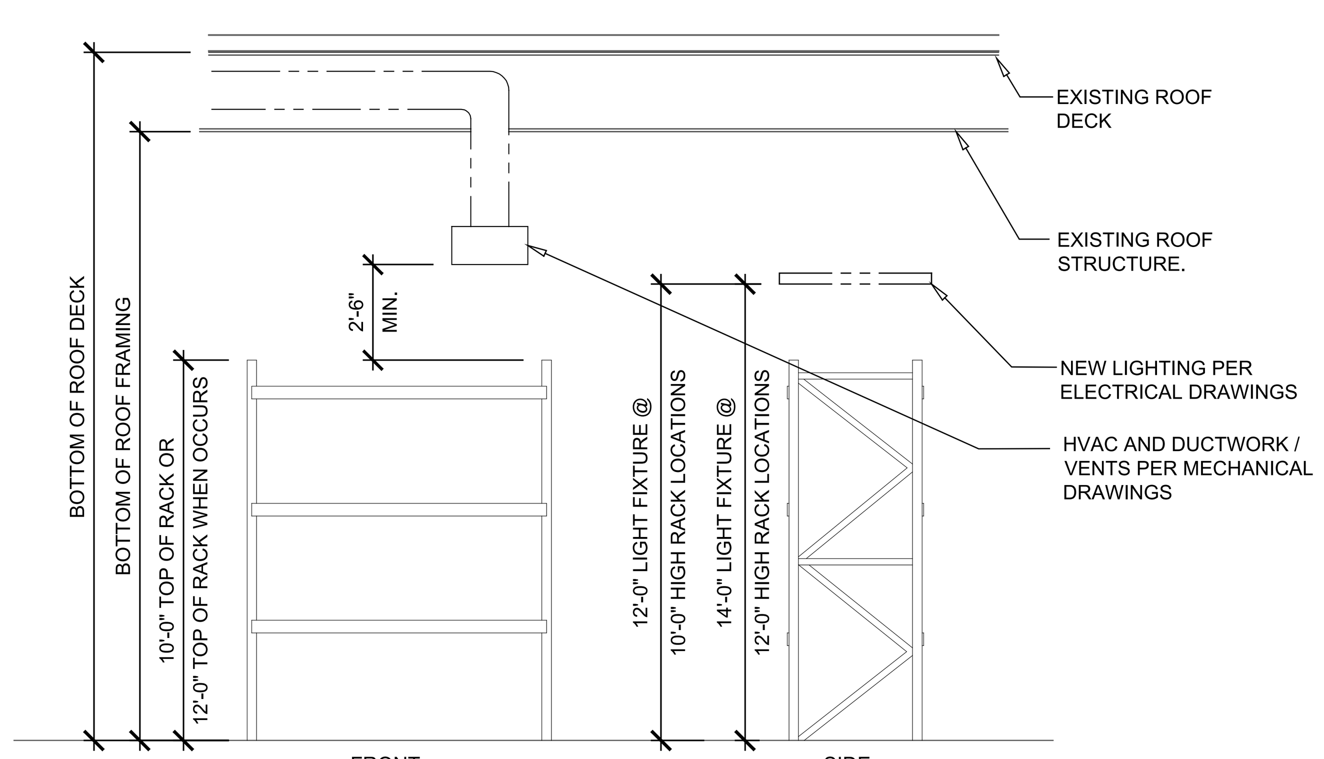
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SHEET NUMBER: A1.4



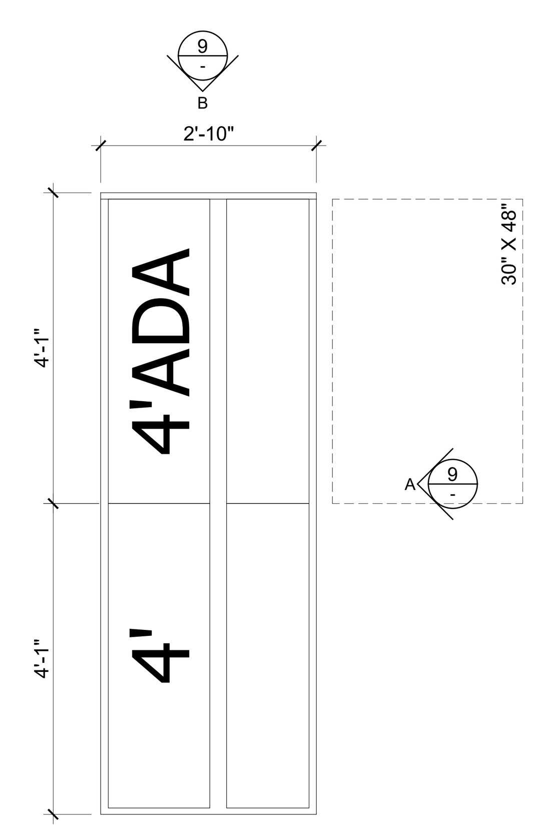


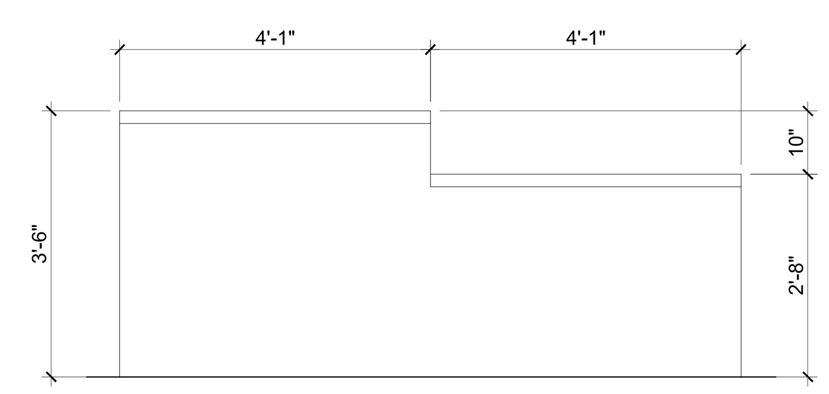
1 FIXTURE PLAN (FOR REFERENCE ONLY)
SCALE: 1/16"=1'-0"



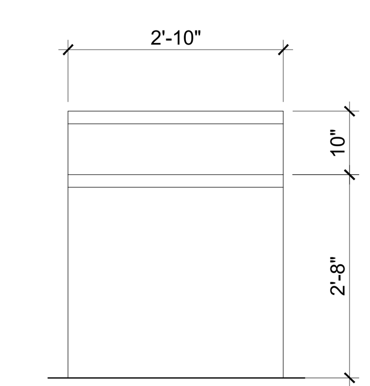
NOTE:
WHERE A MEZZANINE OCCURS, HOLD MECHANICAL AND ELECTRICAL DEVICES AS HIGH AS POSSIBLE TO THE UNDERSIDE OF THE MEZZANINE FLOOR FRAMING, COORDINATE IN FILED

2 CEILING HEIGHT AND RACK SECTION (FOR REFERENCE ONLY)
SCALE: 1/4"=1'-0"





ELEVATION A



ELEVATION B

9 TYPICAL ACCESSIBLE CASH WRAP (FOR REFERENCE ONLY)
SCALE: 1/2"=1'-0"

FIXTURE LEGEND

	HGT	SECURED	MFR	DESCRIPTION	FIXTURE NO
	≤60"	NO	LOZIER	L.D. GONDOLA	#2A
	78"	YES	LOZIER	L.D. GONDOLA	#2A
	84"	YES	LOZIER	GRAVITY FEED	#3A
	84"	YES	LOZIER	L.D. GONDOLA	#2A
	96"	YES	LOZIER	L.D. GONDOLA	#2A
	96"	YES	LOZIER	L.D. STORAGE	#1A
	120"	YES	LOZIER	L.D. STORAGE	#1A

FIXTURE REQUIREMENTS

A SEPARATE FIXTURE PERMIT IS REQUIRED	NO
FIXTURE ANCHORAGE REQUIRED	YES
SEISMIC CALCULATIONS REQUIRED	NO
THIRD PARTY SEISMIC SPECIAL INSPECTION REQUIRED	NO
FIXTURE INSTALLER IS REQUIRED TO BE LICENSED WITH THE CITY/COUNTY	NO
A TEMPORARY CERTIFICATE OF OCCUPANCY CAN BE ISSUED TO ALLOW STOCKING OF THE STORE	NO

FIXTURE GENERAL NOTES

A PLAN IS FOR RACK HEIGHT REFERENCE ONLY. REFER TO STORE INSTALL PLAN FOR FINAL FIXTURE LAYOUT (NOT INCLUDED IN THIS SET).

DESIGN BY OTHERS. FOR REFERENCE ONLY

Professional of Record

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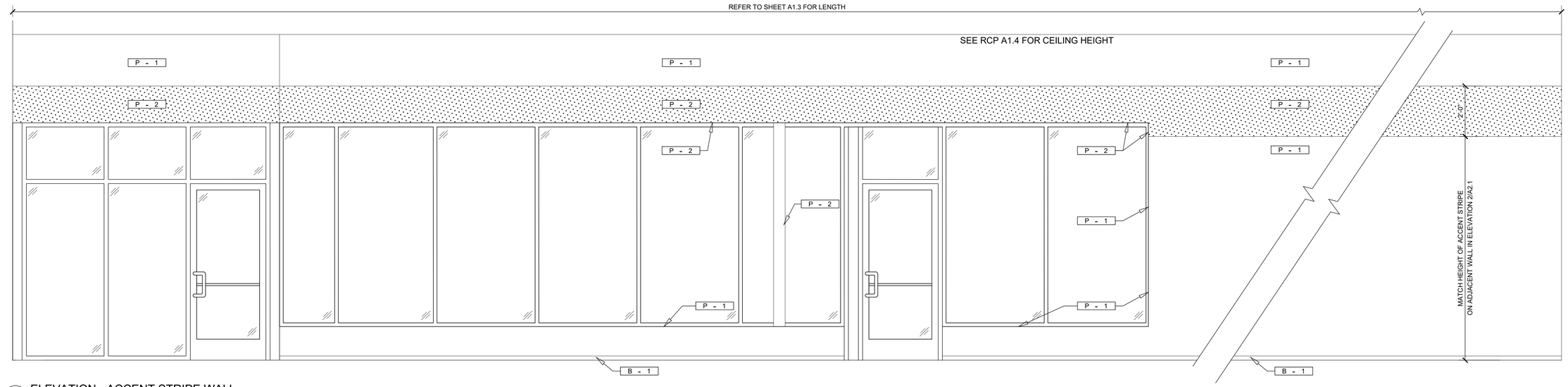
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FIXTURE PLAN

O'Reilly AUTO PARTS

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	FOR REVIEW	MM/DD/YY

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DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: A1.5



1 ELEVATION - ACCENT STRIPE WALL
SCALE: 1/2"=1'-0"

PERIMETER WALL STRIPE NOTE:
PAINT STRIPE TO CONTINUE AT STOREFRONT WINDOW JAMB AND HEAD RETURN TO WINDOW FRAME WHERE OCCURS.

REFER TO SHEET **A1.3** FOR FINISH SPECIFICATIONS

COMMONWEALTH OF MASSACHUSETTS
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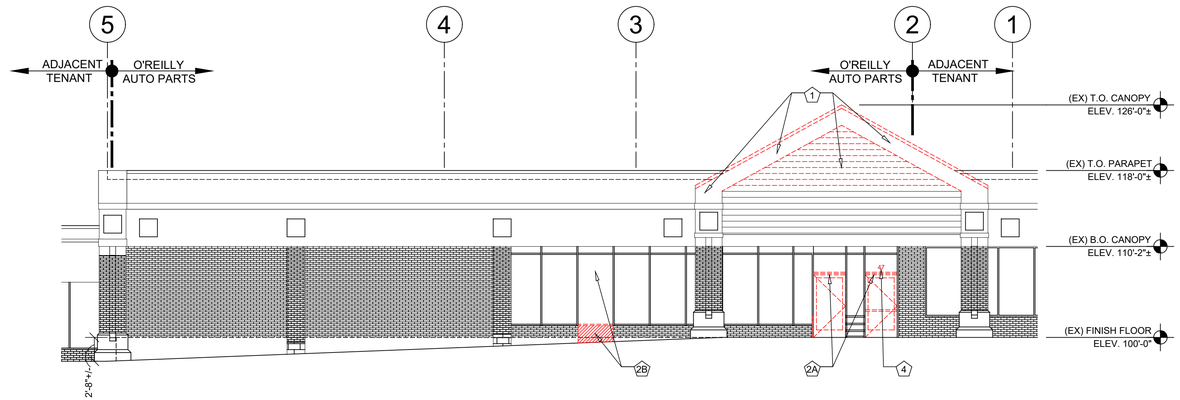
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INTERIOR ELEVATIONS

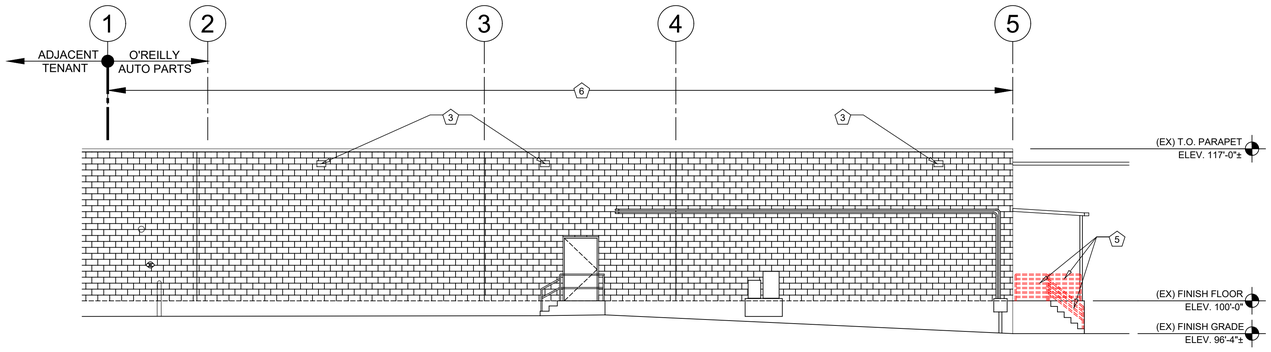
O'Reilly AUTO PARTS

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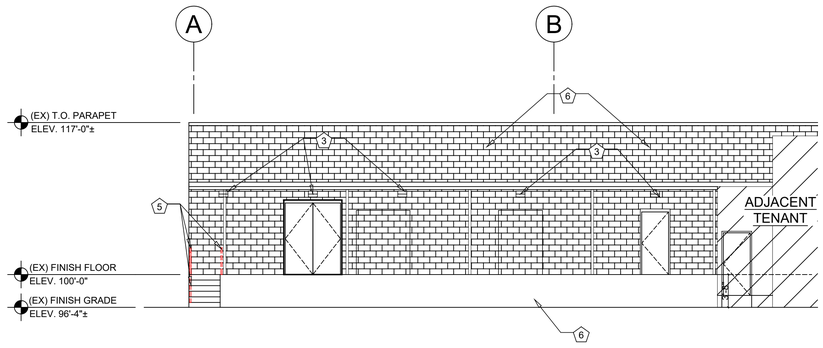
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SHEET NUMBER: A2.1



1 SOUTH (FRONT) EXTERIOR DEMOLITION ELEVATION
SCALE: 1/8"=1'-0"



2 NORTH (LEFT) EXTERIOR DEMOLITION ELEVATION
SCALE: 1/8"=1'-0"



3 WEST (REAR) EXTERIOR DEMOLITION ELEVATION
SCALE: 1/8"=1'-0"

LEGEND

EXISTING TO BE REMOVED

WALL CUT OUT, PER DEMOLITION PLAN

GENERAL NOTES

A EXISTING CONDITIONS BASED UPON INFORMATION PROVIDED BY OTHERS OR ARCHITECT'S OBSERVATION.

B EXISTING CONSTRUCTION TO REMAIN TO BE PROTECTED AS REQUIRED. REMOVE AND REPLACE DAMAGED CONSTRUCTION DUE TO CONTRACTOR'S ACTIVITIES.

C EXISTING CONSTRUCTION TO BE REWORKED AS REQUIRED FOR INSTALLATION OF NEW CONSTRUCTION. PATCH AND REPAIR EXPOSED SURFACES OF EXISTING CONSTRUCTION TO REMAIN AT LOCATIONS OF EXISTING CONSTRUCTION TO BE REMOVED. FIELD VERIFY SCOPE OF WORK REQUIRED.

D NEW CONSTRUCTION TO MATCH EXISTING CONSTRUCTION TYPE AND FINISH, UNLESS OTHERWISE NOTED.

DEMOLITION KEYNOTES

1 REMOVE EXISTING DECORATIVE EIFS CORNICE AND CAP FLASHING DOWN TO SHEATHING/FRAMING. REMOVE EXISTING SIDING AND/OR SHEATHING AS REQUIRED TO FACILITATE NEW WORK. REFER TO SHEET A2.2.2 FOR ADDITIONAL INFORMATION. EXISTING GABLE ROOF FRAMING AND ROOFING, BEHIND FASCIA IS TO REMAIN.

2A EXISTING STOREFRONT AND STOREFRONT DOORS TO BE REMOVED AS REQUIRED FOR INSTALLATION OF NEW VESTIBULE. REFER TO SHEET A1.1 FOR ADDITIONAL INSTRUCTION. VERTICAL STOREFRONT FRAMING MEMBERS AND THE HORIZONTAL MULLION AT 9'-3 1/4" A.F.F.± ARE TO REMAIN IN PLACE.

2B ALUM. STOREFRONT TO BE REMOVED BETWEEN VERTICAL FRAMING MEMBERS. HORIZONTAL MULLION AT 9'-3 1/4"± AFF TO REMAIN. STOREFRONT SILL MEMBER, WOOD SILL AND EXTERIOR CMU KNEEWALL CONSTRUCTION TO BE REMOVED FOR NEW PROPOSED STOREFRONT DOOR. REFER TO A1.1 FOR ADDITIONAL INFORMATION.

3 EXISTING EXTERIOR LIGHT FIXTURE TO BE REMOVED. PREPARE WALL AS REQUIRED TO RECEIVE NEW WALLPACK FIXTURE .

4 REMOVE SUITE/ADDRESSING AS REQUIRED. REFER TO SHEET A2.2.2 FOR ADDITIONAL INSTRUCTION.

5 EXISTING GUARDRAIL AND/OR HANDRAIL TO BE REMOVED BELOW THE SURFACE OF THE CONCRETE DOCK AND STAIR. CONCRETE TO BE PATCHED SMOOTH AND FLUSH WITH THE ADJACENT SURFACE.

6 O'REILLY PORTION OF LEFT SIDE AND REAR WALLS ARE TO BE POWER WASHED.

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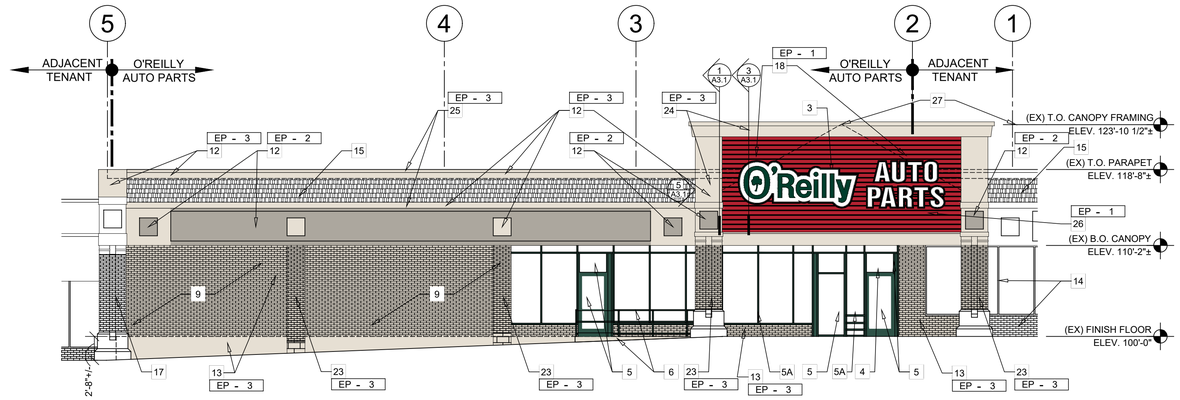
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EXTERIOR DEMOLITION ELEVATIONS

O'Reilly AUTO PARTS

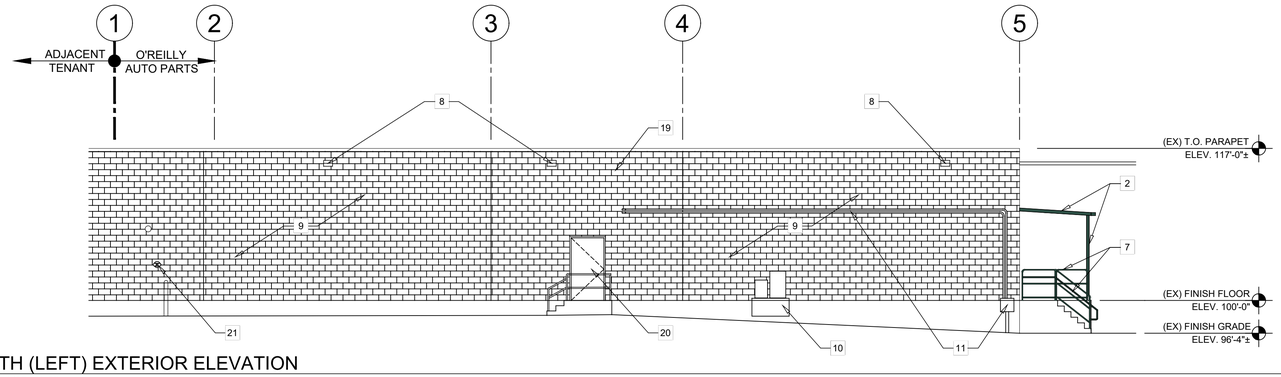
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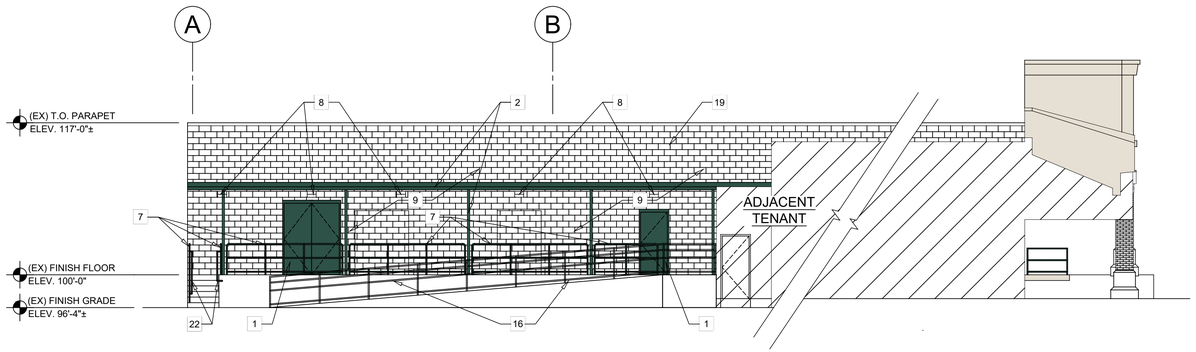
1 SOUTH (FRONT) EXTERIOR ELEVATION

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



2 NORTH (LEFT) EXTERIOR ELEVATION

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



3 WEST (REAR) EXTERIOR ELEVATION

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

FACADE

EP - 1	**PAINT**	
	MFR:	SHERWIN WILLIAMS
	STYLE:	SHER-CRYL
	COLOR:	SW6871 POSITIVE RED
	FINISH:	GLOSS
	APP:	PER MFR SPECS FOR SURFACE
	NOTES:	INCLUDE THREE COMPONENT (B65T105 / B65V105 / B65C105) CLEAR URETHANE
EP - 2	**PAINT**	
	MFR:	SHERWIN WILLIAMS
	COLOR:	SW7017 DORIAN GRAY
	FINISH:	SEMI GLOSS
	APP:	PER MFR SPECS FOR SURFACE
EP - 3	**PAINT**	
	MFR:	SHERWIN WILLIAMS
	COLOR:	SW7042 SHOJI WHITE
	FINISH:	SEMI GLOSS
	APP:	PER MFR SPECS FOR SURFACE

EXTERIOR FINISH SCHEDULE

NOTE: REFER TO ELEVATIONS FOR FINISH LOCATIONS

EXIST. HM DOOR AND FRAME, EXISTING METAL CANOPY AND COLUMNS, NEW METAL PIPE HANDRAIL AND GUARDRAILS:
FINISH: NEW - FACTORY PRIMED AND FIELD PAINTED
EXISTING - CLEAN, PRIME AND PAINT
COLOR: HUNT CLUB GREEN BY SHERWIN WILLIAMS (OR APPROVED EQUAL), SEMI-GLOSS FINISH.

STOREFRONT SYSTEM
MFG: EFCO, KAWNEER OR VISTA WALL (NO SUBSTITUTES)
COLOR: TO MATCH EXISTING or IVY, DARK IVY OR INTERSTATE GREEN, RESPECTIVELY

WINDOW TINT
MFG: 3M
STYLE: LAYER 1 - NIGHT VISION 15 (APPLY FIRST); LAYER 2 - FASERA, MILANO (APPLY OVER)
REP: JIM MANNIX | 612.325.6509
NOTE: INSTALL PRIOR TO INSTALLATION OF INTERIOR WALL CONSTRUCTION.

ELECTROSTATIC REFINISHING OF EXISTING ALUMINUM FRAMES NOTE:
CONTRACTOR TO FIELD-PAINT THE EXISTING ALUMINUM STOREFRONT FRAMES, MULLIONS, AND RELEVANT EXTERIOR TRIM USING A PROFESSIONAL-GRADE, ON-SITE ELECTROSTATIC SPRAY APPLICATION PROCESS. PREPARATION, PRIMING, AND COATING SYSTEM (TWO-PART ALIPHATIC POLYURETHANE) TO STRICTLY COMPLY WITH MANUFACTURER SPECIFICATIONS AND DIVISION 09 FINISHES. COLOR TO MATCH ARCHITECT'S SAMPLE. MASK GLAZING, HARDWARE, AND ADJACENT FINISHES COMPREHENSIVELY PRIOR TO APPLICATION. COLOR AND FINISH TO MATCH NEW STOREFRONT SYSTEM.

EXTERIOR GENERAL NOTES

A MANUFACTURER: SHERWIN WILLIAMS SPECIFIED. EQUAL PRODUCTS BY PPG INDUSTRIES ACCEPTABLE (NO SUBSTITUTES).

B APPLICATION: INSTALL PER MANUFACTURER'S RECOMMENDATIONS FOR PROJECT CONDITIONS. EACH COAT SPECIFIED SHALL BE SPRAY APPLIED AND BACK ROLLED. COVERAGE THICKNESS INDICATED IN WET MIL UNITS, UNLESS OTHERWISE INDICATED.

EXTERIOR KEYNOTES

1 EXISTING HOLLOW METAL DOOR AND FRAME. CLEAN, PRIME AND PAINT. SEE EXTERIOR FINISH SCHEDULE ABOVE FOR COLOR. REFER TO SHEET A6.1 FOR FURTHER INFORMATION.

2 EXISTING METAL CANOPY AND COLUMNS. CLEAN, PRIME AND PAINT. SEE EXTERIOR FINISH SCHEDULE ABOVE FOR COLOR.

3 SURFACE MOUNTED SIGN, O'REILLY CONSTRUCTION FURNISHED AND INSTALLED. PROVIDE ROUGH-IN ELECTRICAL. GC TO VERIFY ADEQUATE BACKING FOR MOUNTING . COORDINATE REQUIREMENTS WITH O'REILLY CONSTRUCTION. REFER TO SHEET SG2.1 IN SEPARATE EXTERIOR DESIGN PACKAGE.

4 PREFERRED BUILDING ADDRESS NUMBERS: 6" HIGH HELVETICA WHITE VINYL ADHERED TO EXTERIOR FACE OF GLAZING. CONFIRM WITH LANDLORD/JURISDICTION REQUIREMENTS.

5 NEW EXTERIOR STOREFRONT GLAZING SYSTEM WITH NEW ENTRY AND EXIT DOORS IN EXISTING STOREFRONT WINDOW OPENING. REFER TO SHEETS A1.1, A1.2 AND A5.4 FOR FURTHER INFORMATION.

5A EXISTING EXTERIOR STOREFRONT GLAZING SYSTEM TO REMAIN. SEE EXTERIOR FINISH SCHEDULE ABOVE FOR REFINISHING REQUIREMENTS.

6 NEW CONCRETE PLATFORM AND METAL PIPE HANDRAILS. SEE EXTERIOR FINISH SCHEDULE ABOVE FOR HANDRAIL COLOR. SEE SHEET A0.2.3 FOR FURTHER INFORMATION.

7 NEW METAL PIPE GUARDRAILS, SEE EXTERIOR FINISH SCHEDULE ABOVE FOR COLOR. SEE SHEET A0.2.3 FOR FURTHER INFORMATION.

8 NEW WALLPACK LIGHT FIXTURE IN SAME LOCATION OF EXISTING WALL PACKS, TYP. REFER TO ELECTRICAL DRAWINGS.

9 PATCH AND REPAIR ALL MISC. HOLES, RIPS, TEARS, PENETRATIONS, ETC. AS REQUIRED AND MAKE EXTERIOR WEATHERTIGHT.

10 EXISTING ELECTRICAL EQUIPMENT.

11 EXISTING ELECTRICAL JUNCTION BOX AND CONDUITS.

12 EXISTING EIFS TO BE PATCHED, CLEANED AND PAINTED PER NOTED PAINT COLOR.

13 EXISTING PAINTED BRICK/CONCRETE TO BE PATCHED, CLEANED AND PAINTED PER NOTED PAINT COLOR.

14 EXISTING ADJACENT TENANT BRICK AND STOREFRONT TO REMAIN, NO WORK.

15 EXISTING SHINGLE ROOFING.

16 NEW PREMANUFACTURED METAL RAMP AND RAILINGS.

17 EXISTING BRICK AND STONE COLUMN. DO NOT PAINT.

18 INSTALL NEW SIGN BACKER TO MATCH EXISTING. PAINT PER NOTED PAINT COLOR.

19 EXISTING MASONRY WALL. POWER WASH.

20 EXISTING SHARED FIRE PROTECTION/FIRE ALARM, ELECTRICAL ROOM ENTRANCE. NO WORK

21 EXISTING FIRE DEPARTMENT CONNECTION.

22 NEW METAL PIPE HANDRAILS. SEE EXTERIOR FINISH SCHEDULE ABOVE FOR HANDRAIL COLOR. SEE SHEET A0.2.3 FOR FURTHER INFORMATION.

23 EXISTING BRICK AND STONE COLUMN TO BE PATCHED, CLEANED AND PAINTED PER NOTED PAINT COLOR.

24 NEW EIFS TO BE PAINTED PER NOTED PAINT COLOR.

25 EXISTING COPING TO BE PAINTER PER NOTED PAINT COLOR.

26 EXISTING SIGN BACKER. PAINT PER NOTED PAINT COLOR.

27 TOP OF CANOPY FRAMING TO BE 6" MIN. ABOVE EXISTING GABLE RIDGE.

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SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

EXTERIOR ELEVATIONS

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

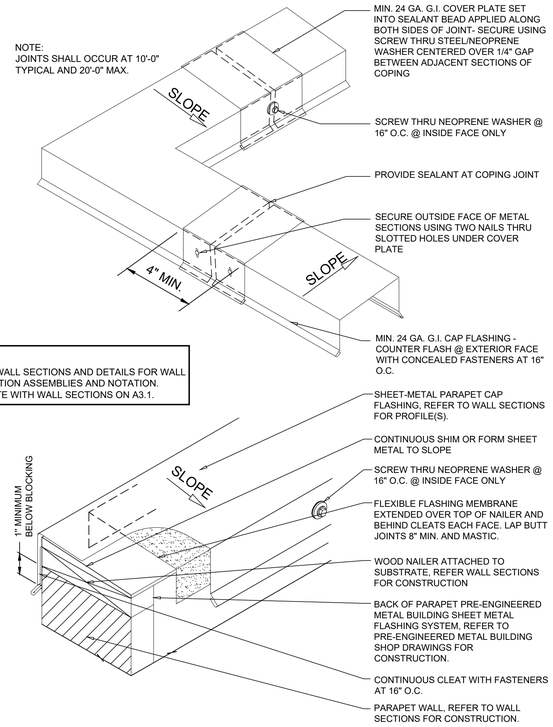
DRAWN BY: JVR
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DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: A2.2.2

GENERAL NOTES

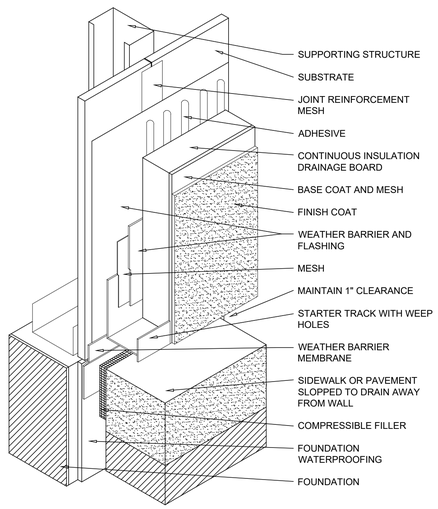
A REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.

B SHEET METAL AND ROOFING CONSTRUCTION SHALL COMPLY WITH NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA) AND SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA) DESIGN STANDARDS AND RECOMMENDATIONS.

C REFER TO SHEET A2.2.2 FOR METAL COPING AND EXTERIOR INSULATION FINISH SYSTEM (EIFS) TEXTURE AND COLOR. PERIMETER SEALANT COLOR TO MATCH FRAMING COLOR UNLESS OTHERWISE INDICATED.



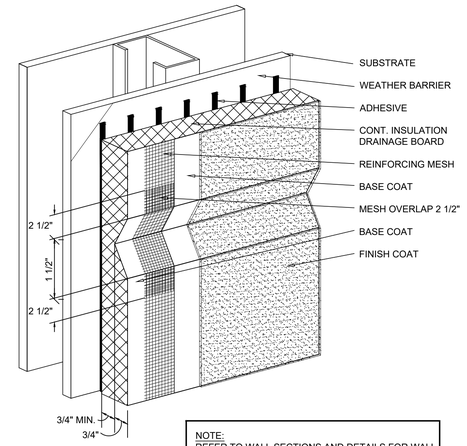
1 TYPICAL COPING FLASHING DETAIL
SCALE: N.T.S.



NOTE:
REFER TO WALL SECTIONS AND DETAILS FOR WALL CONSTRUCTION ASSEMBLIES AND NOTATION

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

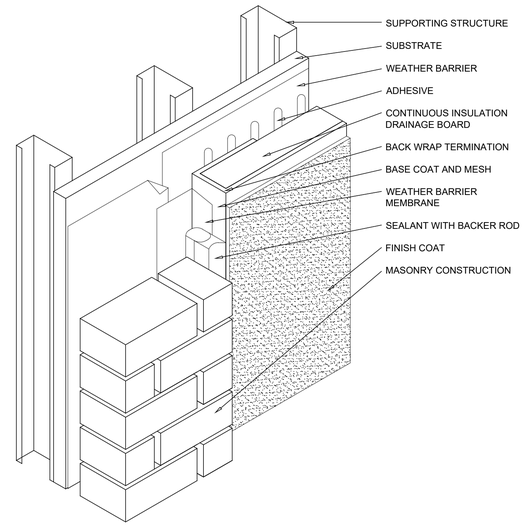
2 EIFS TERMINATION DETAIL
SCALE: N.T.S.



NOTE:
REFER TO WALL SECTIONS AND DETAILS FOR WALL CONSTRUCTION ASSEMBLIES AND NOTATION

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

3 RUSTICATION EIFS JOINT DETAIL
SCALE: N.T.S.



NOTE:
REFER TO WALL SECTIONS AND DETAILS FOR WALL CONSTRUCTION ASSEMBLIES AND NOTATION

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

4 EIFS TERMINATION DETAIL
SCALE: N.T.S.

COMMONWEALTH OF MASSACHUSETTS REGISTERED ARCHITECTS Michael S. Sundermeyer #52005 St. Louis, Missouri

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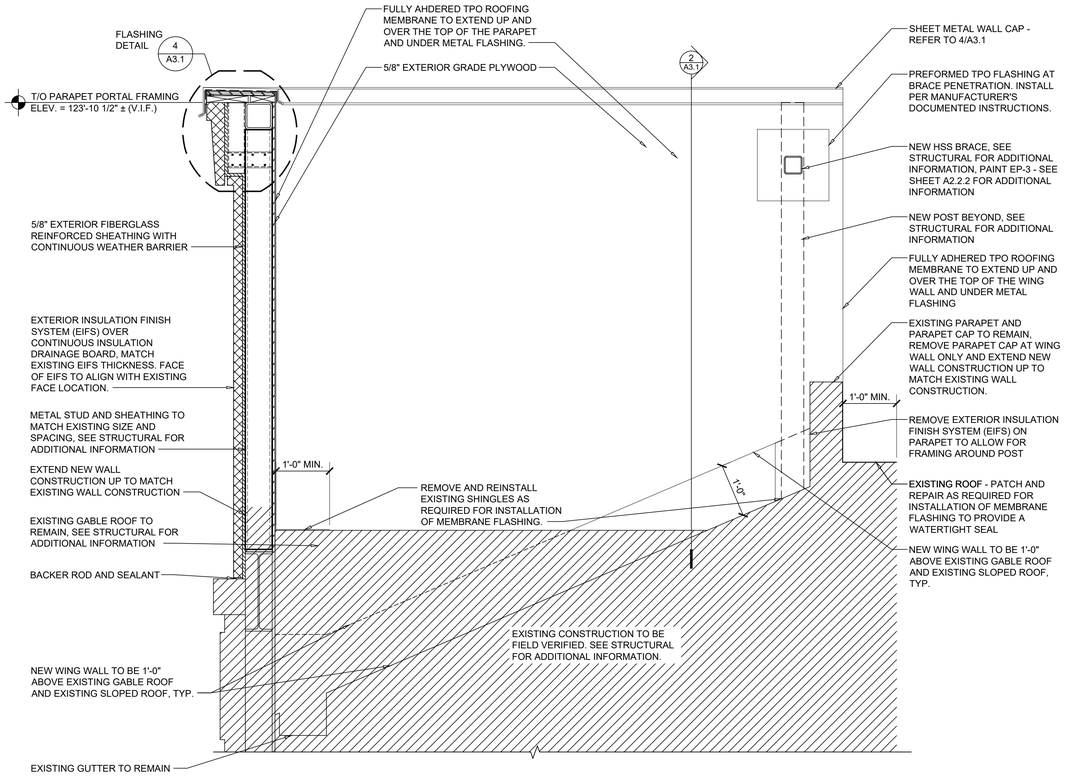
PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

EXTERIOR DETAILS

O'Reilly AUTO PARTS

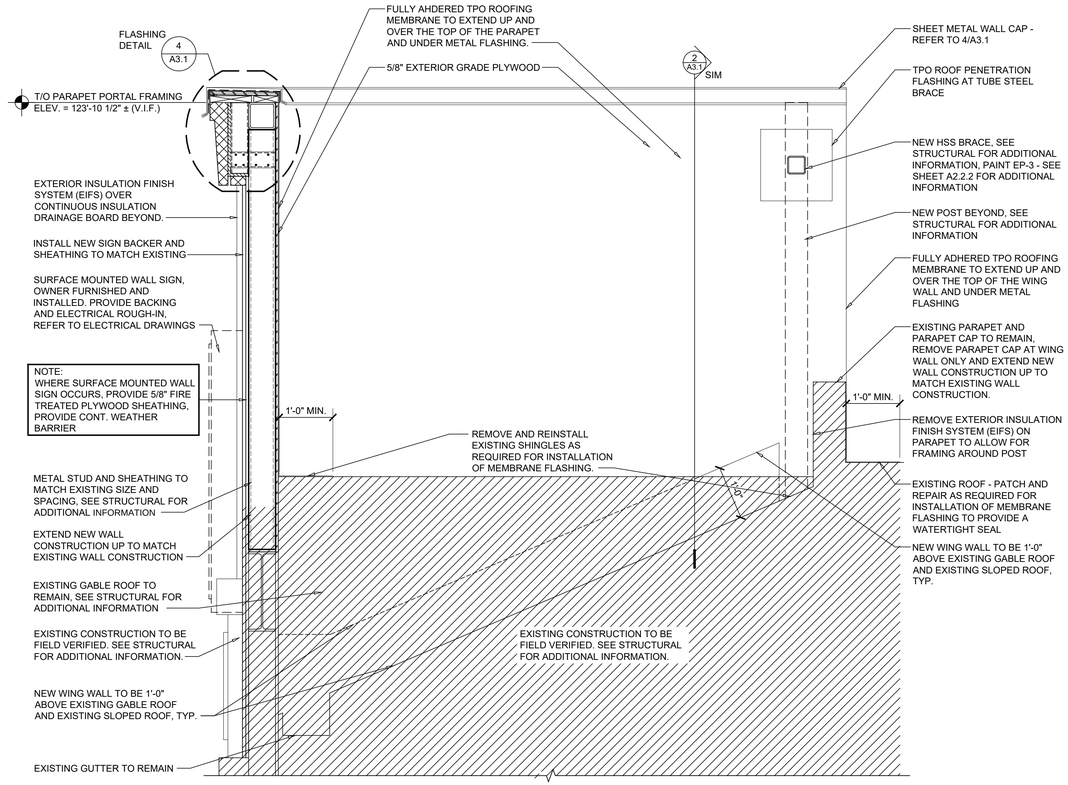
REV.	DESCRIPTION	DATE
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DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: A3.1.1



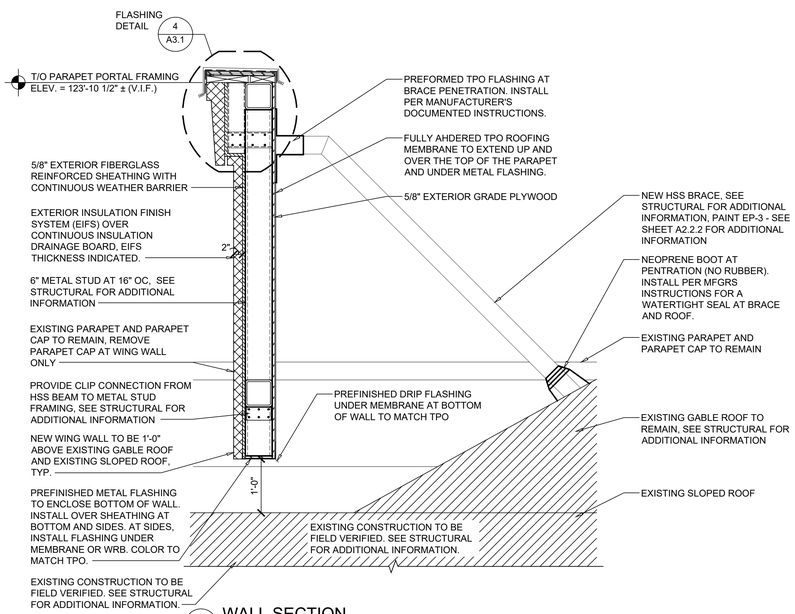
1 WALL SECTION

SCALE: 3/4"=1'-0"



3 WALL SECTION

SCALE: 3/4"=1'-0"

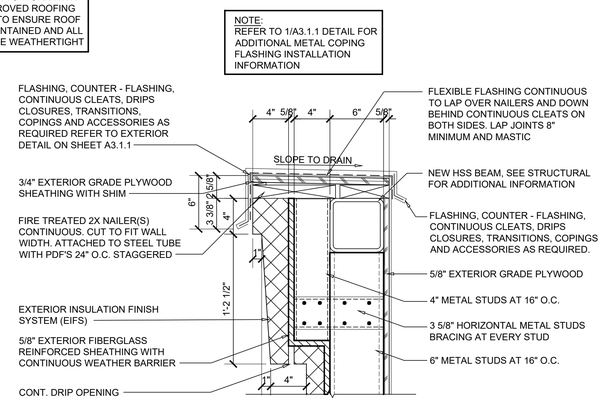


2 WALL SECTION

SCALE: 3/4"=1'-0"

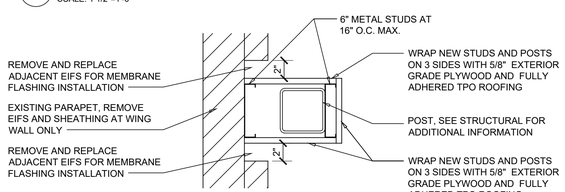
NOTE:
THE CONTRACTOR TO WORK WITH LANDLORD'S APPROVED ROOFING MANUFACTURER TO ENSURE ROOF WARRANTY IS MAINTAINED AND ALL CONNECTIONS ARE WEATHERTIGHT

NOTE:
REFER TO 1/A3.1.1 DETAIL FOR ADDITIONAL METAL COPING FLASHING INSTALLATION INFORMATION



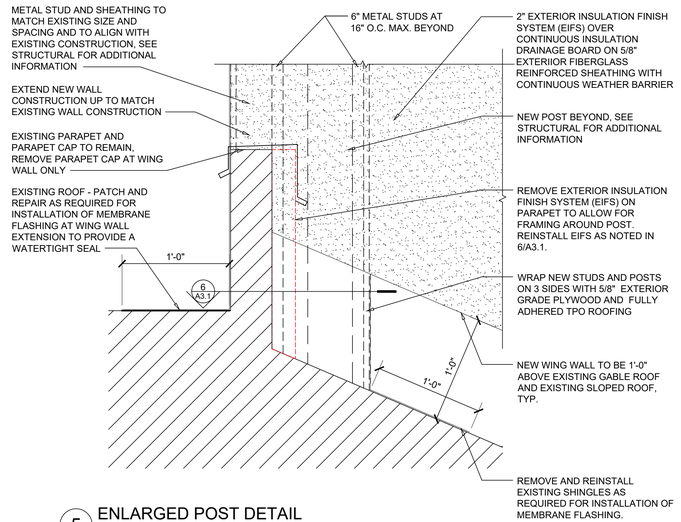
4 CAP FLASHING DETAIL

SCALE: 1 1/2"=1'-0"



6 ENLARGED PLAN AT POST

SCALE: 1 1/2"=1'-0"



5 ENLARGED POST DETAIL

SCALE: 1 1/2"=1'-0"

GENERAL NOTES

A. STOREFRONT ANCHORING SYSTEMS SHALL BE DESIGNED BY MANUFACTURER TO CONFORM TO PERFORMANCE AND TESTING REQUIREMENTS SPECIFIED.

B. REFER TO SHEET A2.2.2 FOR STOREFRONT FRAMING COLORS. PERIMETER SEALANT COLOR TO MATCH FRAMING COLOR UNLESS OTHERWISE INDICATED.

C. FIELD VERIFY FINAL ROUGH OPENINGS PRIOR TO FABRICATION.

D. REFER TO SHEET A2.2.2 FOR EXTERIOR INSULATION FINISH SYSTEM (EIFS) TEXTURE AND COLOR. PERIMETER SEALANT COLOR TO MATCH FRAMING COLOR UNLESS OTHERWISE INDICATED.

E. REFER TO SHEET A3.1.1 FOR EXTERIOR INSULATION FINISH SYSTEM (EIFS) TYPICAL SECTIONS AND DETAILS.

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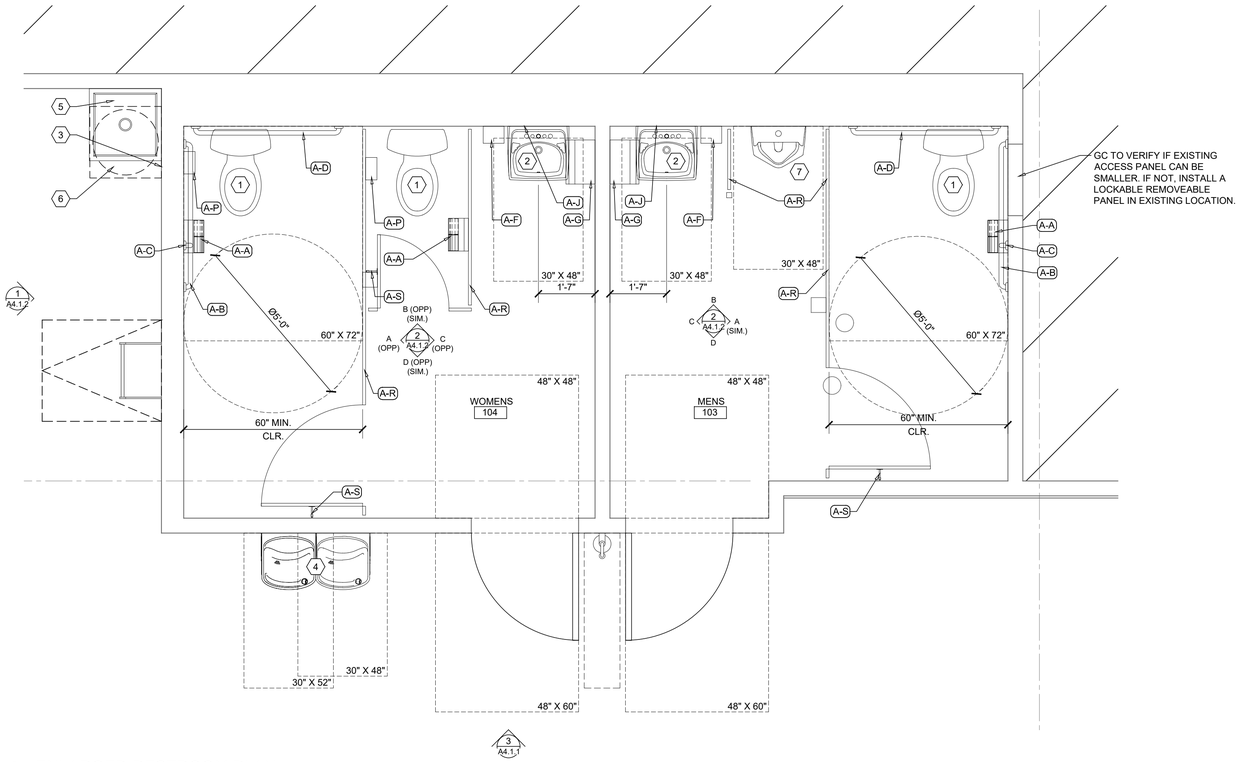
PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

EXTERIOR SECTIONS AND DETAILS

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

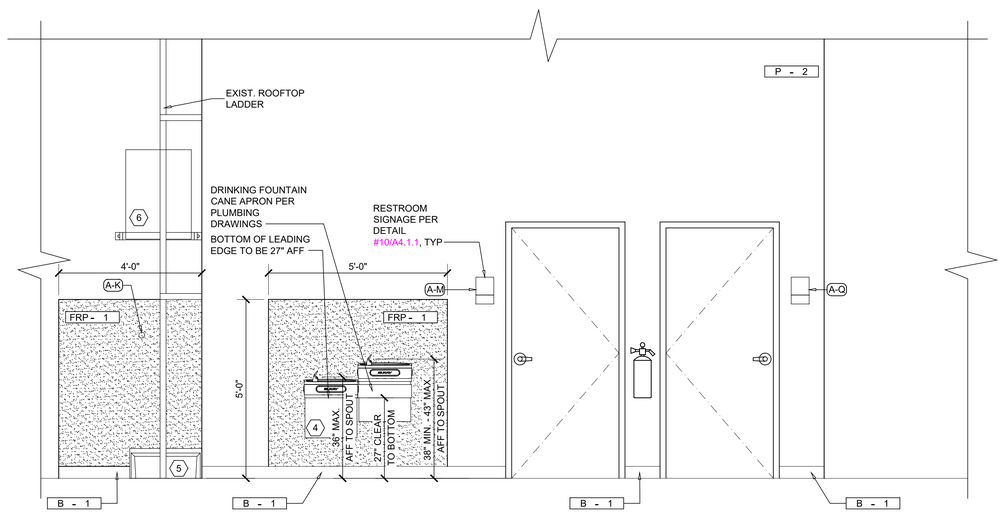
DRAWN BY: JLB
CHECKED BY: JVR
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: A3.1



GC TO VERIFY IF EXISTING ACCESS PANEL CAN BE SMALLER. IF NOT, INSTALL A LOCKABLE REMOVEABLE PANEL IN EXISTING LOCATION.

2 ENLARGED RESTROOM PLAN

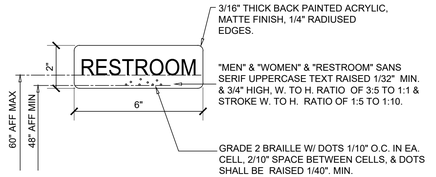
SCALE: 1/2"=1'-0"



3 ELEVATION - RESTROOM FRONT

SCALE: 1/2"=1'-0"

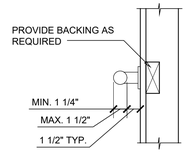
REFER TO SHEET A1.3 FOR FINISH SPECIFICATIONS



RESTROOM WALL SIGN

10 RESTROOM SIGNAGE DETAIL

SCALE: 1-1/2"=1'-0"



11 GRAB BAR SECTION

SCALE: 1-1/2"=1'-0"

A-X ACCESSORY SCHEDULE

	DESCRIPTION	MFR	SERIES / MODEL
A	TISSUE PAPER DISPENSER	GEORGIA PACIFIC	56783A
B	GRAB BAR	BOBRICK	B6806 x 48"
C	GRAB BAR	BOBRICK	B6806 x 18"
D	GRAB BAR	BOBRICK	B6806 x 42"
F	SOAP DISPENSER	GOJO	PRO 2000
G	PAPER TOWEL DISPENSER	GEORGIA PACIFIC	59460A
H	CANE GUARD	BOBRICK	819299
J	MIRROR	BOBRICK	B-165-1836 18" W X 36" H
K	MOP HANGER	REFER TO PLUMBING DRAWINGS	REFER TO PLUMBING DRAWINGS
L	DOOR SIGN & SYMBOL (ALL GENDER)	COMPLIANCE SIGNS	RRE-55205_DCT_T24 SET_BLU_WHT
M	DOOR SIGN (WOMEN)	ROCKWOOD	BFM688
N	BABY CHANGING STATION	ASI	9012
P	SANITARY NAPKIN RECEPTACLE	BOBRICK	B-270
Q	DOOR SIGN (MEN)	ROCKWOOD	BFM687
R	TOILET PARTITION SYSTEM	ACCURATE	FLR ANCHORED / OH BRACED SS #4 FIN
S	ROBE HOOK / WALL BUMPER	BOBRICK	B-212

PLUMBING FIXTURE SCHEDULE

REFER TO PLUMBING DRAWINGS FOR SPECIFICATIONS AND ADDITIONAL REQUIREMENTS.

1. WATER CLOSET. FLUSH CONTROLS TO BE ON WIDE SIDE OF TOILET.
2. WALL HUNG LAVATORY.
3. EYE WASH STATION. INSTALL WITH TOP AT 45" (MAX.) ABOVE FINISH FLOOR.
4. HIGH / LOW DRINKING FOUNTAIN.
5. FLOOR MOUNTED JANITOR SINK.
6. WALL MOUNTED WATER HEATER.
7. WALL HUNG URINAL

GENERAL NOTES

A. GRAB BARS, FASTENERS AND MOUNTING DEVICES SHALL BE ABLE TO SUPPORT 250 LBS. PER LINEAR FOOT LOAD.

B. ALL EXPOSED PIPING BELOW SINKS TO BE COVERED WITH INSULATION.

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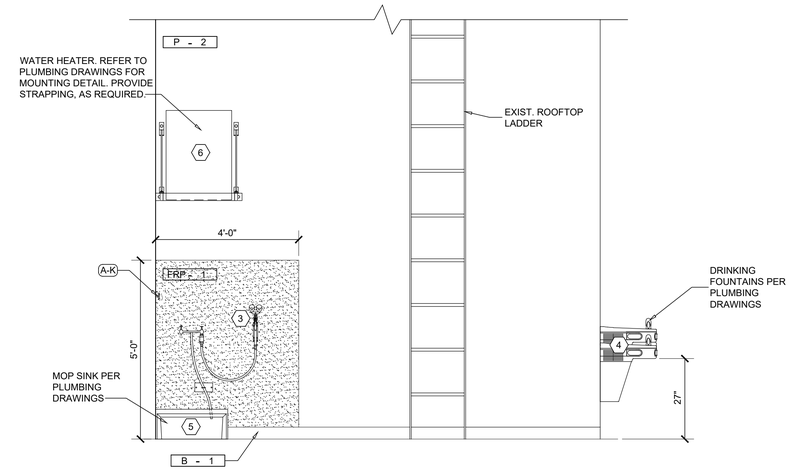
PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

ENLARGED ACCESSIBLE RESTROOMS

O'Reilly AUTO PARTS

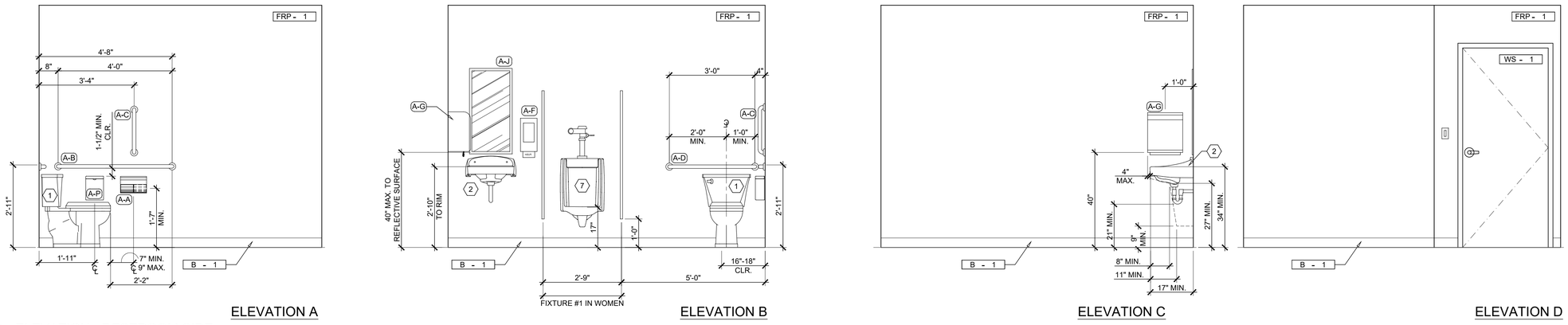
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CHECKED BY: KWH
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: A4.1.1



1 ELEVATION - RESTROOM SIDE

SCALE: 1/2"=1'-0"



2 ELEVATION - RESTROOM SIDE

SCALE: 1/2"=1'-0"

REFER TO SHEET A1.3 FOR FINISH SPECIFICATIONS; SHEET A4.1.1 FOR ACCESSORY AND FIXTURE SPECIFICATIONS

COMMONWEALTH OF MISSOURI REGISTERED ARCHITECT Michael S. Sundermeyer #52005 St. Louis Missouri

8/20/26

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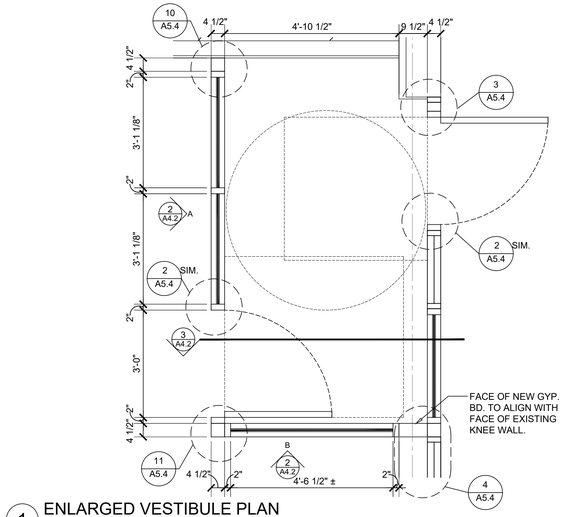
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ENLARGED ACCESSIBLE RESTROOMS

O'Reilly AUTO PARTS

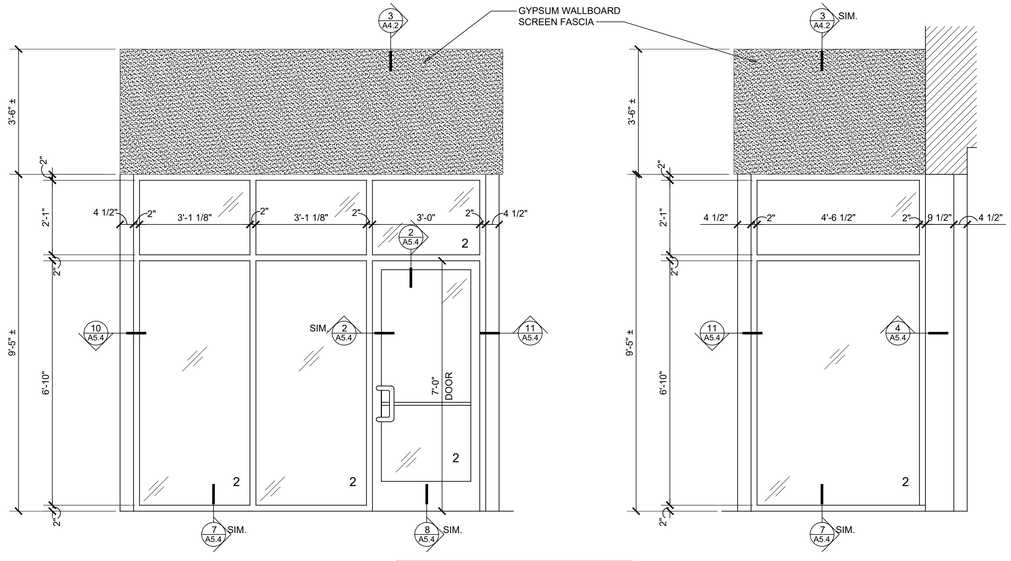
REV.	DESCRIPTION	DATE
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DRAWN BY: JMC
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SHEET NUMBER: A4.1.2



1 ENLARGED VESTIBULE PLAN

SCALE: 1/2"=1'-0"



2 VESTIBULE STOREFRONT ELEVATIONS (VIEWED FROM OUTSIDE OF VESTIBULE)

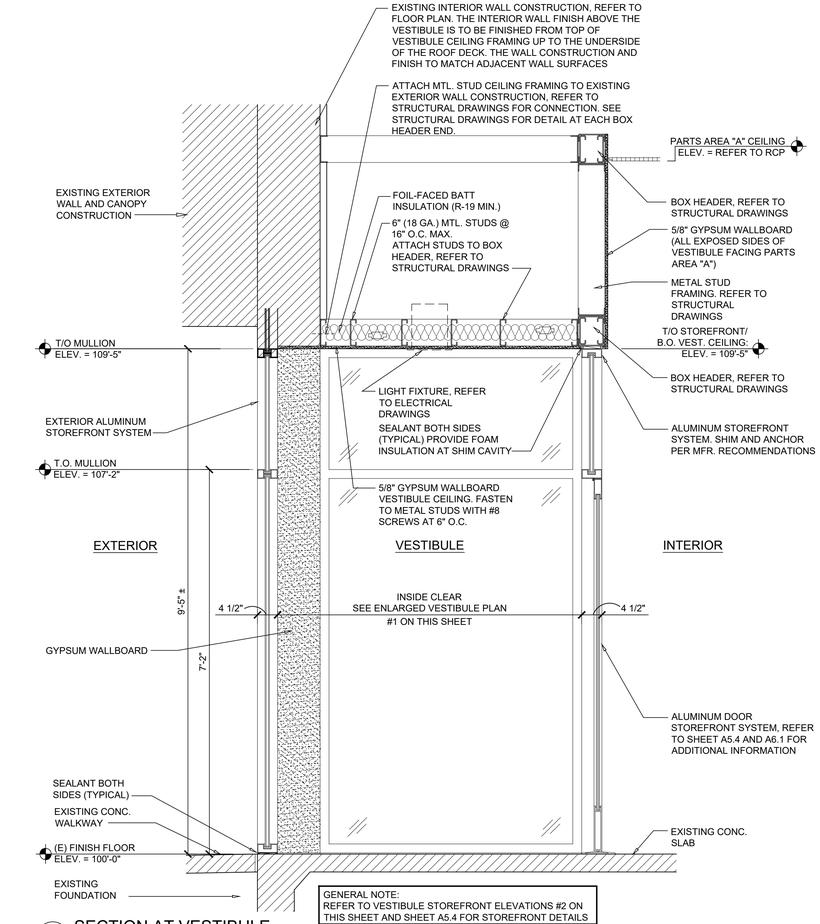
SCALE: 1/2"=1'-0"

GLAZING SCHEDULE

1	NEW 1" INSULATED GLASS UNIT. SPEC: VITRO ARCHITECTURAL GLASS (1/4" SOLARCOOL AZURIA @ EXTERIOR / 1/2" AIR SPACE / 1/4" CLEAR TEMPERED @ INTERIOR)
2	NEW 1/4" CLEAR TEMPERED GLAZING
ETR	EXISTING TO REMAIN

GENERAL NOTES

A	STOREFRONT ANCHORING SYSTEMS SHALL BE DESIGNED BY MANUFACTURER TO CONFORM TO PERFORMANCE AND TESTING REQUIREMENTS SPECIFIED.
B	REFER TO SHEET A2.2.2 FOR STOREFRONT FRAMING COLORS. PERIMETER SEALANT COLOR TO MATCH FRAMING COLOR UNLESS OTHERWISE INDICATED.
C	FIELD VERIFY FINAL ROUGH OPENINGS PRIOR TO FABRICATION.
D	SECURITY SHUTTERS MAY BE REQUIRED. CONTACT O'REILLY CONSTRUCTION FOR VERIFICATION (REFER TO SCOPE OF WORK SCHEDULE). PROVIDE ADDITIONAL SUPPORT FRAMING SYSTEM AS REQUIRED.
E	WHEN PROJECT ZONE WIND SPEEDS ARE EQUAL TO OR GREATER THAN 120 MPH, A STORM PANEL SYSTEM SHALL BE FURNISHED AND INSTALLED BY O'REILLY CONSTRUCTION. CONTACT O'REILLY CONSTRUCTION TO VERIFY AND COORDINATE WITH SYSTEM FABRICATOR (REFER TO SCOPE OF WORK SCHEDULE). PROVIDE ADDITIONAL SUPPORT FRAMING SYSTEM AS REQUIRED.
F	CONTRACTOR'S OPTION TO DIRECT ORDER/PURCHASE WINDOW FRAMING SYSTEM FROM THE FOLLOWING SUPPLIER (REFER TO SCOPE OF WORK SCHEDULE): COULTER & COMPANY 13711 E. 66TH ST. N. OWASSO, OK 74055 CONTACT: CARL YORMAN | 918.272.4494 | CARL@COULTERGLASS.COM



3 SECTION AT VESTIBULE

SCALE: 3/4"=1'-0"

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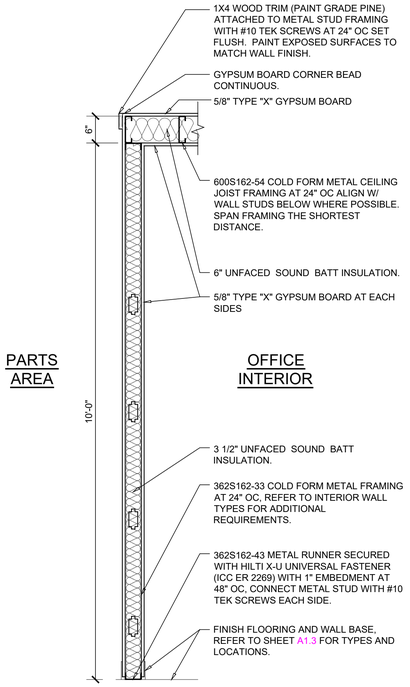
PROJECT:
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47 MEMORIAL PKWY
RANDOLPH, MA 02368

ENLARGED VESTIBULE

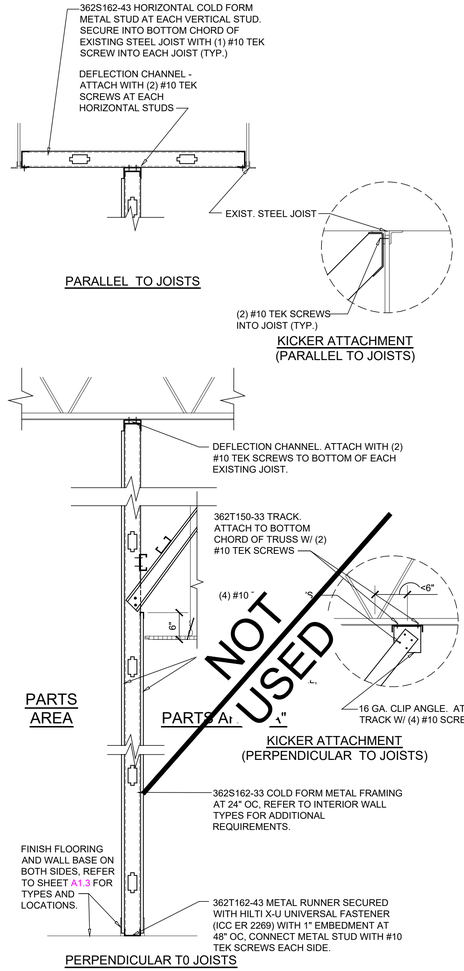
O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
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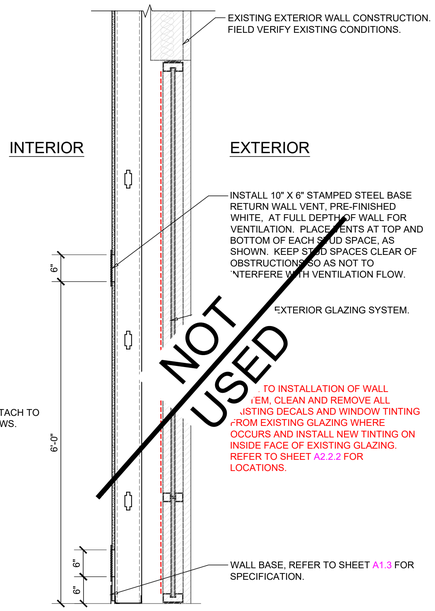
DRAWN BY: JMC
CHECKED BY: KWH
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: A4.2



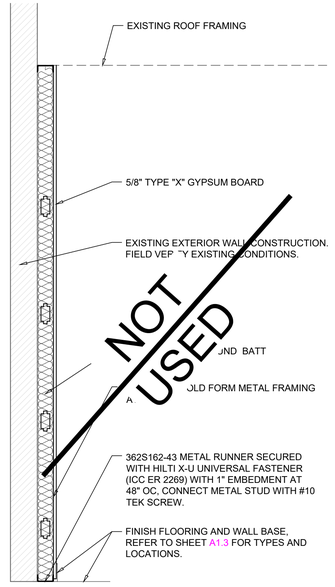
2 WALL DETAIL - P1
SCALE: 3/4"=1'-0"



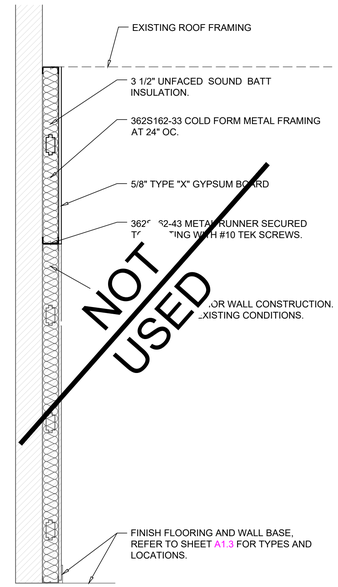
5 WALL DETAIL - P2
SCALE: 3/4"=1'-0"



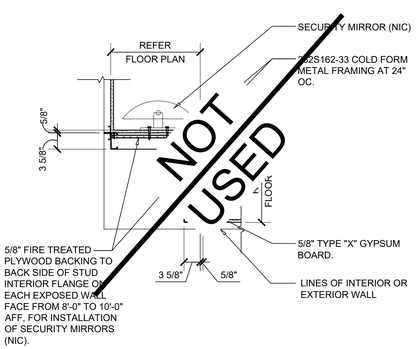
8 WALL DETAIL - P3
SCALE: 3/4"=1'-0"



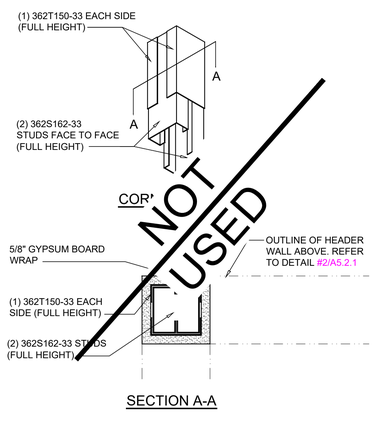
11 WALL DETAIL - P4
SCALE: 3/4"=1'-0"



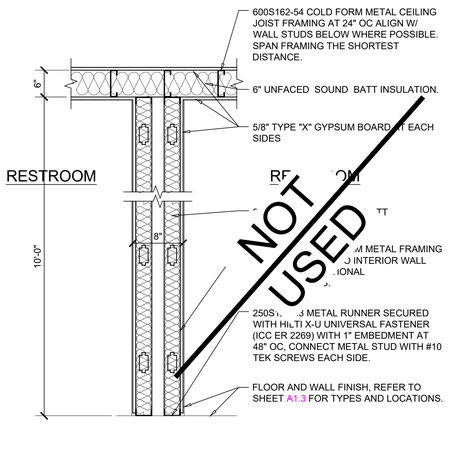
14 WALL DETAIL - P5
SCALE: 3/4"=1'-0"



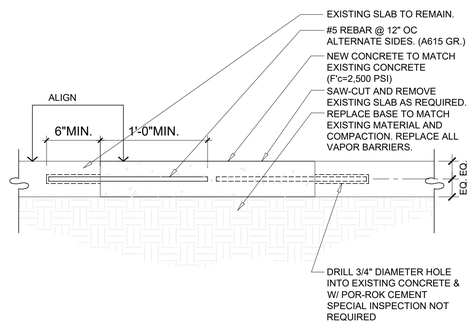
3 CORNER FRAMING DETAIL
SCALE: 1-1/2"=1'-0"



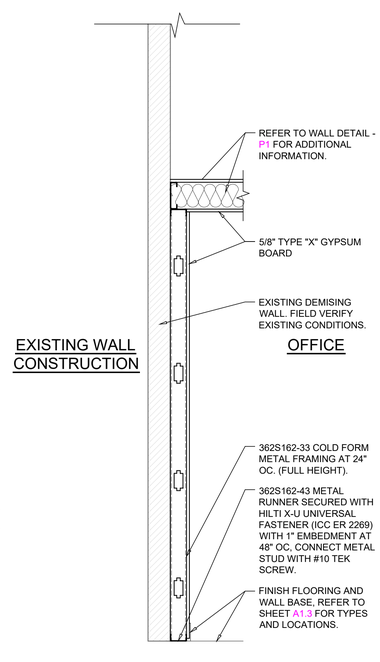
6 HEADER SUPPORT POST DETAIL
SCALE: NTS



9 WALL DETAIL - P6
SCALE: 3/4"=1'-0"



12 SAW-CUT CONCRETE SLAB REPAIR DETAIL
SCALE: 1-1/2"=1'-0"



15 WALL DETAIL - P9
SCALE: 3/4"=1'-0"

REFER TO SHEET A5.1.1 FOR ADDITIONAL WALL DETAILS

REGISTERED ARCHITECT
Michael S. Sundermeyer
#52005
St. Louis
Missouri
STATE OF MISSOURI
8/20/26
Michael S. Sundermeyer
License #952005
Exp. Date: 08/31/26
Professional of Record

CASCO
12 Sunnen Drive, Suite 100,
St. Louis, MO 63143
T: 314.821.1100

PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

WALL DETAILS

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

DRAWN BY: JLB
CHECKED BY: KWH
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: A5.1

GLAZING SCHEDULE

1	NEW 1" INSULATED GLASS UNIT. SPEC: VITRO ARCHITECTURAL GLASS (1/4" SOLARCOOL AZURIA @ EXTERIOR / 1/2" AIR SPACE / 1/4" CLEAR TEMPERED @ INTERIOR)
2	NEW 1/4" CLEAR TEMPERED GLAZING
ETR	EXISTING TO REMAIN

GENERAL NOTES

A	STOREFRONT ANCHORING SYSTEMS SHALL BE DESIGNED BY MANUFACTURER TO CONFORM TO PERFORMANCE AND TESTING REQUIREMENTS SPECIFIED.
B	REFER TO SHEET A2.2.2 FOR STOREFRONT FRAMING COLORS. PERIMETER SEALANT COLOR TO MATCH FRAMING COLOR UNLESS OTHERWISE INDICATED.
C	FIELD VERIFY FINAL ROUGH OPENINGS PRIOR TO FABRICATION.
D	SECURITY SHUTTERS MAY BE REQUIRED. CONTACT O'REILLY CONSTRUCTION FOR VERIFICATION (REFER TO SCOPE OF WORK SCHEDULE). PROVIDE ADDITIONAL SUPPORT FRAMING SYSTEM AS REQUIRED.
E	WHEN PROJECT ZONE WIND SPEEDS ARE EQUAL TO OR GREATER THAN 120 MPH, A STORM PANEL SYSTEM SHALL BE FURNISHED AND INSTALLED BY O'REILLY CONSTRUCTION. CONTACT O'REILLY CONSTRUCTION TO VERIFY AND COORDINATE WITH SYSTEM FABRICATOR (REFER TO SCOPE OF WORK SCHEDULE). PROVIDE ADDITIONAL SUPPORT FRAMING SYSTEM AS REQUIRED.
F	CONTRACTOR'S OPTION TO DIRECT ORDER/PURCHASE WINDOW FRAMING SYSTEM FROM THE FOLLOWING SUPPLIER (REFER TO SCOPE OF WORK SCHEDULE): COULTER & COMPANY 13711 E. 66TH ST. N. OWASSO, OK 74055 CONTACT: CARL YORMAN | 918.272.4494 | CARL@COULTERGLASS.COM



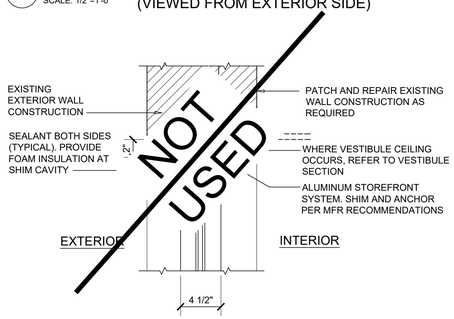
GENERAL NOTE:
REFER TO GLAZING SCHEDULE ON THIS SHEET FOR GLAZING SCHEDULED # AND TYPE

A STOREFRONT ELEVATION - WEST FACING

SCALE: 1/2"=1'-0" (VIEWED FROM EXTERIOR SIDE)

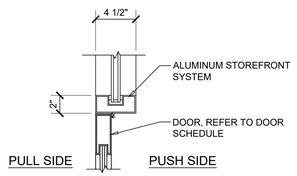
1 NOT USED

SCALE: 1 1/2" = 1'-0"



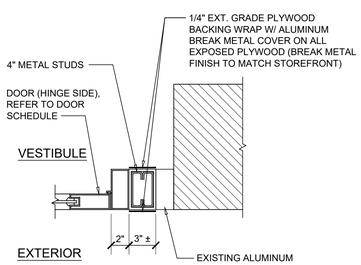
2 HEAD DETAIL AT DOOR (JAMB SIM.)

SCALE: 1 1/2" = 1'-0"



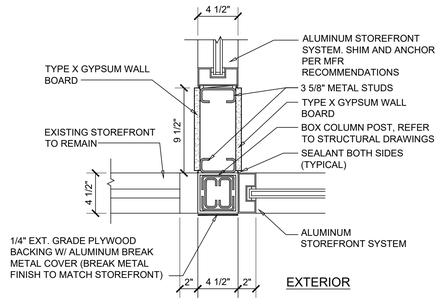
3 JAMB DETAIL AT EXISTING STOREFRONT

SCALE: 1 1/2" = 1'-0"



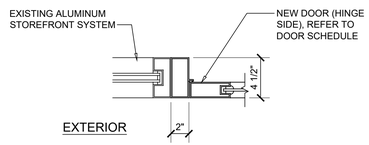
4 POST DETAIL AT VESTIBULE

SCALE: 1 1/2" = 1'-0"



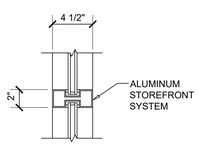
5 JAMB DETAIL AT VESTIBULE

SCALE: 1 1/2" = 1'-0"



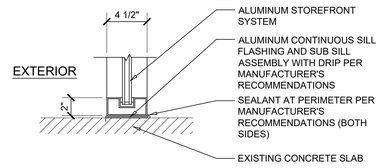
6 MULLION DETAIL

SCALE: 1 1/2" = 1'-0"



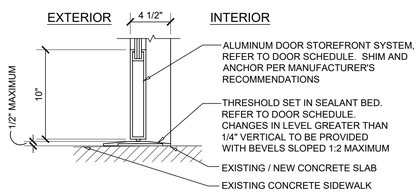
7 SILL DETAIL

SCALE: 1 1/2" = 1'-0"



8 THRESHOLD DETAIL

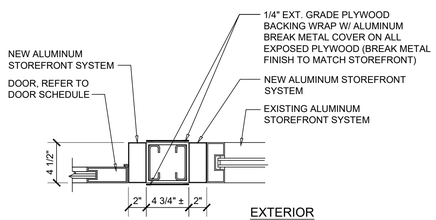
SCALE: 1 1/2" = 1'-0"



GENERAL NOTE:
WHERE NEW CONCRETE SLAB IS REQUIRED AT DOOR LOCATION, REFER TO FLOOR PLAN FOR ADDITIONAL INFORMATION

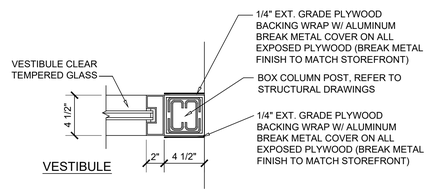
9 JAMB DETAIL AT VESTIBULE

SCALE: 1 1/2" = 1'-0"



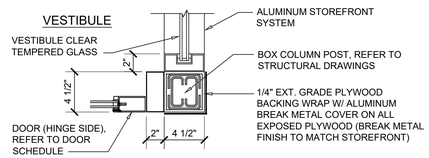
10 POST DETAIL AT VESTIBULE INTERIOR

SCALE: 1 1/2" = 1'-0"



11 POST/JAMB DETAIL AT VESTIBULE INTERIOR

SCALE: 1 1/2" = 1'-0"



REGISTERED ARCHITECT
COMMONWEALTH OF MASSACHUSETTS
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#52005
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SHOPPING CENTER:
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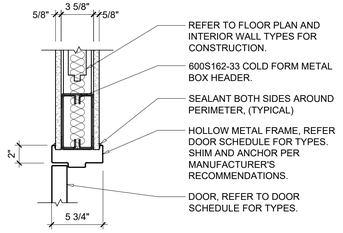
PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

STOREFRONT DETAILS

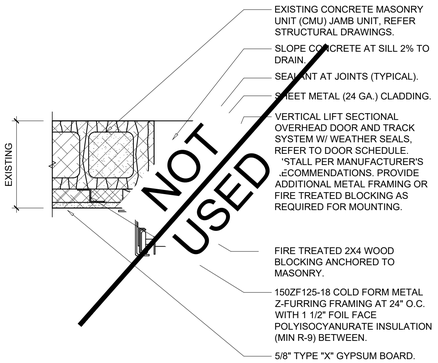
O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

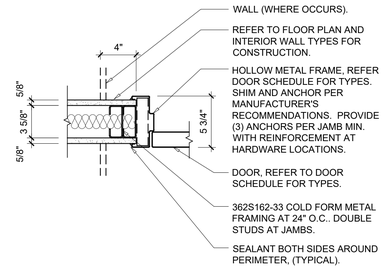
DRAWN BY: JMC
CHECKED BY: JLB
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: A5.4



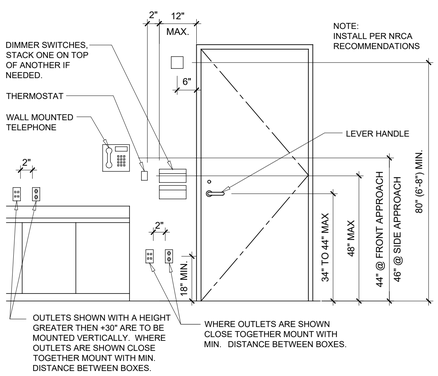
1 HEAD DETAIL
Scale : 1-1/2" = 1'-0"



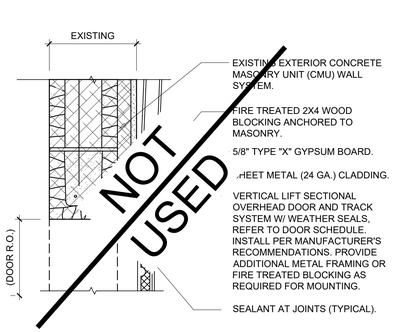
4 OVERHEAD DOOR JAMB
Scale : 1-1/2" = 1'-0"



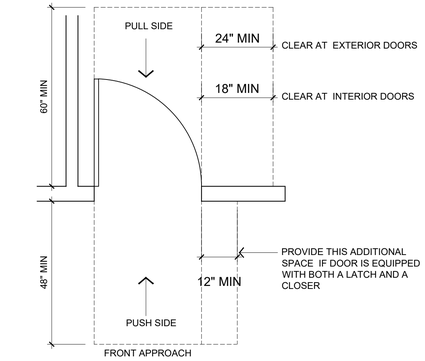
2 JAMB DETAIL
Scale : 1-1/2" = 1'-0"



5 TYPICAL MOUNTING HEIGHTS
SCALE: 1/2"=1'-0"



3 OVERHEAD DOOR HEAD
Scale : 1-1/2" = 1'-0"



6 TYPICAL DOOR CLEARANCES
SCALE: 1/2"=1'-0"

DOOR GENERAL NOTES

1 ALL DOORS SHALL BE SHOP PREPARED FOR HARDWARE.

2 ALL EXTERIOR DOORS TO BE KEYED ALIKE. CONTRACTOR TO FIELD VERIFY AND MATCH CORE OF DOOR MARKED "2".

3 EXTERIOR DOOR, FRAME AND HARDWARE OWNER FURNISHED AND CONTRACTOR INSTALLED. REFER TO SCOPE OF WORK SCHEDULE.

4 ALL INTERIOR DOOR TO BE CUSTOM GRADE ROTARY SLICED NATURAL BIRCH, FACTORY FINISHED WS-1. REFER TO SHEET A1.3

5 CONTRACTOR'S OPTION TO PURCHASE INTERIOR DOORS, FRAMES, AND HARDWARE THROUGH PREFERRED VENDOR. REFER TO SCOPE OF WORK SCHEDULE.

LOCKNET
100 COURCHELLE DRIVE
NICHOLASVILLE, KY 40356
CONTACT: PAM PEEL | 800.887.4307 EXT 133 | CONSTRUCTION@LOCKNET.COM

6 PROVIDE SIGN POSTED ON EGRESS SIDE ADJACENT TO DOOR STATING "THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED". SIGN CONSTRUCTION TO BE NON-GLARE 1" HIGH WHITE LETTERING ON CONTRASTING BLUE BACKGROUND. LOCATION TO COMPLY WITH ANSI A117.1. MOUNT 48" MINIMUM ABOVE FINISH FLOOR TO BOTTOM OF LOWEST CHARACTER AND 60" MAXIMUM ABOVE FINISH FLOOR TO BOTTOM OF HIGHEST CHARACTER.

7 EXISTING DOOR AND FRAME TO REMAIN. REPLACE HARDWARE. GC TO VERIFY WORKING CONDITION AND MEETS PROPOSED USE.

8 NOT USED

9 HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON DOORS AND GATES SHALL BE OPERABLE WITH ONE HAND AND NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. OPERABLE PARTS OF SUCH HARDWARE SHALL BE 34 INCHES MINIMUM AND 44 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES.

10 UNLESS OTHERWISE INDICATED, KNOCK DOWN (KD) TYPE DOOR FRAMES ARE NOT PERMITTED.

11 CLOSING SPEEDS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO AN OPEN POSITION OF 12 DEGREES SHALL BE 5 SECONDS MINIMUM.

12 MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 POUNDS FOR EXTERIOR DOORS & INTERIOR DOORS, SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. WHEN FIRE DOORS ARE REQUIRED, THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY BE INCREASED TO THE MINIMUM ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 POUNDS.

13 VERIFY COMPATIBILITY OF HARDWARE SPECIFIED. NOTIFY ARCHITECT OF INCOMPATIBILITY ISSUES PRIOR TO ORDERING AND INSTALLATION.

DOOR HARDWARE GROUPS

SET NO. 1

1 CYLINDER: 20-062 X 626 - "E" KEYWAY (REMOVABLE CORE) ..... SCHLAGE

(FOLLOWING REQUIRED HARDWARE FURNISHED WITH WINDOW FRAMING DOOR SYSTEM)
1 PAIR OFFSET PIVOTS: 195/180 X 626..... RIXON
1 DEADLOCK: MS1850S X 628..... ADAMS RITE
1 DEADLOCK LEVER (WITH "LOCKED" AND "OPEN" INDICATOR):
4550MS X 628..... ADAMS RITE
1 STRIKE: MS4002 X 628..... ADAMS RITE
1 SET PUSH / OFFSET PULL: CO-12 X CP-II X 626..... KAWNEER
1 CLOSER: 4040XP-3077-18TJ-TB X 689..... LCN
1 SET PERIMETER GASKETS: 027078 (POLYMERIC BULB) X LENGTH REQUIRED..... KAWNEER
1 SWEEP: 200799 X 689 X LENGTH REQUIRED..... KAWNEER
1 THRESHOLD: 069139 X 689 X LENGTH REQUIRED (OFFSET PIVOT COMPATIBLE) (ANSI & ADA COMPLIANT)..... KAWNEER

SET NO. 4

3 HINGES: BB1279 X 4 1/2" X 4 1/2" X 626 ..... HAGER
1 OFFICE LOCK (LEVER HANDLE): AU5307LN X 626 ..... YALE
1 WALL BUMPER: 409 X 626 ..... ROCKWOOD

SET NO. 5

3 HINGES: BB1279 X 4 1/2" X 4 1/2" X 626..... HAGER
1 SET PUSH / PULLS: 70C X BF107 X 70C X 626..... ROCKWOOD
1 CLOSER: 4041 X 3077SCNS X 686 (THRU MOUNTING WITH SEX BOLTS)..... LCN
1 KICK PLATE: K1050 X 8" X 34" X 630..... ROCKWOOD

SET NO. 7

3 HINGES: ECBB1100 X 4 1/2" X 4 1/2" X 626 X NRP ..... HAGER
1 EXIT ONLY PANIC LOCK: 8300B X 486 X 689 ..... DORMA
1 CLOSER: 5300MLT X FC X SX2 X 689 (ADJ. TO 8.5 LBS.) (THROUGH SEX BOLT MOUNTING) ..... HAGER
1 SET PERIMETER GASKETS: 12002 X 1116 X LENGTH REQUIRED ..... SCHLEGEL
1 LATCH GUARD: LG100Z/SF X 663 (STRAIGHT W/ PIN AND SEX BOLTS) ..... LATCHGUARD
1 DOOR BOTTOM SWEEP: 31321 X 689 X LENGTH REQUIRED ..... GLOBAL
1 THRESHOLD: 31206 X 689 X LENGTH REQUIRED ..... GLOBAL

SET NO. 8

(FOLLOWING REQUIRED HARDWARE FURNISHED WITH WINDOW FRAMING DOOR SYSTEM)
1 PAIR OFFSET PIVOTS: 195/188 X 626 ..... RIXON
1 SET PUSH / OFFSET PULL: CO-12 X CP-II X 626 ..... KAWNEER
1 CLOSER: 4040XP-3077-18TJ-TB X 689 (ADJ. TO 5 LBS.) ..... LCN
1 SET PERIMETER GASKETS: POLYMERIC BULB X LENGTH REQUIRED ..... PEMK

SET NO. 9

2 CONTINUOUS HINGES: 780-112HD X 628 X LENGTH REQUIRED..... HAGER
1 CYLINDER (RHR DOOR): 20-057 X 626 - "E" KEYWAY (REMOVABLE CORE) PROVIDE (2) SECURITY KEYS, (1) CORE KEY, (1) BITTED..... SCHLAGE
1 EXIT PANIC (RHR DOOR): 9300B X 486 X 689 X PRTO3 X 630 (THROUGH SEX BOLT MOUNTING)..... DORMAKABA
4 SURFACE BOLTS (LHR DOOR): 1582 X 626..... DON-JO
2 CLOSERS: 8616DST X SNB1 X 689 (THROUGH SEX BOLT MOUNTING)..... DORMAKABA
1 OVERLAPPING STRIKE PLATE (RHR DOOR): 1609 X 631..... GLOBAL
1 SET SPLIT ASTRAGALS: 303AS X LENGTHS REQUIRED..... PEMKO
1 SET PERIMETER GASKETS: QEBD-500-U7133 X LENGTH REQUIRED..... SCHLEGEL
1 LATCH GUARD (RHR DOOR): LG100Z/SF X 663 (STRAIGHT W/ PIN AND SEX BOLTS)..... LATCHGUARD
1 DOOR VIEWER (RHR DOOR): 698-190 X 626..... IVES
2 KICK PLATES: 190S X 8" X 34" X 630..... HAGER
2 DOOR BOTTOM SEALS: 31321 X 689 X LENGTH REQUIRED..... GLOBAL
1 THRESHOLD: 31208 X 689 X LENGTH REQUIRED..... GLOBAL

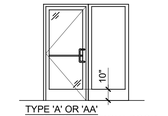
SET NO. 10

(FOLLOWING REQUIRED HARDWARE FURNISHED WITH WINDOW FRAMING DOOR SYSTEM)
1 PAIR OFFSET PIVOTS: 195/180 X 626..... RIXON
1 EXIT ONLY PANIC LOCK: 8300B X 486 X SNB X 689..... DORMAKABA
1 CLOSER: 4040XP-3077-18TJ-TB X 689..... LCN
1 SET PERIMETER GASKETS: 027078 (POLYMERIC BULB) X LENGTH REQUIRED..... KAWNEER
1 SWEEP: 200799 X 689 X LENGTH REQUIRED..... KAWNEER
1 THRESHOLD: 069139 X 689 X LENGTH REQUIRED (OFFSET PIVOT COMPATIBLE) (ANSI & ADA COMPLIANT)..... KAWNEER

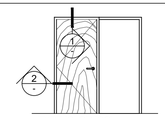
DOOR SCHEDULE

NO.	TYPE	SIZE	FRAME	HDWR	NOTES
101	A	3'-0" x 7'-0"	ALUM	1	1,2,3,6,9,11,12
101A	A	3'-0" x 7'-0"	ALUM	8	1,9,11,12
102	ETR	(EXISTING) 6'-0" x 8'-0"	ETR	9	7,13
104	C	3'-0" x 7'-0"	HM	4	4,5
105	C	3'-0" x 7'-0"	HM	5	4,5
106	C	3'-0" x 7'-0"	HM	5	4,5
107	A	3'-0" x 7'-0"	ALUM	10	1,2,3,6,9,11,12
107A	ETR	(EXISTING) 3'-0" x 7'-0"	ETR	7	7,13

DOOR TYPES



TYPE 'A' OR 'AA'
SINGLE STOREFRONT DOOR
- ALUMINUM
- PAINT GRADE, FINISH TBD
- SEE SHEET A4.2 FOR GLAZING



TYPE 'C' OR 'CC'
FLUSH SINGLE WOOD DOOR
- SOLID CORE
- STAIN GRADE

FRAME TYPES

ALUM	ALUMINUM STOREFRONT
HM	HOLLOW METAL. PAINTED

REGISTERED ARCHITECT
Michael S. Sundermeyer
#52005
St. Louis
Missouri
COMMONWEALTH OF MISSOURI
8/20/26
Michael S. Sundermeyer
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SHOPPING CENTER:
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PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

DOOR SCHEDULE

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

DRAWN BY: JMC
CHECKED BY: KWH
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: A6.1

		OWNER PROGRESS SET	BID SET						
	VAA, LLC - STRUCTURAL PACKAGE	08.07.26	08.20.26						
SHEET NO.	DESCRIPTION								
S0	DRAWING INDEX AND GENERAL STRUCTURAL NOTES	■	■						
S1	FOUNDATION PLAN	■	■						
S2	EQUIPMENT SUPPORT PLAN	■	■						
S3	STRUCTURAL DETAILS	■	■						
S4	ENTRY FRAMING PLAN AND DETAILS	■	■						

PROJECT TEAM

OWNER: O'REILLY AUTOMOTIVE STORES, INC.
233 S PATTERSON AVE.
SPRINGFIELD, MO 65802
CONTACT: MORGAN LUND
PHONE: 417.862.2674 EXT 65433
EMAIL: mlund3@oreillyauto.com

STRUCTURAL ENGINEER: VAA, LLC
301 CARLSON PARKWAY, SUITE 500
MINNETONKA, MN 55305
ENGINEER OF RECORD: BRIAN M. DALTON
CONTACT: MOUNIR NAJM
DIRECT: 763.577.9165
EMAIL: mnajm@vaaeng.com

ARCHITECT: CASCO
12 SUNNEN DR., SUITE 100
ST. LOUIS, MO 63143
CONTACT: MIKE CHURA
DIRECT: 314.238.2041
EMAIL: Mike.Chura@thecdccompanies.com

GENERAL STRUCTURAL NOTES

1 BUILDING CODE:
1.1 MASSACHUSETTS STATE BUILDING CODE, 10TH EDITION.
1.2 BASED ON THE 2021 INTERNATIONAL BUILDING CODE.

2 DESIGN LOADS:
2.1 DESIGN LOADS:
SNOW: GROUND.....35 PSF
FLAT ROOF RAIN ON SNOW.....30 PSF

ROOF LIVE.....20 PSF (REDUCIBLE)

WIND: BASIC WIND SPEED, V.....122 MPH (ULTIMATE)
EXPOSURE.....C

COMPONENT AND CLADDING ULTIMATE WIND PRESSURE TABLE IN PSF[1,2]		
LOCATION	EXTERIOR WALLS	
	TRIBUTARY AREA	
	10 SQ. FT.	500 SQ. FT.
TYPICAL	±34.2	±26.3
WITHIN 8'-0" OF BUILDING CORNER	±42.1	±26.3

[1] LINEAR INTERPOLATION MAY BE USED FOR TRIBUTARY AREAS BETWEEN THOSE SHOWN
[2] PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD AND AWAY FROM THE PROJECTED SURFACES, RESPECTIVELY

SEISMIC DATA: SITE CLASS.....D
RISK CATEGORY.....II
SEISMIC DESIGN CATEGORY.....B
S_S.....0.233
S_1.....0.057
S_{DS}.....0.248
S_{D1}.....0.096

3 GENERAL NOTES:
3.1 CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR THE SAFETY OF PERSONS AND PROPERTY. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR ISSUE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS.
3.2 THE STRUCTURAL DRAWINGS HEREIN REPRESENT THE FINISHED STRUCTURE. DURING ERECTION OF THE STRUCTURE, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR TEMPORARY GUYING, SHORING, BRACING, FORMING, ETC. TO HOLD THE STRUCTURE IN PROPER ALIGNMENT AND TO WITHSTAND ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING LATERAL LOADS, TEMPERATURE DIFFERENTIALS, STOCKPILES OF MATERIAL AND EQUIPMENT. SUCH MEASURES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED FOR SAFETY AND UNTIL ALL FRAMING AND CONNECTIONS ARE IN PLACE. THE INVESTIGATION, DESIGN, SAFETY, ADEQUACY AND INSPECTION OF SUCH TEMPORARY MEASURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
3.3 DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW BY THE ENGINEER.
3.4 ARCHITECTURAL DRAWINGS, MECHANICAL DRAWINGS, ELECTRICAL DRAWINGS, FIRE PROTECTION DRAWINGS, EQUIPMENT DRAWINGS AND RELATED ITEMS ARE BY OTHERS.
3.5 CONTRACTOR AND SUBCONTRACTORS SHALL THOROUGHLY REVIEW ALL DRAWINGS AND SPECIFICATIONS PRIOR TO SUBMITTING BIDS. MISCELLANEOUS FASTENERS, CLIPS, ETC. THAT ARE NOT DETAILED ON THE DRAWINGS BUT ARE PART OF THE REQUIREMENTS FOR FULL INSTALLATION OF ALL STRUCTURAL SYSTEMS ARE TO BE PART OF THE BID. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO THE BID TO ASCERTAIN CONDITIONS WHICH MAY ADVERSELY AFFECT THE BID.
3.6 DURING THE BIDDING STAGE, CONTRACTOR SHALL REQUEST AN INTERPRETATION OF CONFLICTS PRIOR TO BIDDING. IF NO REQUEST IS MADE, BOTH PROVISIONS SHALL BE PRESUMED TO BE INCLUDED IN THE BID AND THE ARCHITECT/ENGINEER SHALL DETERMINE WHICH PROVISION GOVERNS, AND THE CONTRACTOR SHALL PERFORM THE WORK AT NO ADDITIONAL COST TO THE OWNER.
3.7 ALL OMISSIONS AND CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE CONSTRUCTION DRAWINGS AND/OR SPECIFICATIONS AND/OR EXISTING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
3.8 THE CONTRACTOR SHALL COORDINATED STRUCTURAL WORK WITH ALL DISCIPLINES PRIOR TO INSTALLING STRUCTURAL COMPONENTS.
3.9 MECHANICAL UNITS SUPPORTED BY ROOF STRUCTURE ARE SUBJECT TO THE ACCEPTANCE OF THE STRUCTURAL ENGINEER.
3.10 DO NOT HANG ANYTHING FROM THE EXISTING ROOF DECK.

4 EXISTING CONSTRUCTION:
4.1 WHEREVER APPLICABLE, PRIOR TO FABRICATION AND CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ELEVATIONS, DIMENSIONS, DETAILS OF EXISTING STRUCTURAL CONNECTIONS AND OTHER CONDITIONS WHERE THEY AFFECT THIS CONSTRUCTION. NOTIFY THE ENGINEER IF THERE ARE ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS. CONSULT WITH THE STRUCTURAL ENGINEER BEFORE MAKING ANY MODIFICATIONS TO THE EXISTING STRUCTURE NOT INDICATED ON THE CONTRACT DOCUMENTS.
4.2 BEFORE PROCEEDING WITH ANY WORK WITHIN THE EXISTING FACILITY, THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE EXISTING STRUCTURE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY BRACING, SHORING AND OTHER SAFEGUARDS TO MAINTAIN ALL PARTS OF THE EXISTING WORK IN A SAFE CONDITION DURING THE PROCESS OF DEMOLITION AND CONSTRUCTION AND TO PROTECT FROM DAMAGE THOSE PORTIONS OF THE EXISTING WORK WHICH ARE TO REMAIN.
4.3 THE CONTRACTOR SHALL CONSIDER ALL HAZARDS DUE TO WELDING WITHIN THE EXISTING FACILITY, INCLUDING FIRE HAZARD, TOXIC SMOKE HAZARD AND LIQUEFACTION OF MEMBERS UNDER LOAD. VERIFY THE PRESENCE OF ANY TOXIC MATERIALS PRIOR TO BIDDING THE WORK OR SUBMITTAL OF FINAL PRICE.

5 FOOTINGS AND SOIL DATA:
5.1 THE STRUCTURE IS DESIGNED FOR THE PRESUMPTIVE BEARING PRESSURES BASED ON THE IBC:
MAXIMUM ALLOWABLE SOIL BEARING CAPACITY.....1500 PSF
5.2 A QUALIFIED GEOTECHNICAL ENGINEER SHALL OBSERVE THE IN-SITU SOIL AFTER EXCAVATION AND PRIOR TO FOUNDATION CONSTRUCTION TO CONFIRM THIS MINIMUM VALUE. THE GEOTECHNICAL ENGINEER SHALL ADVISE THE CONTRACTOR OF ANY CORRECTION REQUIRED TO ACHIEVE THIS MINUMUM VALUE. NOTIFY OWNER AND ENGINEER IF SPECIFIED ALLOWABLE BEARING PRESSURE IS NOT FEASIBLE.
5.3 FOOTINGS SHALL BEAR ON NATURAL UNDISTURBED SOIL OR ON COMPACTED, ENGINEERED FILL. ALL SUBGRADE SHALL BE PREPARED AND COMPACTED ACCORDING TO THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT.
5.4 ALL TOPSOIL, FILL AND OTHER UNSUITABLE BEARING MATERIAL SHALL BE REMOVED. A GEOTECHNICAL ENGINEER SHALL INSPECT THE EXCAVATED AREA TO ENSURE ALL MATERIALS REQUIRING REMOVAL HAVE BEEN REMOVED AND TO VERIFY THE SOIL BEARING CAPACITY USED FOR DESIGN PRIOR TO CONCRETE PLACEMENT.
5.5 EMBEDMENT DEPTH FROM EXTERIOR GRADE TO BOTTOM OF FOOTING SHALL NOT BE LESS THAN 4'-0". DURING WINTER CONSTRUCTION ALL FOOTINGS SHALL BE CONSIDERED UNHEATED STRUCTURES UNLESS INDICATED OTHERWISE IN THE GEOTECHNICAL REPORT. BOTTOM OF FOOTING ELEVATION SHALL BE LOWERED AS REQUIRED TO MEET THIS MINIMUM.
5.6 BACKFILL SHALL BE PLACED AND COMPACTED AGAINST BOTH SIDES OF FOUNDATION WALLS SIMULTANEOUSLY.
5.7 MUD SLABS, FOOTINGS OR SLABS SHALL NOT BE PLACED ONTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST OR ICE. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT ANY FROST OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUBGRADE BEFORE AND AFTER PLACING CONCRETE UNTIL SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT BUILDING STRUCTURE OR PROPER DEPTH OF BURY.

6 REINFORCED CONCRETE:
6.1 DESIGN CODE: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318), LATEST ADOPTION.
6.2 CONCRETE MIXES SHALL BE DESIGNED PER ACI 301 USING THE FOLLOWING:
PORTLAND CEMENT CONFORMING TO ASTM C150 OR C595
AGGREGATE CONFORMING TO ASTM C33.
ADMIXTURES CONFORMING TO ASTM C494, C1017, AND C260. DO NOT USE CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE.
CONCRETE SHALL BE READY-MIXED IN ACCORDANCE WITH ASTM C94.
6.3 MATERIAL STRENGTHS:
6.3.1 PROVIDE THE FOLLOWING CONCRETE PROPERTIES:

DESCRIPTION	COMPRESSIVE STRENGTH (f'c) AT 28 DAYS	MAX AGGREGATE SIZE	SLUMP[2]	MAX WATER TO CEMENT RATIOS (W/C)[3]
FOOTINGS	3000 PSI	1 ½"	4" ± 1"	0.57
FOUNDATION WALLS	4000 PSI	¾"	4" ± 1"	0.45
INTERIOR SLABS ON GRADE	4000 PSI	¾"	3" ± 1"	0.43
ANY CONCRETE SUBJECT TO FREEZE-THAW CYCLES (5% ENTRAINED AIR[1])	4500 PSI	¾"	4" ± 1"	0.45
ALL OTHER CONCRETE	4000 PSI	¾"	4" ± 1"	0.43

[1] TOLERANCE ON AIR CONTENT AS DELIVERED SHALL BE ± 1.5%.
[2] PRIOR TO ADDITION OF PLASTICIZER OR HIGH-RANGE WATER-REDUCER
[3] THESE W/C RATIOS MAY BE LOWER THAN NECESSARY TO PROVIDE THE SPECIFIED STRENGTHS.

6.3.2 REINFORCING STEEL:
BARS, STIRRUPS AND TIES.....ASTM A615, GR. 60
WELDED WIRE FABRIC.....ASTM A1064
6.4 PLACEMENT OF CONCRETE AND REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI AND CRSI STANDARDS.
6.5 PROVIDE 3/4" CHAMFER AT ALL EXPOSED CORNERS.
6.6 FURNISH THE FOLLOWING CONCRETE COVER ON REINFORCING BARS UNLESS SHOWN OTHERWISE ON DRAWINGS:
SLABS ON GRADE.....CENTER MESH OR BARS IN SLAB
PIERS.....1 1/2" COVER ON TIES
FOOTINGS.....3" COVER ON BOTTOM AND SIDES
WALLS.....CENTER REINFORCING IN WALL
6.7 ALL WELDED WIRE FABRIC SHALL BE TRANSPORTED AND DELIVERED IN FLAT SHEETS.
6.8 WELDING (INCLUDING TACKING) OF BARS OTHER THAN ASTM A706 SHALL NOT BE ALLOWED. WELDING OF ASTM A706 BARS SHALL CONFORM TO AWS D1.4.
6.9 MAINTAIN CONCRETE IN A CONTINUOUSLY DAMP AND WET CONDITION FOR NOT LESS THAN 7 DAYS AFTER PLACING. PROTECT FROM MOISTURE LOSS WITH SHEETING OR SPRAY-ON MEMBRANE MEETING ASTM C309 AND COMPATIBLE WITH FLOOR COVERINGS.
6.10 DO NOT FIELD BEND BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE UNLESS SPECIFICALLY INDICATED OR ACCEPTED BY THE ENGINEER.
6.11 PROVIDE CORNER BARS EQUAL IN SIZE AND SPACING TO WALL HORIZONTAL REINFORCEMENT UNLESS OTHERWISE DETAILED.
6.12 IN SLABS PROVIDE (2) #4x4'-0" DIAGONAL BARS AT 45 DEGREES AT ALL CORNERS OF OPENINGS AND RE-ENTRANT CORNERS.
6.13 COLD WEATHER CONCRETING SHALL FOLLOW PROCEDURES IN ACI 306.
6.14 HOT WEATHER CONCRETING SHALL FOLLOW PROCEDURES IN ACI 305.
6.15 BAR SUPPORTS AND HOLDING BARS SHALL BE PROVIDED FOR ALL REINFORCING STEEL TO ENSURE COMPLIANCE WITH MINIMUM CONCRETE COVER. BAR SUPPORTS SHALL BE PLASTIC, PLASTIC TIPPED, EPOXY COATED OR STAINLESS STEEL FOR UNCOATED STEEL. BAR SUPPORTS FOR COATED STEEL SHALL BE PLASTIC, PLASTIC COATED OR EPOXY COATED.
6.16 FORMWORK SHALL REMAIN IN PLACE UNTIL CONCRETE HAS ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE ALL SHORING.
6.17 SPECIAL ADDITIONAL REQUIREMENTS FOR SLABS ON GRADE:
6.17.1 DESIGN STANDARD: GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION (ACI 302.1)
6.17.2 LAP ADJOINING WELDED WIRE FABRIC AT LEAST TWO FULL MESHES.
6.17.3 WALKWAYS AND OTHER EXTERIOR SLABS, IF SHOWN ON THE STRUCTURAL DRAWINGS, ARE FOR INFORMATION ONLY. WALKS SHALL BE REINFORCED WITH A MINIMUM OF 6x6 – W1.4xW1.4 WELDED WIRE FABRIC UNLESS OTHERWISE NOTED. SEE THE SITE PLAN, CIVIL DRAWINGS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS, DIMENSIONS, ELEVATIONS, JOINTING DETAILS AND FINISH DETAILS.
6.17.4 FINISH TOLERANCE OF ALL SLABS SHALL BE IN ACCORDANCE WITH ACI 302.1 R.

7 STRUCTURAL STEEL:
7.1 DESIGN CODE: SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (AISC 360), LATEST ADOPTION.
7.2 MATERIAL SPECIFICATIONS (UNLESS NOTED OTHERWISE):
STRUCTURAL STEEL WIDE FLANGE.....ASTM A992
STRUCTURAL STEEL ROLLED SHAPES, PLATES & BARS.....ASTM A36
HOLLOW STRUCTURAL SECTIONS.....ASTM A500, GR B
CONNECTION BOLTS.....ASTM A325
THREADED RODS.....ASTM A36
ANCHOR RODS.....ASTM F1554, GR 36
WELDS (E70XX ELECTRODES).....AWS D1.1
NON-SHRINK GROUT (7,000 PSI).....ASTM C1107, GR. A
7.3 ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED ACCORDING TO THE SPECIFICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), LATEST ADOPTION. PROVISION 4.4 AND APPENDIX A OF THE AISC CODE OF STANDARD PRACTICE ARE SPECIFICALLY DELETED FROM THE PROJECT CONTRACT DOCUMENTS. THE FABRICATOR SHALL PROVIDE ITS SCHEDULE FOR THE SUBMITTAL OF SHOP AND ERECTION DRAWINGS A MINIMUM OF 14 DAYS PRIOR TO FIRST SUBMITTAL.
7.4 ALL COLUMNS, ANCHOR BOLTS, BASE PLATES, ETC. HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN INVESTIGATED FOR POTENTIAL LOADINGS ENCOUNTERED DURING STEEL ERECTION AND CONSTRUCTION. CONFORMANCE TO OR DEVIATION FROM ALLOWABLE CAPACITIES DURING ERECTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR (SEE GENERAL NOTES).
7.5 BEAMS SHALL BE FABRICATED AND ERECTED FOR PLACEMENT WITH THE NATURAL CAMBER UP.
7.6 ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.1. UNLESS OTHERWISE NOTED, PROVIDE CONTINUOUS FILLET WELDS PER AISC REQUIREMENTS MEETING MINIMUM THICKNESSES ALLOWED PER THICKNESS OF MATERIAL WELDED. ALL FILLER MATERIAL SHALL HAVE A MINIMUM YIELD STRENGTH OF 58 KSI.
7.7 HOLES IN STEEL SHALL BE DRILLED OR PUNCHED. ALL SLOTTED HOLES SHALL BE PROVIDED WITH SMOOTH EDGES. BURNING OF HOLES AND TORCH CUTTING AT THE SITE ARE NOT PERMITTED.
7.8 STRUCTURAL STEEL PERMANENTLY EXPOSED TO VIEW SHALL BE SHOP-PRIMED WITH ONE COAT OF SSPC 15-68, TYPE 1 (RED OXIDE) PAINT. DAMAGE DURING TRANSPORTING, ERECTING AND FIELD WELDING PROCESSES SHALL BE REPAIRED TO MATCH THE SHOP APPLIED COATING. STRUCTURAL STEEL PERMANENTLY EXPOSED TO WEATHER INCLUDING BRICK SHELF ANGLES AND ALL OTHER EXTERIOR WALL LINTELS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123. PROVIDE VENT HOLES FOR GALVANIZING AS REQUIRED. SEAL ALL VENT HOLES AFTER GALVANIZING.REPAIR OF GALVANIZED SURFACES SHALL BE PERFORMED WITH A MINIMUM OF 2 COATS OF COLD-GALVANIZING PRODUCT.

8 POST-INSTALLED FASTENING:
8.1 POST-INSTALLED SYSTEMS ARE BASED ON THE FOLLOWING (UNLESS NOTED OTHERWISE):

DESCRIPTION	ANCHOR/ADHESIVE[1]	APPLICATIONS	ICC REPORT NUMBER
ADHESIVE ANCHOR	HILTI HIT-HY 200 V3 OR DEWALT AC 200+ GOLD (FOR MASONRY: HILTI HIT-HY 270)	CONCRETE (EXCLUDES PRECAST HOLLOW-CORE)	ICC ESR-4868 ICC ESR-4027 ICC ESR-4143
EXPANSION ANCHOR	HILTI KWIK BOLT TZ2 OR DEWALT POWER-STUD+ SD1 (SD2)	CONCRETE & MASONRY	ICC ESR-4266 ICC ESR-2966
SCREW ANCHOR	HILTI KWIK HUS-EZ OR SIMPSON TITEN HD	---	ICC ESR-3027 ICC ESR-2713
POWDER-ACTUATED FASTENERS	HILTI X-U	COLD-FORMED STEEL FRAMING TO CONCRETE OR MASONRY	ICC ESR-2269

[1] SUBSTITUTIONS WILL BE CONSIDERED PROVIDED THE CONTRACTOR SUPPLIES DOCUMENTATION OF EQUAL OR GREATER CAPACITY BASED ON ANCHOR SIZE, EMBEDMENT DEPTH, SPACING AND EDGE DISTANCE.

8.1.1 POST-INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.

9 COLD-FORMED STEEL FRAMING:
9.1 DESIGN, FABRICATION AND ERECTION COLD-FORMED STEEL FRAMING SHALL CONFORM TO THE NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS (AISI S100), LATEST ADOPTION.
9.2 DETAILS SHOWN ON THE DRAWINGS ARE INTENDED TO EXPRESS A DESIGN MINIMUM PERFORMANCE.
9.2.1 FURNISH BRIDGING, BLOCKING, CLIP ANGLES, BRACING, REINFORCEMENTS, FASTENERS AND ALL OTHER ACCESSORIES FOR COMPLETE INSTALLATION AS RECOMMENDED BY THE MANUFACTURER FOR THE APPLICATION INDICATED. ALL BRIDGING (IF REQUIRED) SHALL BE INSTALLED PRIOR TO THE ADDITION OF ANY LOADING.
9.3 STUDS AND ACCESSORIES SHALL BE GALVANIZED WITH A G-60 COATING MEETING THE REQUIREMENTS OF ASTM A653.
9.4 ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS PER AWS STANDARDS, IN CONFORMANCE WITH AWS SPECIFICATION D1.3. CONSULT AWS D19.0 WELDING ZINC COATED STEEL.
9.5 ALL FIELD WELDS AND SURFACES ABRADED DURING SHIPPING OR ERECTION SHALL BE TOUCHED UP WITH ZINC RICH PAINT IMMEDIATELY AFTER ERECTION.
9.6 NOTCHING OR COPING OF STUDS IS NOT ALLOWED, UNLESS NOTED OTHERWISE
9.7 SPLICES IN AXIALLY LOADED STUDS ARE NOT PERMITTED.
9.8 END OF STUDS SHALL FIRMLY AND SQUARELY SEAT TO RUNNER TRACKS, TOP AND BOTTOM.
9.9 SECURELY ANCHOR ALL GIRTS AND PURLINS TO EACH OTHER AND TO THE SUPPORTING STRUCTURE.
9.10 RUNNER TRACK SHALL BEAR FULLY ON SUPPORTING STRUCTURE AND SHALL BE FASTENED TO CONCRETE WITH POWDER-ACTUATED FASTENERS PER THE POST-INSTALLED FASTENER SECTION AND SHALL MATCH SPACING OF EACH VERTICAL STUD, UNLESS NOTED OTHERWISE.
9.11 TOP TRACK CONNECTIONS OF NON-LOAD BEARING WALLS SHALL PROVIDE FOR A 1 1/2" MINIMUM VERTICAL DEFLECTION OF SPANDREL BEAMS, GIRDERS, ETC, UNLESS NOTED OTHERWISE.
9.12 PROVIDE DOUBLE JACK STUDS AT ALL BEAM AND TRUSS BEARINGS, UNLESS OTHERWISE NOTED.
9.13 PROVIDE WEB STIFFENERS AT JOIST AND RAFTER BEARINGS IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
9.14 THE GAUGE OF ALL CONNECTING ELEMENTS, INCLUDING TRACKS, SHALL BE NO LIGHTER THAN THE GAUGE OF THE MEMBER BEING CONNECTED.

10 SUBMITTALS:
10.1 GENERAL SUBMITTAL REQUIREMENTS
10.1.1 CONTRACTOR SHALL REVIEW, STAMP, SIGN AND DATE ALL SUBMITTALS PRIOR TO FORWARDING TO ARCHITECT/ENGINEER. THE ENGINEER'S REVIEW IS FOR CONFORMANCE WITH THE DESIGN CONCEPT AND GENERAL COMPLIANCE WITH THE RELEVANT CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK AND COORDINATE THE SUBMITTALS THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS IN THE SUBMITTALS.
10.1.2 SHOP DRAWINGS SHALL BE IN THE FORM OF BLACK-LINE PRINTS OR PORTABLE DOCUMENT FORMAT (PDF) FOR REVIEW. DRAWINGS LISTED BELOW AS "CERTIFIED" SHALL BEAR THE SIGNED AND DATED SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. IN NO CASE SHALL REPRODUCTIONS OF THE CONTRACT DRAWINGS BE USED AS SHOP DRAWINGS. DRAWINGS SHALL SHOW ERECTION PLANS, DIMENSIONS, BRACING AND BRIDGING REQUIREMENTS, DETAILS, SUPPORTED MECHANICAL EQUIPMENT AND PIPING. SUBMITTALS ARE REQUIRED.
10.1.3 SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED PRIOR TO FABRICATION
10.2 STRUCTURAL STEEL:
10.2.1 SHOP DRAWINGS
10.3 CONCRETE:
10.3.1 CONCRETE MIX DESIGN SUBMITTAL
10.3.2 REBAR LAYOUT SHOP DRAWINGS

11 SPECIAL INSPECTION:
11.1 SPECIAL INSPECTION IS REQUIRED IN ACCORDANCE WITH IBC SECTION 1701 FOR THE FOLLOWING PORTIONS OF CONSTRUCTION:
11.1.1 SOILS:
11.1.1.1 BACKFILL AND COMPACTION
11.2 CONCRETE:
11.2.1 DURING TAKING OF TEST SPECIMENS.
11.2.2 REINFORCEMENT – PRIOR TO PLACING CONCRETE.
11.3 STRUCTURAL STEEL:
11.3.1 ONLY APPROVED FABRICATORS IN ACCORDANCE WITH IBC 1704.2.2 SHALL BE USED.
11.3.2 FULL TIME INSPECTION IN ACCORDANCE WITH AISC 341 SHALL BE REQUIRED EXCEPT FOR THE FOLLOWING ITEMS WHICH REQUIRE PERIODIC INSPECTION, INCLUDING 100% VISUAL INSPECTION:
11.3.3 SINGLE-PASS FIELD-PERFORMED FILLET WELDS NOT EXCEEDING 5/16".
11.3.4 VERIFICATION OF WELDER QUALIFICATIONS, WELDING PROCEDURES AND MATERIALS.
11.4 POST INSTALLED ANCHORS:
11.4.1 INSTALLATION OF ADHESIVE AND MECHANICAL ANCHORS SHALL BE CONTINUOUSLY INSPECTED DURING INSTALLATION BY AN INSPECTOR SPECIALLY APPROVED BY THE BUILDING OFFICIAL.
11.5 REPORTS FOR THE ABOVE SHALL BE SUBMITTED TO THE ENGINEER. ALL REPORTS SHALL CLEARLY INDICATE COMPLIANCE OR NON-COMPLIANCE.
11.6 THE CONTRACTOR SHALL NOTIFY THE SPECIAL INSPECTOR AT LEAST 48 HOURS IN ADVANCE FOR WORK THAT WILL REQUIRE INSPECTION OR TESTING.
11.7 UPON COMPLETION OF EACH PHASE OF THE WORK, THE SPECIAL INSPECTOR SHALL SUBMIT A LETTER STATING COMPLIANCE WITH AND VARIANCES FROM THE PROJECT REQUIREMENTS (IF ANY).
11.8 UPON COMPLETION OF THE PROJECT, THE SPECIAL INSPECTOR SHALL SUBMIT A LETTER STATING COMPLIANCE WITH THE PROJECT REQUIREMENTS INCLUDING MEASURES TAKEN TO CORRECT PREVIOUSLY IDENTIFIED NON-COMPLYING ITEMS.

ABBREVIATIONS			
ACI	AMERICAN CONCRETE INSTITUTE	AWS	AMERICAN WELDING SOCIETY
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
AISI	AMERICAN IRON AND STEEL INSTITUTE	ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS

COMMONWEALTH OF MASSACHUSETTS
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STRUCTURAL
NO. 61000
REGISTERED
PROFESSIONAL ENGINEER
8/19/2026
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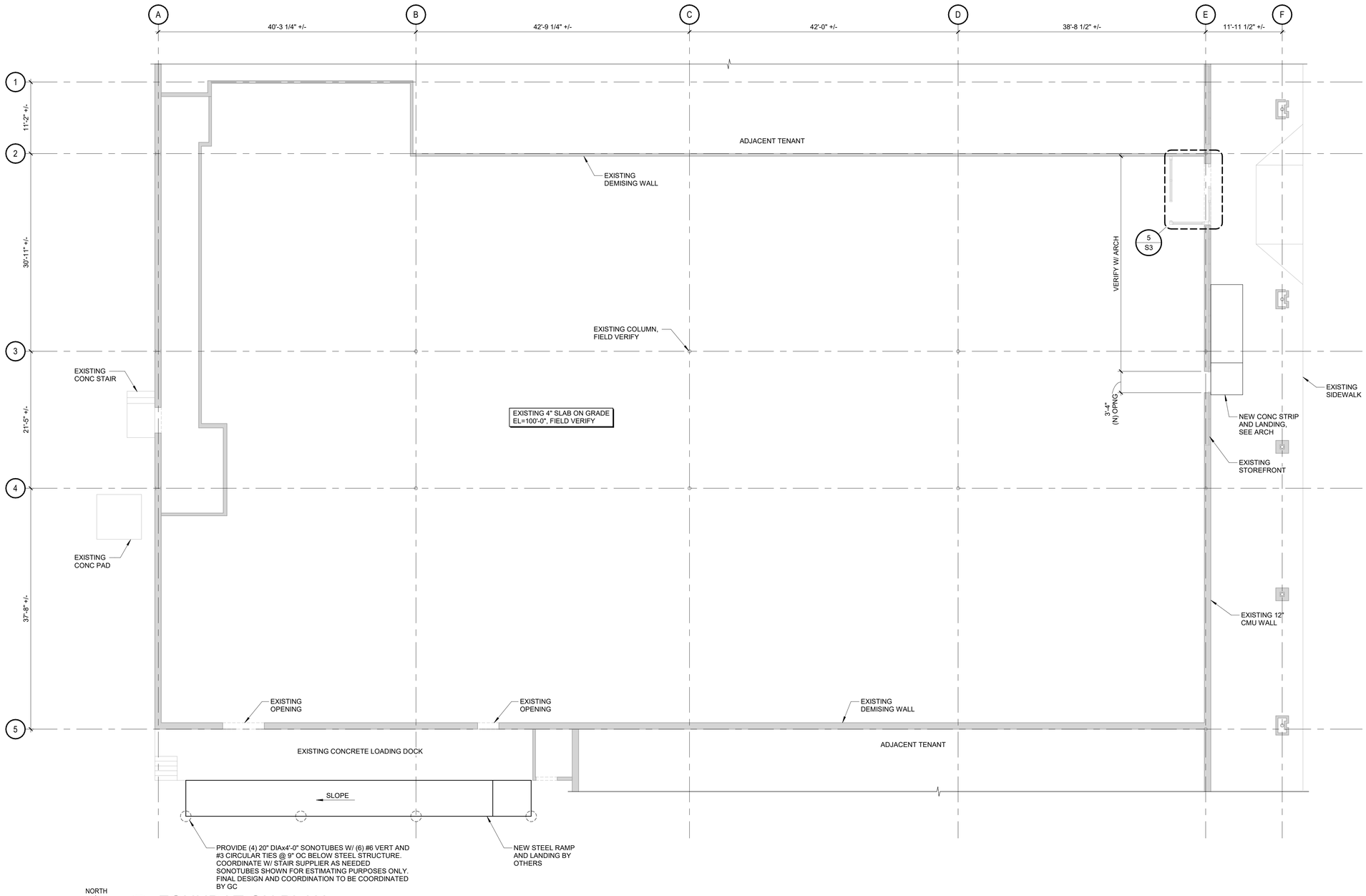
PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

GENERAL STRUCTURAL NOTES

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	BID SET	08.20.26

DRAWN BY: JWO
CHECKED BY: MSN/TJM
DATE: 08.20.2026
PROJECT NUMBER: 260871
SHEET NUMBER: S0



1 S1 FOUNDATION PLAN

1/8" = 1'-0"

PLAN NOTES:

1. FOR GENERAL STRUCTURAL NOTES, SEE SHEET S0.
2. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, ELEVATIONS, ETC PRIOR TO FABRICATION OR CONSTRUCTION.
3. COORDINATE WITH ALL DISCIPLINES FOR EXTENTS OF DEMO.
4. FOR TYPICAL BAR BENDING DETAIL, SEE 1/S3.
5. FOR TYPICAL CORNER REINFORCING DETAIL, SEE 2/S3.
6. FOR SLAB INFILL DETAIL, SEE 3/S3.

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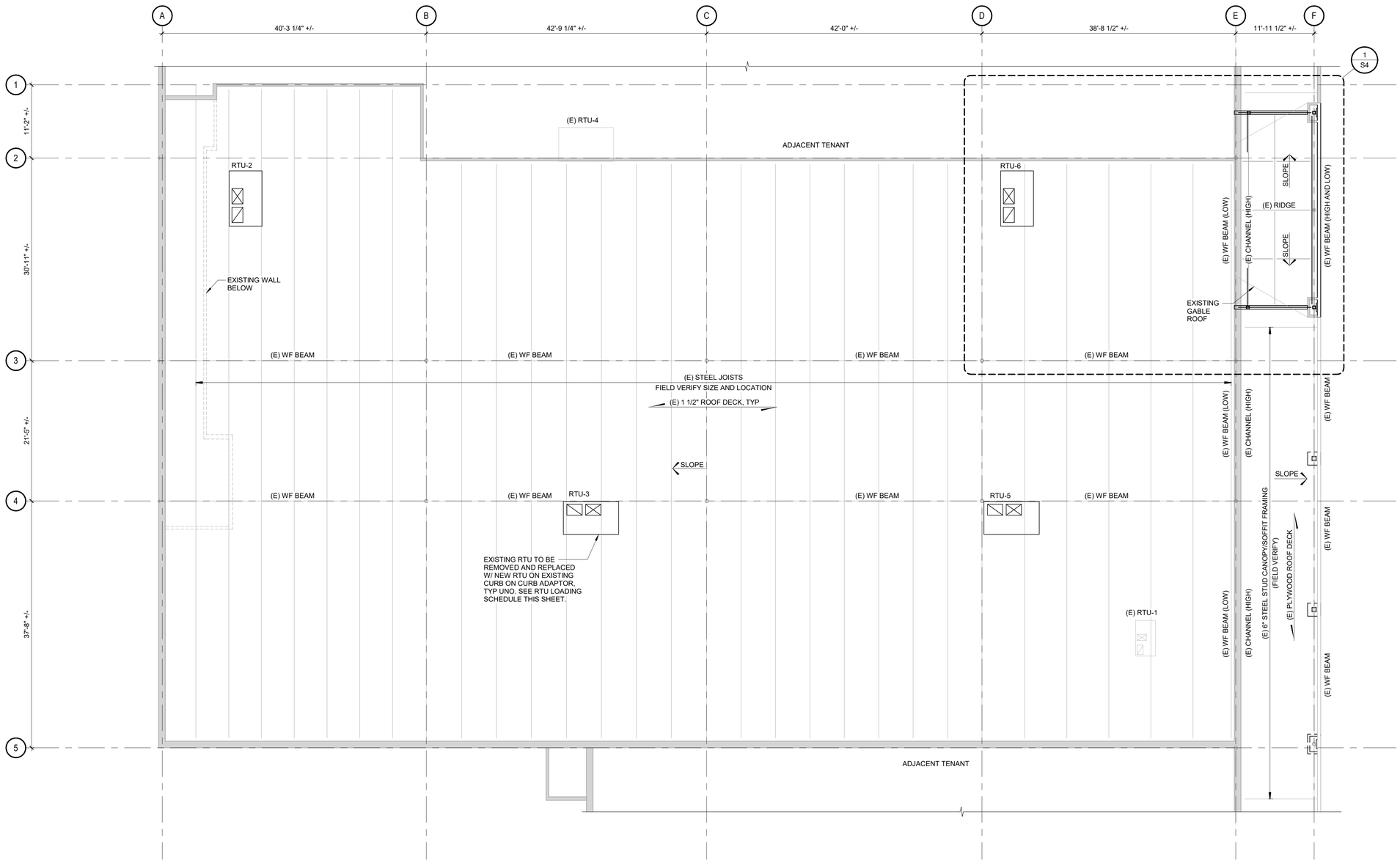
PROJECT:
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RANDOLPH, MA 02368

FOUNDATION PLAN

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	BID SET	08.20.26

DRAWN BY: JWO
CHECKED BY: MSN/TJM
DATE: 08.20.2026
PROJECT NUMBER: 260871
SHEET NUMBER: S1



NORTH

1/S2 EQUIPMENT SUPPORT PLAN

1/8" = 1'-0"

PLAN NOTES:
1. FOR GENERAL STRUCTURAL NOTES, SEE SHEET S0.
2. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, ELEVATIONS, ETC PRIOR TO FABRICATION OR CONSTRUCTION.
3. COORDINATE WITH ALL DISCIPLINES FOR EXTENTS OF DEMO.

RTU LOADING SCHEDULE

NEW RTU NO.	(E) RTU WEIGHT	(N) RTU WEIGHT W/ CURB ADAPTER
1	550 LBS	N/A
2	1444 LBS	1538 LBS
3	1500 LBS	1550 LBS
4	N/A	N/A
5	1500 LBS	1550 LBS
6	1500 LBS	1550 LBS

NOTE:
1. NEW UNITS TO REPLACE EXISTING UNITS ON EXISTING CURBS WITH NEW CURB ADAPTER.
2. NEW UNIT WEIGHTS + CURB ADAPTER TO BE FIELD VERIFIED TO BE EQUAL TO OR LESS THAN WEIGHT SHOWN IN TABLE ABOVE BY GC.

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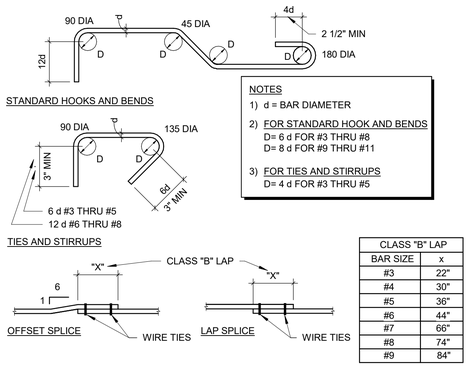
PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

EQUIPMENT SUPPORT PLAN

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	BID SET	08.20.26

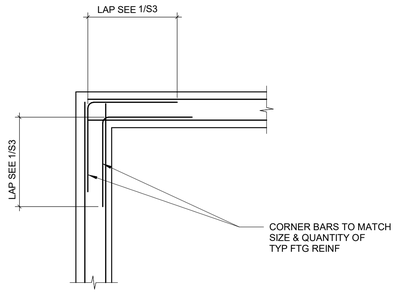
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CHECKED BY: MSN/TJM
DATE: 08.20.2026
PROJECT NUMBER: 260871
SHEET NUMBER: S2



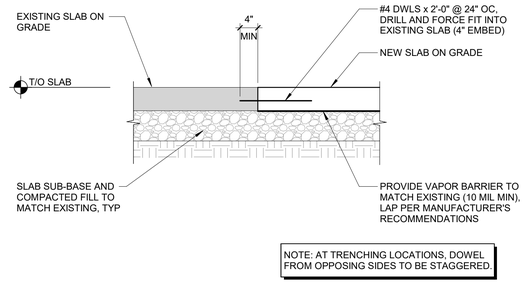
NOTES
1) d = BAR DIAMETER
2) FOR STANDARD HOOK AND BENDS
   D= 6 d FOR #3 THRU #8
   D= 8 d FOR #9 THRU #11
3) FOR TIES AND STIRRUPS
   D= 4 d FOR #3 THRU #5

CLASS "B" LAP	
BAR SIZE	x
#3	22"
#4	30"
#5	36"
#6	44"
#7	66"
#8	74"
#9	84"

1 S3 TYPICAL BAR BENDING DETAIL
1/2" = 1'-0"



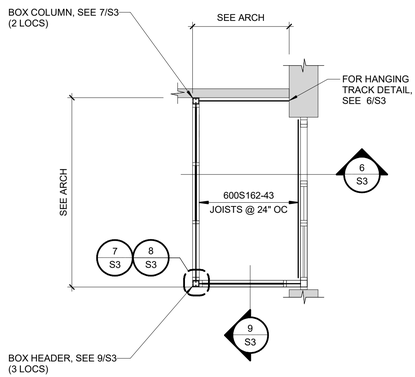
2 S3 TYP CORNER REINF DETAIL
1/2" = 1'-0"



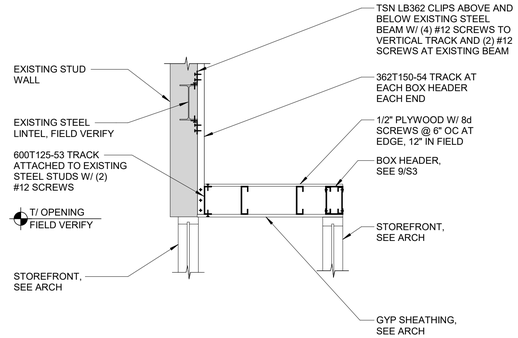
NOTE: AT TRENCHING LOCATIONS, DOWEL FROM OPPOSING SIDES TO BE STAGGERED.

3 S3 SLAB INFILL DETAIL
3/4" = 1'-0"

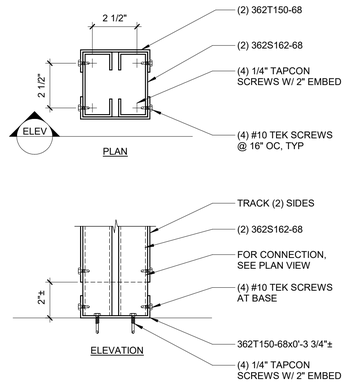
4 S3 NOT USED



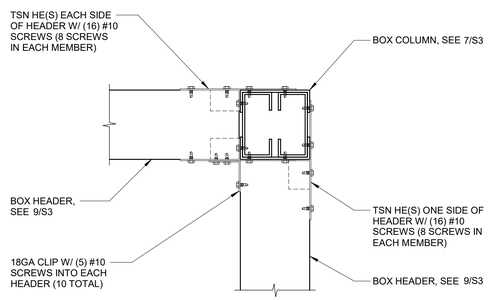
5 S3 VESTIBULE FRAMING PLAN
1/4" = 1'-0"



6 S3 CONNECTION DETAIL
3/4" = 1'-0"

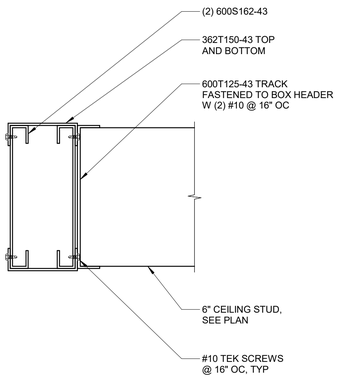


7 S3 BOX COLUMN
3" = 1'-0"



NOTE:
SEE PLAN FOR ORIENTATION

8 S3 BOX HEADER CONNECTION
3" = 1'-0"



9 S3 BOX HEADER
3" = 1'-0"

BRIAN M. DALTON
STRUCTURAL
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REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS
8/19/2026
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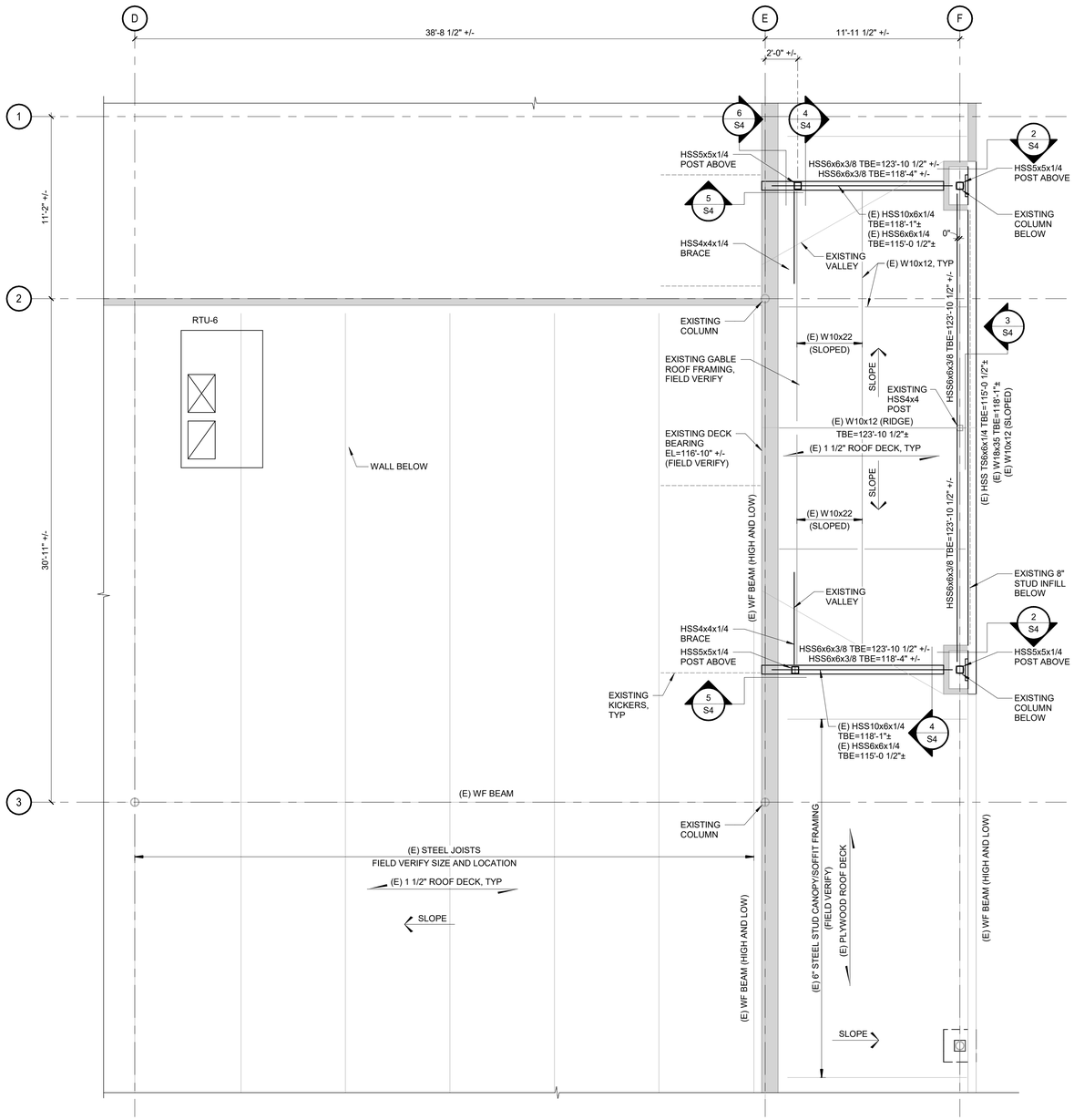
PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

STRUCTURAL DETAILS

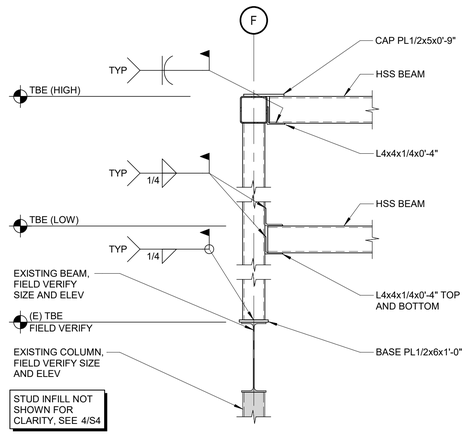
O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	BID SET	08.20.26

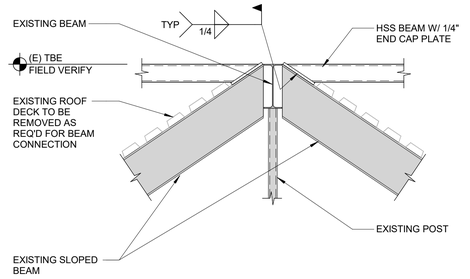
DRAWN BY: JWO
CHECKED BY: MSN/TJM
DATE: 08.20.2026
PROJECT NUMBER: 260871
SHEET NUMBER: S3



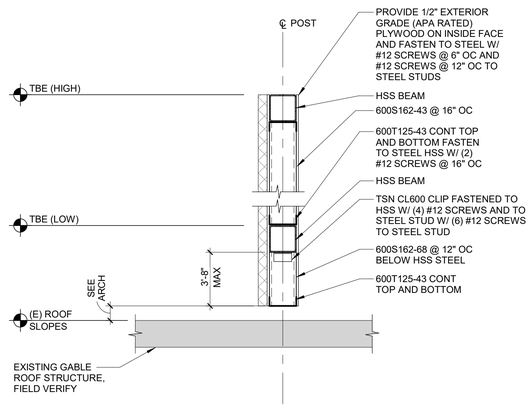
1 S4 ENTRY FRAMING PLAN
1/4" = 1'-0"



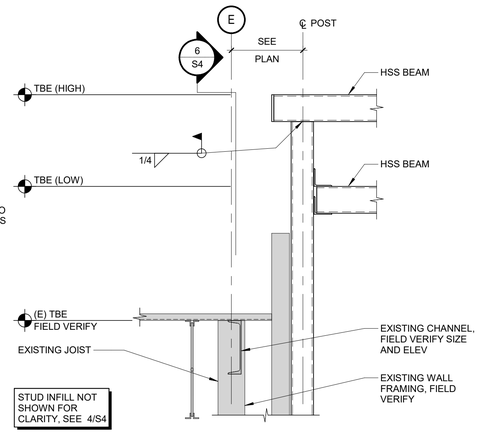
2 S4 ENTRY PARAPET DETAIL
3/4" = 1'-0"



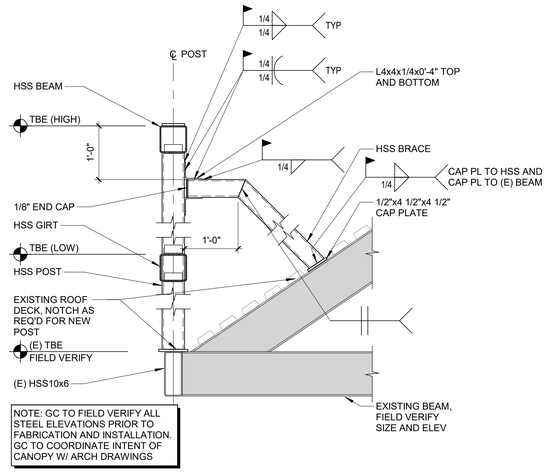
3 S4 ENTRY PARAPET DETAIL
3/4" = 1'-0"



4 S4 ENTRY PARAPET DETAIL
3/4" = 1'-0"



5 S4 ENTRY PARAPET DETAIL
3/4" = 1'-0"



6 S4 ENTRY PARAPET DETAIL
3/4" = 1'-0"

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PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

ENTRY FRAMING PLAN AND DETAILS

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	BID SET	08.20.26

DRAWN BY: JWO
CHECKED BY: MSN/TJM
DATE: 08.20.2026
PROJECT NUMBER: 260871
SHEET NUMBER: **S4**

HVAC GENERAL NOTES

1. DRAWING IS DIAGRAMMATIC AND IS NOT TO BE SCALED. REFER TO ARCHITECTURAL PLANS OR FIELD MEASUREMENTS FOR DIMENSIONS.
2. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE CODE(S) NOTED ON THE COVER SHEET.
3. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONSTRUCTION PRIOR TO SUBMITTING HIS BID. NO EXTRAS WILL BE PAID DUE TO UNANTICIPATED EXISTING CONDITIONS.
4. ALL ROOF AND WALL PENETRATIONS REQUIRED SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PROVIDE ALL SLEEVES, FLASHING, CURBS, REINFORCED ANGLE, SUPPORTING FRAMES, ETC., WHICH ARE REQUIRED UNLESS THEY ARE SPECIFICALLY CALL OUT TO BE FURNISHED BY OTHERS.
5. A SUBMITTAL OF ALL MATERIALS AND EQUIPMENT PROPOSED TO BE USED ON THE JOB SHALL BE PREPARED AS SOON AS POSSIBLE AFTER AWARD OF THE CONTRACT. THE SUBMITTAL WILL BE REVIEWED BY THE OWNER FOR EQUAL QUALITY AND PERFORMANCE TO THE ITEMS SPECIFIED. ALL CONTROL DEVICES SHALL BE INCLUDED IN THE SUBMITTAL. A TABULATION OF SUBMITTED ITEMS MUST BE INCLUDED FOR REVIEW.
6. THE PROPER PERFORMANCE OF THE CONTROL SYSTEM IS THE RESPONSIBILITY OF THE CONTRACTOR.
7. THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS WORK W/ THE WORK OF OTHER SUBCONTRACTORS OF THE PROJECT. COORDINATION DOES NOT MEAN "I WAS HERE FIRST".
8. THE CONTRACTOR SHALL COORDINATE WITH ALL STATE AND LOCAL BUILDING REGULATION AGENCIES AND UTILITY COMPANY(S) IN THE PROCUREMENT OF AND PAYMENT OF ALL PERMITS, LICENSES, FEES, AND CHARGES REQUIRED FOR THE PERFORMANCE OF THE WORK.
9. THE CONTRACTOR IS RESPONSIBLE FOR ALL FEES AND DIRECT EXPENSES INVOLVED IN ANY INSPECTION REQUIRED FOR THE PROJECT.
10. ALL WORK IS TO BE GUARANTEED FOR ONE YEAR UPON OCCUPANCY. REFRIGERATION COMPRESSORS SHALL HAVE A 5-YEAR WARRANTY.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE AND FUNCTIONAL SYSTEM IN ACCORDANCE W/ THE INTENT OF THE PLANS, WHETHER OR NOT EVERY ELEMENT THEREOF IS SPECIFICALLY CALLED OUT.
12. DUCT DIMENSIONS ON PLANS ARE TO BE FINISHED INSIDE DIMENSIONS.
13. DUCT MATERIALS SHALL BE AS FOLLOWS:
    a. ROUND SUPPLY AIR DUCT - GALVANIZED "SNAPLOCK" PIPE W/ TRANSVERSE JOINTS TAPED AND WRAPPED W/ 2" THICK, 1-1/2 LB. FIBERGLASS DUCT WRAP WITH A CONTINUOUS VAPOR BARRIER.
    b. RECTANGULAR SUPPLY AND RETURN AIR DUCT WORK - GALVANIZED STEEL W/ 2" THICK, 1-1/2 LB LINER, CONSTRUCTED IN ACCORDANCE WITH SMACNA. INSTALL TURNING VANES IN ALL ELBOWS. DO NOT SUBSTITUTE RADIUSED ELBOWS.
    c. DUCT WRAP INSULATION - DUCT WRAP INSULATION SHALL BE 2" THICK, 1-1/2 LB/CU FOOT DENSITY, FIBERGLASS TYPE, W/ FOIL SCRIM KRAFT FACING. THE INSULATION SHALL HAVE AN R-VALUE OF 8.3 @ 75° MEAN TEMPERATURE. DUCT WRAP SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS:
        - ALL CONCEALED ROUND AND RETURN, SUPPLY AND OUTSIDE AIR DUCTS.
        - ALL SUPPLY AND RETURN DUCTS WITHIN ROOF-CEILING ASSEMBLIES (ATTICS) THAT ARE VENTED TO THE OUTSIDE AND WHERE OTHERWISE EXPOSED TO AMBIENT CONDITIONS. SUCH DUCTS SHALL BE LINED AND WRAPPED.
        - ALL DUCTS WHERE WRAPPING IS CALLED FOR ON THE DRAWINGS.
    d. RUNOUTS TO DIFFUSERS - UL LISTED CLASS 1 PRE-INSULATED FLEX DUCT, NOT OVER 8' LONG. (SEE DIFFUSER INSTALLATION DETAIL).
    e. EXHAUST DUCT - UNINSULATED SNAPLOCK PIPE OR UNLINED GALVANIZED STEEL.
    f. TRANSITIONS - SHALL CONFORM TO SMACNA STANDARDS.
14. NO EQUIPMENT OR FIXTURE SUBSTITUTIONS ALLOWED (THAT ARE NOT CURRENTLY LISTED) WITHOUT PRIOR WRITTEN APPROVAL FROM THE OWNER.
15. UPON COMPLETION BALANCE SYSTEMS TO AIR FLOWS SHOWN. REPORT THE BALANCING MEASUREMENTS ON THE "AS BUILT" DRAWINGS.
16. MOUNT CONDENSATE AND REFRIGERANT LINES (WHEN APPLICABLE) AS HIGH AS POSSIBLE.
17. CONTROL WIRING BY HVAC CONTRACTOR, FINAL CONNECTIONS BY HVAC CONTRACTOR.
18. ALL CAULKING ON BUILDING PENETRATIONS SHALL BE A ONE-COMPONENT NON-SAG URETHANE ELASTOMERIC SEALANT. ANY CONTRACTOR WHO USES SILICONE OR ANY OTHER CAULKING WILL BE REQUIRED TO REMOVE AND REPLACE WITH A SPECIFIED SEALANT.
19. THE HVAC SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH NFPA 101: 7-2 AND NFPA 90A "STANDARD FOR THE INSTALLATION OF AIR CONDITIONING AND VENTILATION SYSTEMS.
20. ALL HVAC SYSTEM FLUES & VENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH NFPA 94 (LATEST EDITION).
21. PROVIDE AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR PRIOR TO OCCUPANCY THAT PROVIDES AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV) 8.
22. COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. AT THE TIME OF ROUGH INSTALLATION, OR DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING AND COOLING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST OR DEBRIS WHICH MAY COLLECT IN THE SYSTEM.
23. ALL HVAC CONDENSATE LINES SHALL RUN AT A MINIMUM SLOPE OF 1/8-INCH PER FOOT.

HVAC - KEYNOTES

1. INSTALL NEW PACKAGED ROOFTOP UNIT AND CURB ADAPTER ON EXISTING ROOF CURB. PROVIDE MINIMUM R-19 FIBERGLASS BATT INSULATION IN ENTIRE ROOF CURB CAVITY PRIOR TO INSTALLING NEW ROOFTOP UNIT AND CURB ADAPTER. BALANCE OUTSIDE AIR AS INDICATED ON SCHEDULE (SHEET M2).
2. 12"x12" DUCT W/ ELBOW FROM "R2" TO JUST ABOVE THE CEILING PLATFORM.
3. CONTRACTOR TO ROUTE 12"Ø EXHAUST DUCT UP THRU ROOF TO ROOF CAP. SEE DETAIL 9/M2.
4. ZONE ONE SC-ZD-6, 24VAC, ZONE DAMPER AND SC-Z20T, 24VAC, THERMOSTAT.
   COOLING SETPOINT: 85°F
   HEATING SETPOINT: 60°F
5. DERIVE 24VAC FOR DAMPER CONTROL FROM ASSOCIATED ROOFTOP UNIT CONTROL CIRCUIT OR INSTALL 75VA CONTROL TRANSFORMER (120VAC TO 24VAC) AND CONNECT TO NEAREST UNSWITCHED 120V SERVICE.
6. THERMOSTATS PROVIDED FOR EACH ROOFTOP UNIT (TYPICAL WIRING FOR EACH THERMOSTAT). SEE VS SHEETS.
7. EXISTING SUPPLY AND RETURN DUCT DROPS TO REMAIN AND BE REUSED. CONTRACTOR SHALL VERIFY EXACT SIZE, LOCATION AND CONDITION OF ALL EXISTING DUCTWORK INCLUDING INSULATION. SHOULD ANY REPAIRS BE REQUIRED, CONTACT OWNER'S REPRESENTATIVE AND SUBMIT A WRITTEN COST PROPOSAL INCLUDING COMPLETE COST TO REPAIR IN "LIKE NEW" CONDITION AND TIME ESTIMATE TO COMPLETE REPAIRS.
8. CONNECT NEW DUCTWORK TO EXISTING DUCT DROPS AS SHOWN ON PLAN WITH LIKE MATERIALS. ENSURE VAPOR BARRIER IS MAINTAINED. DUCTWORK CONNECTION TO BE SEALED TO SMACNA LOW LEAK STANDARDS. TRANSITION AS REQUIRED TO SIZES SHOWN ON PLAN.
9. COVER OPEN END OF EXISTING RETURN DUCT DROP WITH 1" MESH HARDWARE CLOTH IN A REMOVABLE METAL FRAME. SEE DETAIL 8, SHEET M2.
10. INSTALL NEW DROP BOX DIFFUSER WITH THE BOTTOM OF BOX MOUNTED 10'-8" A.F.F.
11. EXISTING GAS-FIRED UNIT HEATER AND ASSOCIATED CONTROLS TO REMAIN AND BE REUSED. CONTRACTOR SHALL VERIFY EXACT CAPACITY, LOCATION, AND CONDITION OF EXISTING HEATER TO ENSURE PROPER OPERATION. SHOULD ANY REPAIRS BE REQUIRED, CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE AND SUBMIT A WRITTEN COST PROPOSAL INCLUDING COMPLETE COST TO PLACE HEATER IN "LIKE NEW" CONDITION AND TIME ESTIMATE TO COMPLETE REPAIRS.
12. EXISTING ROOFTOP UNIT TO BE ABANDONED IN PLACE. CONTRACTOR SHALL REMOVE ALL ASSOCIATED DUCTWORK AND CONTROLS, DISCONNECT POWER, CAP CONNECTED GAS PIPING, ETC. TO MAKE EQUIPMENT NON-OPERATIONAL. SEAL ALL DAMPERS AND OPENINGS WATER AND WEATHER TIGHT.
13. FIELD VERIFY EXACT LOCATION OF EXISTING ROOFTOP UNIT AND ASSOCIATED DUCTWORK. REMOVE AND PROPERLY DISPOSE OF ALL DUCTWORK IN O'REILLY AUTO PARTS SPACE AND, IF REQUIRED, CAP DUCTWORK AIR AND WATER TIGHT AT DEMISING WALL.

HVAC DEMOLITION NOTES

HVAC SYSTEM: XRTU-1 AND XRTU-4 SHALL BE ABANDONED IN PLACE. REMOVE ALL DIFFUSERS, DUCTWORK, AND CONTROLS. DISCONNECT POWER, CAP CONNECTED GAS PIPING, ETC. TO MAKE EQUIPMENT NON-OPERATIONAL. COORDINATE WITH O'REILLY REPRESENTATIVE.

HVAC SYSTEM: ALL OTHER EXISTING HVAC UNITS (INDOOR AND OUTDOOR), INCLUDING RTUS 2, 3, 5, AND 6, WITH ASSOCIATED DUCTWORK, PIPING, AND CONTROLS SHALL BE REMOVED, UNLESS OTHERWISE NOTED ON PLANS. COORDINATE WITH O'REILLY REPRESENTATIVE. REFERENCE ARCHITECTURAL DEMOLITION PLANS.

EXHAUST FANS: ALL EXISTING EXHAUST FANS WITH ASSOCIATED DUCTWORK AND CONTROLS SHALL BE REMOVED.

ENERGY MANAGEMENT SYSTEM: CONTRACTOR SHALL REMOVE EXISTING EMS SYSTEM, ACCESSORIES, ETC. AS REQUIRED.

HVAC SCOPE OF WORK

HVAC EQUIPMENT: HVAC CONTRACTOR SHALL REPLACE EXISTING ROOFTOP UNITS WITH (4) NEW 10-TON ROOFTOP UNITS AT EXISTING ROOF CURB LOCATIONS. SEE ROOFTOP UNIT SCHEDULE ON SHEET M2 FOR ROOF CURB ADAPTER INFORMATION. FIELD VERIFY EXISTING ROOFTOP UNIT LOCATION. COORDINATE WITH O'REILLY REPRESENTATIVE.

AT CONSTRUCTION COMPLETION:
1. CONTRACTOR SHALL REPLACE ALL RETURN AIR FILTERS INSIDE ALL HVAC UNITS WITH NEW AIR FILTERS.
2. CONTRACTOR SHALL SUPPLY AN ADDITIONAL CLEAN SET OF NEW AIR FILTERS TO THE OWNER AT JOB COMPLETION.
3. CONTRACTOR SHALL SHOW THE STORE MANAGER THE LOCATION OF ALL RETURN AIR FILTERS AND PROVIDE INSTRUCTION ON HOW TO CHANGE THEM.

ENERGY MANAGEMENT SYSTEM: CONTRACTOR SHALL INSTALL VENSTAR SYSTEM ACCESSORIES AS REQUIRED. INSTALL ACCESSORIES TO NEW/EXISTING HVAC AS REQUIRED. SEE PLAN AND EM SHEETS FOR ACCESSORIES TO BE INSTALLED.

HVAC LEGEND

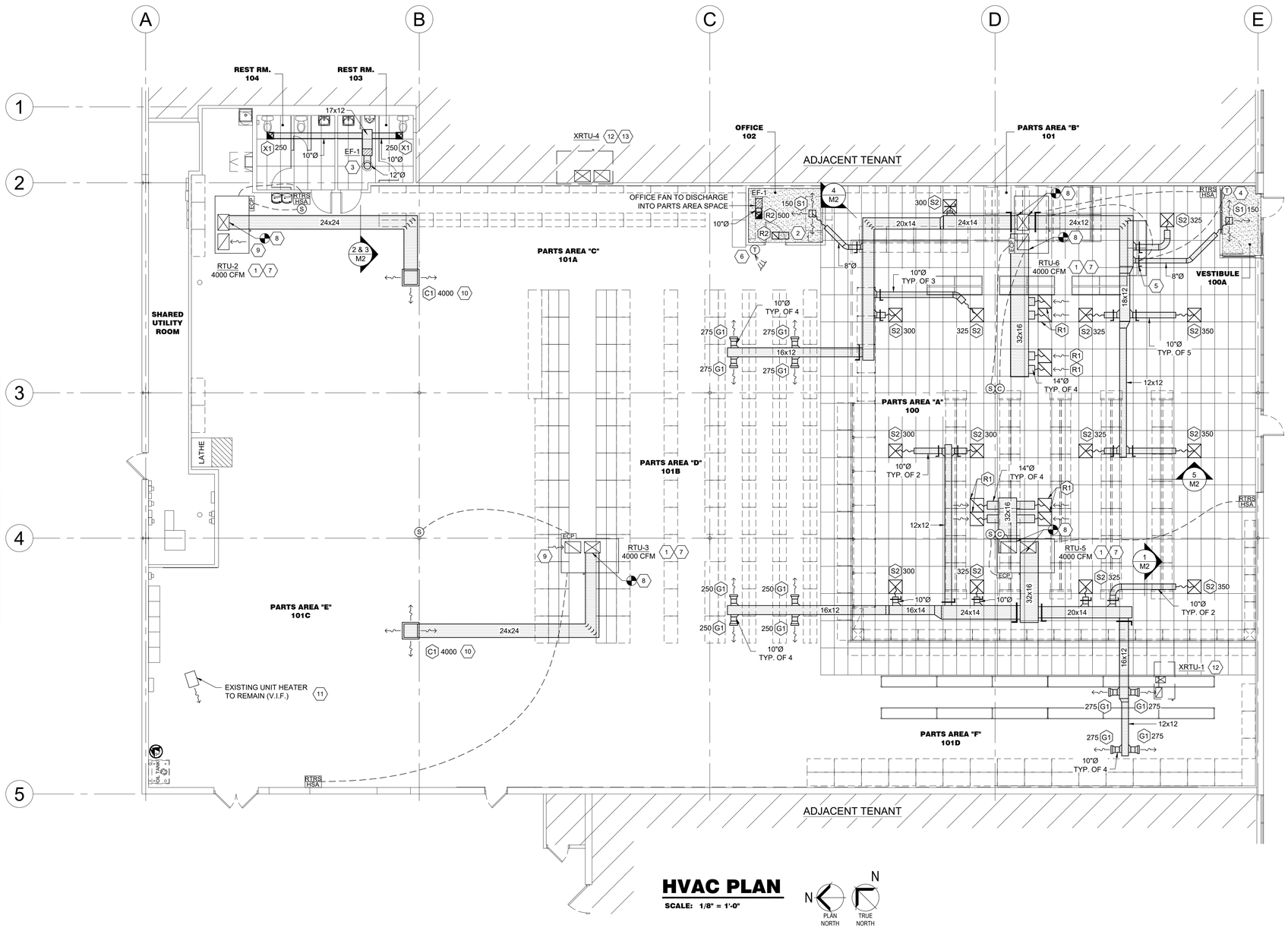
- SUPPLY DIFFUSER (4 WAY)
- SUPPLY DIFFUSER (1 WAY)
- RETURN AIR GRILLE
- EXHAUST REGISTER
- EXISTING RECTANGULAR OR ROUND DUCT
- RECTANGULAR OR ROUND DUCT
- ROUND DUCT
- FLEXIBLE DUCT (MAX. LENGTH = 8'-0") NOTE: LOCATION OF FLEX DUCT SHALL BE ONLY AS INDICATED ON PLAN VIEW DRAWING.
- C — CONDENSATE PIPING
- R — REFRIGERANT PIPING
- AIR FLOW INDICATOR
- SADDLE TAP FITTING (WITH DAMPER)
- COMMUNICATION CABLE
- TURNING VANES
- ECP — VENSTAR EQUIPMENT CONTROL PAC.
- T — THERMOSTAT. SEE VS SHEETS FOR THERMOSTAT, THERMOSTAT MOUNTING HEIGHTS, AND TYPICAL WIRING.
- S — VENSTAR REMOTE SENSOR. CONTRACTOR SHALL FIELD SPLICE CABLE & EXTEND CABLE TO LOCATIONS SHOWN. SEE VS SHEETS. MOUNT HVAC SENSOR AT 7'-6" A.F.F. IN SHOWROOM AND AT 5'-6" A.F.F. IN HARD PARTS.
- C — VENSTAR REMOTE SENSOR. CONTRACTOR SHALL FIELD SPLICE CABLE & EXTEND CABLE TO LOCATIONS SHOWN. SEE VS SHEETS. MOUNT HVAC SENSOR AT 7'-6" A.F.F. IN SHOWROOM AND AT 5'-6" A.F.F. IN HARD PARTS.
- M — MOTORIZED DAMPER
- RTRS — REMOTE TEST STATION FOR DUCT SMOKE DETECTOR (MOUNT @ 5'-0" A.F.F.)
- HSA — REMOTE ALARM/STROBE FOR DUCT SMOKE DETECTOR (MOUNT @ 7'-6" A.F.F.)

HVAC SYSTEMS TESTING & BALANCING

THE HVAC SYSTEM SHALL BE TESTED AND BALANCED (T&B) BY THE CONTRACTOR IN ACCORDANCE WITH THE PROCEDURES OF AABC OR NEBB. CONTRACTOR SHALL SUBMIT WRITTEN T&B REPORTS TO THE OWNER.

DUCTWORK MOUNTING NOTES

1. OPEN CEILING: TOP OF DUCTWORK SHALL BE MOUNTED TIGHT TO BOTTOM OF STRUCTURE.
2. LAY-IN CEILING: BOTTOM OF DUCTWORK SHALL BE MOUNTED, ABOVE CEILING, AT A HEIGHT EASILY ACCESSIBLE FOR MAINTENANCE AND DAMPER ADJUSTMENT (TYP. 2'-0", WHEN CLEARANCE ALLOWS) ABOVE CEILING.



HVAC PLAN

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

N — PLAN NORTH — TRUE NORTH

COMMONWEALTH OF MASSACHUSETTS
MICHAEL C. GRAPPERHAUS
MECHANICAL
NO. 49388
REGISTERED
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08/20/2026
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Professional of Record

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PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

HVAC PLAN

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

DRAWN BY: MEML
CHECKED BY: MCG
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: M1

HVAC OUTDOOR AIR REQUIREMENTS

OUTDOOR AIR VENTILATION CALCULATIONS ARE BASED ON THE 2021 MASSACHUSETTS MECHANICAL CODE: CHAPTER 4: VENTILATION, SECTION 403: MECHANICAL VENTILATION, TABLE 403.3.1.1. MINIMUM AND MAXIMUM OUTDOOR AIR VENTILATION VALUES SHOWN ARE BASED ON REQUIREMENTS FOR DEMAND CONTROL VENTILATION.

1. SHOWROOM = 3693 SQUARE FEET
2. OFFICE = 99 SQUARE FEET
3. HARD PARTS = 10457 SQUARE FEET

SHOWROOM (SALES)
3693 (SQUARE FEET) x (.12 CFM/SQUARE FEET) = 443 CFM (MIN.)
3693 (SQUARE FEET) ÷ 1000 (SQUARE FEET) = 3.7
3.7 x 15 (PERSONS/1000 SQUARE FEET) = 56 PEOPLE
(CFM/ PERSON x PERSONS) + (CFM/SQUARE FEET x SQUARE FEET) = CFM
(7.5 x 56) + (.12 x 3693) = 863 CFM OF OUTSIDE AIR REQUIRED (MAX.)

OFFICE
99 (SQUARE FEET) x (.06 CFM/SQUARE FEET) = 6 CFM (MIN.)
99 (SQUARE FEET) ÷ 1000 (SQUARE FEET) = 0.1
0.1 x 5 (PERSONS/1000 SQUARE FEET) = 1 PERSON
(CFM/ PERSON x PERSONS) + (CFM/SQUARE FEET x SQUARE FEET) = CFM
(5 x 1) + (.06 x 99) = 11 CFM OF OUTSIDE AIR REQUIRED (MAX.)

HARD PARTS (STORAGE ROOM)
10457 (SQUARE FEET) x .12 (CFM/SQUARE FEET) = 1255 CFM OF OUTSIDE AIR REQUIRED (MAX.)

443 CFM + 6 CFM + 1255 CFM = 1704 (MIN. TOTAL CFM)
863 CFM + 11 CFM + 1255 CFM = 2129 (MAX. TOTAL CFM)

MINIMUM OUTSIDE AIR REQUIRED: 1704 CFM
MAXIMUM OUTSIDE AIR REQUIRED: 2129 CFM
TOTAL OUTSIDE AIR SPECIFIED: 2140 CFM (MAX.)

OUTSIDE AIR SETUP

CONTRACTOR TO SET DAMPERS AS FOLLOWS:

ECONOMIZER MODE CFM PER UNIT
10 TON RTU = 4,000

OUTSIDE AIR CFM PER RTU:

RTU-2 = 440 CFM (MIN/MAX)
RTU-3 = 440 CFM (MIN/MAX)
RTU-5 = 430 CFM (MIN)
= 610 CFM (MAX)
RTU-6 = 410 CFM (MIN)
= 650 CFM (MAX)

DEMO ROOFTOP UNIT SCHEDULE (FOR REFERENCE ONLY)

MARK	MFR.	CATALOG NUMBER	SERIAL NUMBER	REMARKS
XRTU-1	LENNOX	2SG13B24068P-1A	1606E23689	1
XRTU-2	LENNOX	LGA090H2BH3Y	5606D09015	1, 2
XRTU-3	LENNOX	LGA120H2BH3Y	5606D09026	1, 2
XRTU-4	LENNOX	LGA120H2BH3Y	5606H05252	1
XRTU-5	LENNOX	LGA120H2BH3Y	5606D05421	1, 2
XRTU-6	LENNOX	LGA120H2BH3Y	5606F09309	1, 2

REMARKS

1. THIS EXISTING ROOFTOP UNIT IS TO BE ABANDONED IN PLACE. REFER TO SHEET M1 FOR ADDITIONAL INFORMATION.
2. THIS EXISTING ROOFTOP UNIT IS TO BE REMOVED IN ITS ENTIRETY AND REPLACED WITH THE CORRESPONDING NEW ROOFTOP UNIT AS SHOWN ON THE ROOFTOP UNIT SCHEDULE, THIS SHEET.
3. THE EXISTING ROOF CURB ASSOCIATED WITH THIS UNIT IS TO REMAIN AND BE REUSED, WITH A NEW CURB ADAPTER TO ACCOMMODATE THE NEW UNIT.

ROOFTOP UNIT SCHEDULE - 10 TON - GAS (3 PHASE) - BY O'REILLY

RTU - RESPONSIBILITIES

1.) ALL LENNOX HVAC UNITS ARE OWNER SUPPLIED BY O'REILLY AUTOMOTIVE.
2.) MECHANICAL CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ALL LENNOX HVAC UNITS.
3.) MECHANICAL CONTRACTOR IS RESPONSIBLE FOR THE FIRST YEAR LABOR WARRANTY ON ALL OWNER SUPPLIED EQUIPMENT.
4.) MECHANICAL CONTRACTORS WORKING ON O'REILLY PROJECTS MUST CALL SOURCEONE SOLUTIONS FOR CONFIRMATION OF ORDERS ONLY!
5.) MECHANICAL CONTRACTOR IS RESPONSIBLE FOR SCHEDULING, SHIPPING & RECEIVING OF ALL LENNOX UNITS FROM SOURCEONE SOLUTIONS. CONTACT CUSTOMER SERVICE REP. LISTED TO THE RIGHT.

CALL SOURCEONE SOLUTIONS BELOW FOR CONFIRMATION OF ORDERS.
DO NOT CALL FOR QUOTES!

SOURCEONE SOLUTIONS
4341 GREEN ASH DRIVE
EARTH CITY, MO 63045

ACCOUNT MANAGER:
ncoreilly@sourceonesolutions.com
PHONE: 314-499-6400

MARK	DESCRIPTION	MFR.	CATALOG NUMBER	HTG. MBH IN	HTG. MBH OUT	THERM. EFF.	CLG. MBH TOT.	CLG. MBH SENS.	EER	IEER	SUPPLY FAN CFM	SUPPLY FAN O.A.	SUPPLY FAN ESP	SUPPLY FAN HP	ELECTRICAL 208V/3Ø MCA	ELECTRICAL 208V/3Ø MOCP	WT. (lbs.)	ACCESSORIES	REMARKS	REF. DTL.
RTU-2 RTU-3 RTU-5 RTU-6	PACKAGED ROOFTOP UNIT 10-TON	LENNOX	LGX120S5M-Y	240/156	194/124.8	81%	127.7	93.2	11.0	14.6	4000	3	0.8	3.0	49	60*	1176	SEE BELOW	1, 2, 3, 5, 6	6/M2 7/M2

ACCESSORIES - FACTORY SUPPLIED AND INSTALLED

HE - STAINLESS STEEL GAS HEAT EXCHANGER.
SD - RETURN AIR SMOKE DETECTOR.
MB - MULTI-SPEED ECM DIRECT DRIVE.
HG - LOUVERED HAIL GUARDS.
UPO - UN-POWERED CONVENIENCE OUTLET, (FIELD POWERED), 15AMP, 120V, GROUND FAULT CIRCUIT INTERRUPTER (GFCI) TYPE.
TTB - THRU-THE-BOTTOM-ELECTRIC & GAS SERVICES.
SS - HI & LOW REFRIGERANT SAFETY SWITCHES.
AF - 2" RETURN AIR FILTERS.
EC - LOW LEAK DRY BULB ECONOMIZER, W/ BAROMETRIC RELIEF & HONEYWELL W7220 CONTROL. THIS ECONOMIZER CONTROLLER IS LISTED & EQUIPPED W/ FAULT DETECTION & DIAGNOSTICS (FDD).
COF - CONDENSATE OVERFLOW SWITCH.

ACCESSORIES - SOURCEONE SUPPLIED & FIELD INSTALLED

HSA - ALARM/STROBE, AUDIBLE/VISUAL SIGNAL DEVICE FOR SIGNALING ALARM OF DUCT SMOKE DETECTOR. SEE HVAC PLAN FOR MOUNTING LOCATIONS.
CO2 - CO2 SENSOR, WALL MOUNT, CO2/SPACE TEMPERATURE SENSOR WITH LCD DISPLAY & NO OVERRIDE.
RTRS - REMOTE TEST/RESET STATION, FOR REMOTE TESTING/RESETTING OF DUCT SMOKE DETECTOR. SEE HVAC PLAN FOR MOUNTING LOCATIONS.
STS - SPACE TEMPERATURE SENSOR, (NO SUBSTITUTIONS). REFER TO EM SHEETS.

ACCESSORIES - ELECTRICAL SUPPLIER SUPPLIED & FIELD INSTALLED

DS - NON-FUSED DISCONNECT SWITCH, SUPPLIED W/ ELECTRICAL BILL OF MATERIALS FROM ELECTRICAL EQUIPMENT DISTRIBUTOR. SEE E3 SHEET.

ACCESSORIES - FIELD SUPPLIED & FIELD INSTALLED

CA - CURB ADAPTER, INSULATED CUSTOM CURB ADAPTER FOR SPECIFIED RTU. THE WEIGHTS OF THE CURB ADAPTER AND EXISTING ROOF CURB ARE NOT INCLUDED IN THE WEIGHT ABOVE.

REMARKS

1. COOLING CAPACITY BASED ON 80°F EDB AND 67°F EWB. AND 95°F AMBIENT TEMPERATURE.
2. NOTE! HVAC COMPLETION, AT CONSTRUCTION COMPLETION:
   1. CONTRACTOR SHALL REPLACE ALL RETURN AIR FILTERS INSIDE ALL HVAC UNITS W/CLEAN NEW AIR FILTERS.
   2. CONTRACTOR SHALL SUPPLY AN ADDITIONAL CLEAN SET OF FILTERS TO THE OWNER AT JOB COMPLETION.
   3. CONTRACTOR SHALL SHOW THE STORE MANAGER THE LOCATION OF & INSTRUCT HIM/HER HOW TO CHANGE ALL AIR FILTERS.
3. SEE OUTSIDE AIR SETUP (THIS SHEET) FOR UNIT(S) REQUIRING OUTSIDE AIR.
4. REFRIGERANT = R-454B
5. FACTORY EQUIPPED WITH STANDARD LOW AMBIENT COOLING TO 30°F ODB.
6. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WIRING AND CONNECTIONS REQUIRED BETWEEN THE SMOKE DETECTOR AND THE UNIT, AND SHALL PROVIDE SMOKE TESTING TO VERIFY PROPER OPERATION AND UNIT SHUT DOWN PRIOR TO OCCUPANCY.

* MAXIMUM CIRCUIT BREAKER OR TIME-DELAY FUSE.

GRILLE AND DIFFUSER SCHEDULE

MARK	DESCRIPTION	MFR.	CATALOG NUMBER	SIZE (in.)	FINISH	MOUNTING	BRANCH DUCT SIZE	ACCESSORIES	REMARKS	REF. DETAIL
S1	SUPPLY GRILLE	ANEMOSTAT	S2H0	14x14	WHITE	DUCT	SEE PLAN	OB	1	-
S1	SUPPLY DIFFUSER	ANEMOSTAT	E-1-D	12x12	WHITE	SURFACE	SEE PLAN	DT	1, 3	4/M2
S2	SUPPLY DIFFUSER	ANEMOSTAT	EPL	24x24	WHITE	LAY-IN	SEE PLAN	DT	2, 3	5/M2
R1	RETURN GRILLE	ANEMOSTAT	GC5	24x24	WHITE	LAY-IN/EXPOSED	SEE PLAN	-	NON-FILTERED GRILLE	5/M2
R2	RETURN GRILLE	ANEMOSTAT	GC5	12x12	WHITE	SURFACE	SEE PLAN	-	NON-FILTERED GRILLE	4/M2
X1	EXHAUST GRILLE	ANEMOSTAT	S3HS	12x12	WHITE	LAY-IN	SEE PLAN	OB	-	-
D1	SUPPLY DROP BOX DIFFUSER	RUSKIN (RRS)	01-575-201024B	30x30	WHITE	DUCT	24x24	-	2	-

ACCESSORIES

OB - OPPOSED BLADE DAMPER.
DT - DIRECTIONAL TABS.

APPROVED ALTERNATE MANUFACTURERS

GRILLES, DIFFUSERS, & DAMPERS:
*TUTTLE & BAILEY *NAILOR *ARROW *CARNES
*PRICE INDUSTRIES *TITUS *KRUEGER

REMARKS

1. 1-WAY
2. 4-WAY
3. DIRECTIONAL TABS. ADJUST TO PROVIDE THROW AS INDICATED ON PLANS.

FAN SCHEDULE

MARK	DESCRIPTION	MFR.	CATALOG NUMBER	CFM (NOM)	STATIC PRESS.	MOTOR H.P.	ELECTRICAL V/PH	ELECTRICAL MCA	ELECTRICAL MOCP	ACCESSORIES	REMARKS	WT. (lbs.)
EF-1	INLINE EXHAUST FAN	COOK	GN-642	500	0.5	195W	120/1	-	-	BD, DS, RC	1, 2	27
EF-2	INLINE FAN	COOK	GN-642	500	0.5	195W	120/1	-	-	BD, DS, SS	3	27

ACCESSORIES

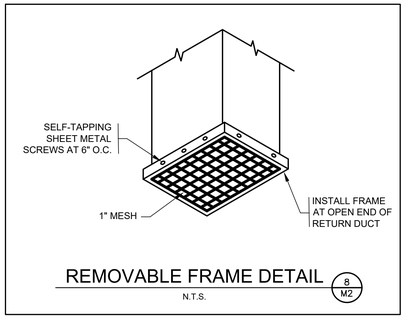
BD - GRAVITY BACKDRAFT DAMPER.
DS - DISCONNECT SWITCH.
RC - ROOF CAP.
SS - FAN SPEED SWITCH, "COOK" #FSC (OFFICE ONLY).

APPROVED ALTERNATE MANUFACTURERS

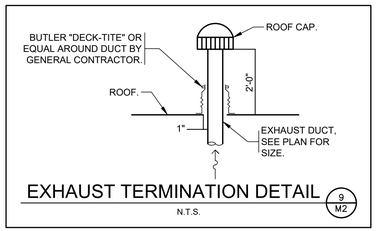
FANS:
*GREENHECK *CARNES

REMARKS

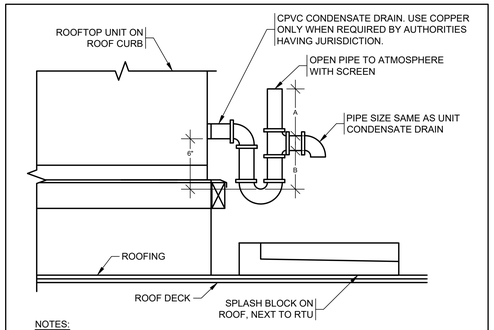
1. ADJUST FOR CFM REQUIRED.
2. EXHAUST FAN SHALL BE WIRED BY THE ELECTRICAL CONTRACTOR TO OPERATE WITH EITHER RESTROOM'S LIGHT SWITCH.
3. FAN IN OFFICE TO BE CONTROLLED BY FAN SPEED SWITCH.



REMOVABLE FRAME DETAIL 8/M2
N.T.S.



EXHAUST TERMINATION DETAIL 9/M2
N.T.S.

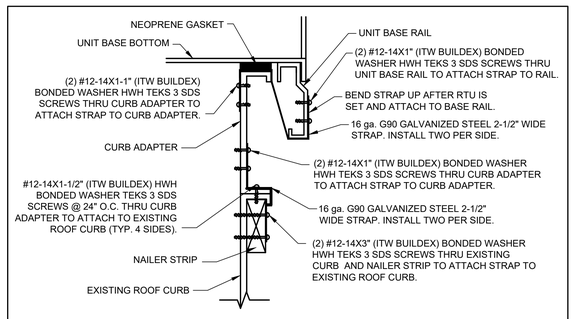


NOTES:
A = STATIC PRESSURE IN PAN (INCHES)
B = 0.5 X STATIC PRESSURE IN PAN (INCHES)

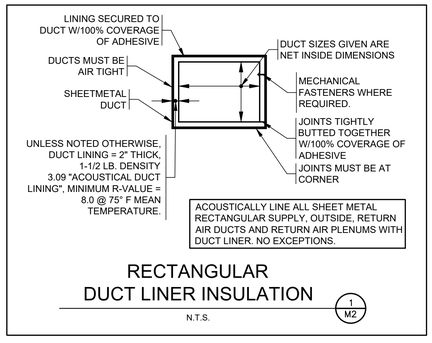
ROUTE CONDENSATE PIPING TO AVOID ANY ACCESS PANELS AND/OR SERVICE ACCESS.

ALL CONDENSATE PIPING SHALL BE FULL SIZE OF UNIT OUTLET. PAINT WHITE IF COPPER IS USED.

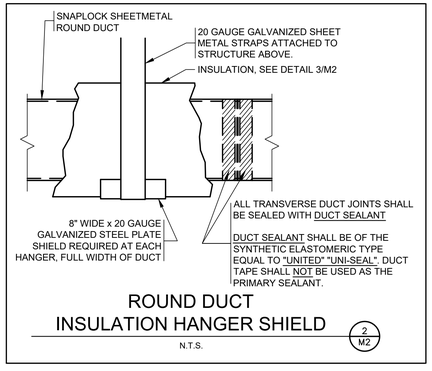
CONDENSATE TRAP PIPING 7/M2
N.T.S.



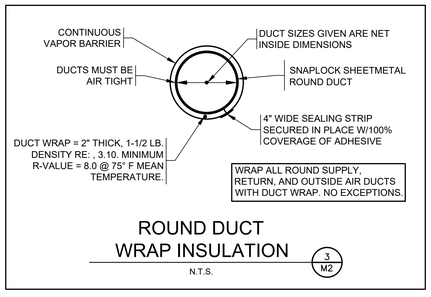
ROOFTOP UNIT CURB ADAPTER ATTACHMENT 6/M2
N.T.S.



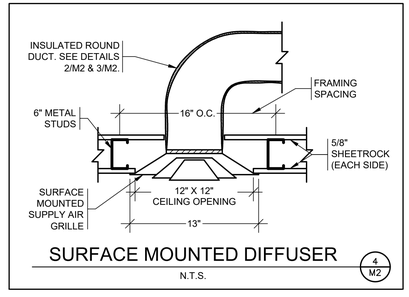
RECTANGULAR DUCT LINER INSULATION 1/M2
N.T.S.



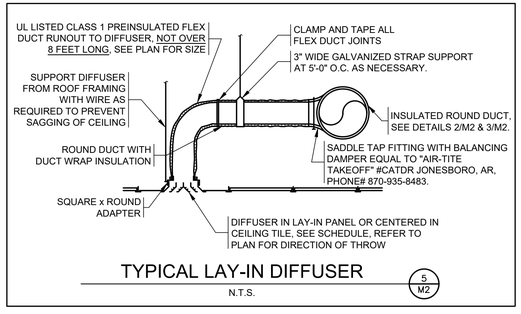
ROUND DUCT INSULATION HANGER SHIELD 2/M2
N.T.S.



ROUND DUCT WRAP INSULATION 3/M2
N.T.S.



SURFACE MOUNTED DIFFUSER 4/M2
N.T.S.



TYPICAL LAY-IN DIFFUSER 5/M2
N.T.S.

COMMONWEALTH OF MASSACHUSETTS
MICHAEL C. GRAPPERHAUS
MECHANICAL
NO. 49388
REGISTERED
PROFESSIONAL ENGINEER
09/20/2026
Michael C. Grapperhaus
License #49388
Exp. Date: 06/30/28
Professional of Record

CASCO
12 Sunnen Drive, Suite 100,
St. Louis, MO 63143
T: 314.821.1100

PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

HVAC SCHEDULES

O'Reilly AUTO PARTS

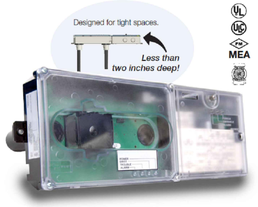
REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

DRAWN BY: MEML
CHECKED BY: MCG
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: M2

Edwards Signaling

Four-wire Duct Smoke Detector

SD-4WJ



Overview

Edwards *SuperDuct* smoke detectors are the most advanced and most reliable devices in their class. Designed for easy installation and superb reliability, *SuperDuct* represents the perfect balance of practical design and advanced technology.

Reliability and stability are two features built into every *SuperDuct* detector. *SuperDuct* features environmental compensation with patented differential sensing. This achieves a level of stability and reliability never before achieved for devices of this type. With differential sensing, *SuperDuct* sensors are immune from sensitivity drift – a common cause of false alarms. Every eight minutes the *SuperDuct* sensor checks its environment for dirt, humidity other conditions that normally interfere with sensor operation, and automatically adjusts its sensitivity to compensate. The result is unparalleled reliability and rock solid stability – two features essential to any duct smoke detection application.

Sensitivity testing and diagnostics reveal some of the most exciting innovations built into *SuperDuct*. With the ingenious *SuperDuct* remote test station, a sensitivity test can be performed at any time from the safety and comfort of a maintenance office or utility room. Operated either by key or by magnet, the one-gang station also performs alarm tests for detectors connected to a single controller. Detectors may also be tested at the controller via a test switch, or they can be tested individually in the field with a simple-to-operate magnetic test tool. Access to the magnetic reed switch does not require the detector cover to be removed, so testing can be performed quickly and easily.

A dedicated dirty/trouble LED on each unit offers immediate at-a-glance information even when the cover is closed.

Standard Features

Detector assembly

- Less than 2" deep for easy installation
- PCB mounted photoelectric detector with on-board intelligence
- Environmental compensation with patented differential sensing
- -4°F to 158°F (-20°C to 70°C) operating range
- 100 ft/min. to 4,000 ft/min air velocity rating
- Standard RJ45 modular interconnection
- Status LEDs remain visible through clear assembly cover
- Cover tamper reed switch for added security
- Standard sampling tube and mounting holes
- Install in tandem with the controller assembly, or remotely from it
- Sampling tubes install from front-side or back-side of housing
- Magnet-activated test/dirty/reset switch
- No need to open the detector for installation

Controller

- One controller for up to two detectors
- Standard connections for easy migration from other detectors
- 24 Vac, 24 Vdc, 120 Vac or 230 Vac operation
- Status LEDs remain visible through clear assembly cover
- Knockouts located on the bottom
- Alarm contact, trouble contact, and two 10 amp auxiliary contacts
- No special tools required for easy access to field connections
- Interconnect up to 15 controllers for multiple fan shut- down

Specifications

Dimensions	Controller: 6.75" x 5.45" x 1.90" inches (17.15 cm x 13.84 cm x 4.83 cm) Sensor: 8.70" x 5.45" x 1.90" (22.10 cm x 13.84 cm x 4.83 cm) Controller with sensor: 14.51" x 5.45" x 1.90" (36.86 cm x 13.84 cm x 4.83 cm)
Wire size	High voltage power input terminals (L&N): #12 to #22 AWG All others: #14 to #22 AWG
Wiring distance	Detector to Controller: 100 feet max for each detector Test Station to Controller: 10 ohms max. per wire (i.e. 621 feet with 22 AWG, 3,952 feet with 14 AWG) Controller Interconnect: 5 ohms max between first and last controller (i.e. 310 feet with 22 AWG, 1,976 feet with 14 AWG)
RJ-45 wiring harness	Cable type: CMP
Smoke detection method	Photoelectric
Air velocity rating	100 to 4,000 ft/min and meets the required minimum air pressure differential
Air pressure differential	0.005 to 1.00 inches of water
Sensitivity	0.87 to 2.46 %obscuration/ft
Reset time	2 seconds, max.
Power up time	8 seconds, max.
Alarm test response time	5 to 7 seconds
Controller LED indicators	Alarm (red), Trouble (yellow), Power (green)
Sensor LED indicators	Alarm (red), Trouble (yellow), Dirty (yellow), Power (green)
Alarm initiation relay	Quantity: 1 Style: Normally open Ratings: 2.0 A at 30 Vdc (resistive)
Auxiliary relay	Quantity: 2 Style: Form C Ratings: 10 A at 30 Vdc, 10 A at 250 Vac (contacts must switch a minimum of 100 mA at 5 Vdc)
Supervision (trouble) relay	Quantity: 1 Style: Form C Ratings: 2.0 A at 30 Vdc (resistive)
Auxiliary output	18 Vdc, nom., 30 mA, max.
Operating environment	Temperature (UL): -4 to 158 °F (-20 to 70 °C), Temperature (ULC): -4 to 120 °F (-20 to 49 °C) Relative humidity: 10 to 93%, noncondensing
Operating voltages	24 Vdc, 24 V at 50/60 Hz, 120 V at 50/60 Hz, 220/240 V at 50/60 Hz
Agency Approvals	UL, ULC, CSFM, FM, MEA

Accessories

RJ45 wiring harnesses
These 8-conductor cables are used to interconnect detectors with controllers. Harnesses are available in 5 ft., 10 ft., and 15 ft. lengths. They include RJ45 connectors with rubber glands to provide a watertight seal at each end.

Air Sampling Tubes
Rigid metal sampling tubes are available in several lengths. They can be installed without the need to open the detector.

Remote Test/Reset Station
The Remote Test/Reset Station provides alarm test or dirty test capability from a remote location. It includes a one-gang plate, momentary SPST switch, red alarm LED, yellow trouble LED, green power LED, and terminal block. Magnetically-operated or key-operated models are available.

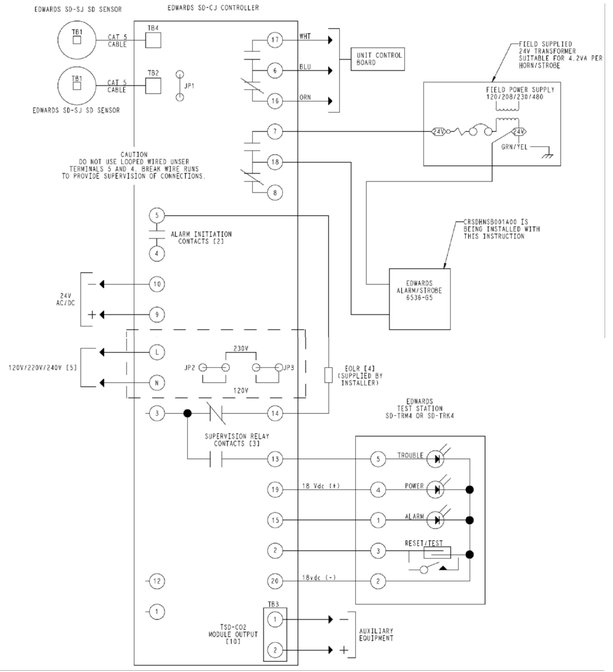
Current Load @ 24 Vdc:
standby = 5 mA
alarm = 15 mA max.

Air Velocity Test Kit
With this kit, and a suitable manometer, testing can be carried out with the duct detector fully installed and wired.

Test Magnet
Used to activate test routine from either a SD-TRM4 Remote Test/Reset Station, or the detector.

Ordering Information

Catalog Number	Description	Ship Wt. lb. (kg)
Controllers and Detectors		
SD-CJ	Controller (RJ45)	2.4 (1.1)
SD-SJ	Sensor (RJ45)	2.4 (1.1)
SD-4WJ	Controller w/sensor (RJ45)	3.7 (3.4)
SD-CT	Controller (terminals)	2.4 (1.1)
SD-ST	Sensor (terminals)	2.4 (1.1)
Accessories		
SD-T8	Air sample tube, 8 inch	0.5 (0.2)
SD-T18	Air sample tube, 18 inch	1.5 (0.7)
SD-T24	Air sample tube, 24 inch	1.1 (0.5)
SD-T36	Air sample tube, 36 inch	3.0 (1.4)
SD-T42	Air sample tube, 42 inch	3.5 (1.6)
SD-T60	Air sample tube, 60 inch	5.8 (2.6)
SD-T78	Air sample tube, 78 inch	4.1 (1.9)
SD-T120	Air sample tube, 120 inch	11.5 (5.2)
SD-RJ15	RJ45 wiring harness kit – 15 ft.	1.5 (0.7)
SD-RJ10	RJ45 wiring harness kit – 10 ft.	1.5 (0.7)
SD-RJ5	RJ45 wiring harness kit – 5 ft.	0.6 (0.3)
SD-TRM4	Remote test/reset station, magnetic	1.0 (0.5)
SD-TRK4	Remote test/reset station, keyed	1.0 (0.5)
5956A	Remote LED Alarm Indicator	1.0 (0.5)
SD-PH	Protective housing for high humidity areas	5.5 (2.5)
SD-VTK	Air velocity test kit (stoppers, etc)	1.0 (0.5)
SD-GSK	Cover gasket kit	0.5 (0.2)
SD-MAG	Test magnet kit	0.5 (0.2)
SD-4WPCBT	Replacement PCB/sensor kit (terminals)	1.0 (0.5)
SD-4WPCBJ	Replacement PCB/sensor kit (RJ45)	1.0 (0.5)
7140126-01	Replacement RJ45 interconnect cable	0.5 (0.2)



EXAMPLE WIRING DIAGRAM FOR CONNECTION OF DUCT DETECTOR TO TEST STATION AND ALARM/STROBE

CRSDTEST001A00

REMOTE TEST/RESET STATION SD–TRM4 FOR SMOKE DETECTORS COMMERCIAL ROOFTOP UNIT 3–27.5 TONS

Installation Instructions

IMPORTANT: Read these instructions completely before attempting to install the accessory Remote Magnetic Test/Reset Station.

SAFETY CONSIDERATIONS

Installation and servicing of air-conditioning equipment can be hazardous due to system pressure and electrical components. Only trained and qualified personnel should install, repair, or service this equipment.

Untrained personnel can perform basic maintenance functions such as cleaning and replacing air filters. All other operations must be performed by trained service personnel. When working on air conditioning equipment, observe precautions in the literature, on tags, and on labels attached to or shipped with the unit and other safety precautions that may apply.

Follow all safety codes. Wear safety glasses, protective clothing, and work gloves. Use quenching cloth for brazing operations. Have fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions included in literature and attached to the unit. Consult local building codes, the current editions of the National Electrical Code (NEC) NFPA 70. In Canada refer to the current editions of the Canadian electrical Code CSA C22.1.

Recognize safety information. This is the safety-alert symbol ⚠. When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury. Understand these signal words: DANGER, WARNING, and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies hazards which **could** result in personal injury or death. CAUTION is used to identify unsafe practices which **may** result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

⚠ WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

Before installing or servicing system, always turn off main power to system and install lockout tag. There may be more than one disconnect switch. Turn off accessory heater power switch if applicable.

⚠ CAUTION

CUT HAZARD

Failure to follow this caution may result in personal injury.

Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate clothing.

⚠ WARNING

PERSONAL INJURY AND ENVIRONMENTAL HAZARD

Failure to relieve system pressure could result in personal injury and/or death.

1. Relieve pressure and recover all refrigerant before servicing existing equipment, and before final unit disposal. Use all service ports and open all flow-control devices, including solenoid valves.
2. Federal regulations require that you do not vent refrigerant into the atmosphere. Recover during system repair or final unit disposal.

CRSDTEST

GENERAL

The SD-TRM4 Remote Test/Reset Station is used with the SuperDuct™ four-wire duct smoke detector. Each remote test/reset station provides a green LED to indicate power, a red LED to indicate alarms, and a yellow LED to indicate trouble and detector dirty levels. The SD-TRM4 requires a magnetic to activate test and reset functions. (See Fig. 1.)

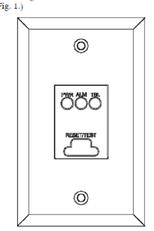


Fig. 1 - SD-TRM4

SPECIFICATIONS

Compatible Electrical Boxes	North American 1–gang box
	Standard 4–in square box, 1–1/2–in deep with 1–gang cover
LED Indicators	Alarm (red) Trouble (yellow) Power (green)
LED Type	Clear lens
Wire Size	14 to 22 AWG
Resistance Per Wire	10 Ω, max
Current Requirements	Included in controller specification
Compatible Detectors	SuperDuct™ Four–Wire Smoke Detectors
Operating Environment	
Temperature	32° – 131°F (0° – 55°C)
Humidity	93% RH, non–condensing
Storage Temperature	–20° to 60°C (–4° to 140°F)

REMOTE TEST/RESET STATION TESTS

Test/reset station alarm test using the SuperDuct™ Four–Wire Smoke Detector

The test/reset station alarm test checks a test/reset station's ability to initiate and indicate an alarm state.

⚠ CAUTION

ALARM SYSTEM ACTIVATION HAZARD

Failure to follow this caution may result in emergency alarm system activation and possible fines.

This test places the duct detector into the alarm state. Unless part of the test, disconnect all auxiliary equipment from the controller before performing the test. If the duct detector is connected to a fire alarm system, notify the proper authorities before performing the test.

To perform the alarm test using an SD–TRM4:

1. Hold the test magnet to the target area for seven seconds.
2. Verify that the test/reset station's Alarm LED turns on.
3. After performing an alarm test using an SD–TRM4, reset the sensor by holding the test magnet to the target area for two seconds.
4. Verify that the test/reset station's Alarm LED turns off.

INSTALLATION

Mount the remote test/reset station on a single gang box as shown in Fig. 2.

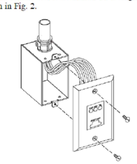


Fig. 2 - SD-TRM4 Installation Diagram

WIRING

Wire the remote test/reset station to the four–wire controller as shown in Fig. 3.

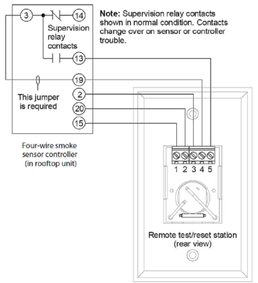


Fig. 3 - Wiring Diagram

CRSDTEST

EDWARDS SIGNALING PRODUCTS

Installation Instructions for the 6536-G5 Horn/Strobe

Description

The 6536-G5 is an audible/visual signal UL Listed for general purpose signaling applications.

Installation

A qualified electrician familiar with National Electrical Code and local code requirements must install this product. Failure to follow the safety precautions in this instruction sheet could result in product or property damage, severe personal injury or death.

⚠ WARNING

To reduce the risk of shock, do not remove lens or tamper with unit when the circuit is energized. Do not connect AC power until installation is complete.

The 6536-G5 horn/strobe (Figure 1) can be mounted on any single gang 2" x 4" (51 mm x 102 mm) electrical box, double gang 4" x 4" (102 mm x 102 mm) electrical box, or standard 4" x 4" (102 mm x 102 mm) junction box with a plaster ring.

1. Install an appropriate electrical box using suitable hardware.
2. Connect the horn/strobe wire leads and terminals (Figure 2). The horn and strobe are connected together at the factory.

NOTE: To connect the horn and strobe to different circuits, loosen the terminals, remove the two wires and cap off with wire nuts.

3. Mount the horn/strobe onto the electrical box. Secure it using two screws (supplied).
4. Perform an operational test.

Maintenance

⚠ WARNING

To reduce the risk of shock, do not remove lens or tamper with unit when the circuit is energized. Disconnect power and allow five (5) minutes for stored energy to dissipate before starting work or disassembly. High energy could be stored in the strobe circuit once it is energized.

Perform regularly scheduled testing at least twice a year or more often as dictated by local authorities having jurisdiction.

Table 1. Specifications

Operating Voltage	24V 50/60 Hz	24V DC
Alarm Current	175 mA	125 mA

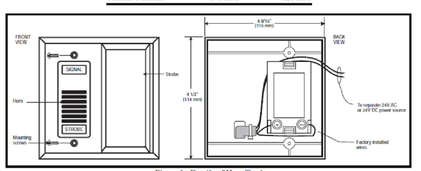


Figure 1. Details of Horn/Strobe

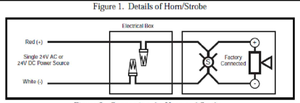


Figure 2. Connecting the Horn and Strobe

CHESHIRE, CT 203-699-3300 FAX 860-677-7746 P-047550-1872 ISSUE 1 © 1999

DUCT DETECTOR - TEST STATION - ALARM/STROBE

FOR REFERENCE ONLY
Professional of Record

CASCO
12 Sunnen Drive, Suite 100,
St. Louis, MO 63143
T: 314.821.1100

PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

HVAC DETAILS

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

DRAWN BY: MEML
CHECKED BY: MEML
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: M3

COMPLIANCE WITH ENERGY CODE IS ACHIEVED BY:

1. ONCE THE EMS HAS BEEN PROGRAMMED, THE INTERIOR AND EXTERIOR LIGHTS WILL TURN ON AND OFF USING THE FOLLOWING LOGIC: SEE VS1 AND VS2 SHEETS.
   - 1.1. INTERIOR WORK LIGHTS WILL TURN ON WITH FIRST MOTION IN THE STORE AND WILL TURN OFF 15 MINUTES AFTER LAST MOTION ONCE THE STORE IS CLOSED.
   - 1.2. INTERIOR SALES LIGHTS WILL TURN ON AT STORE OPENING AND TURN OFF 15 MINUTES AFTER STORE CLOSING.
   - 1.3. EXTERIOR SIGN LIGHTS WILL TURN ON WHEN ITS DARK ENOUGH OUTSIDE ANYTIME DURING STORE HOURS, AND WILL TURN OFF AT STORE CLOSING.
   - 1.4. EXTERIOR SITE LIGHTS WILL TURN ON WHEN IT IS DARK ENOUGH OUTSIDE AND IT IS WITHIN STORE HOURS OR THERE IS MOTION IN THE STORE. THEY WILL TURN OFF 15 MINUTES AFTER LAST MOTION ONCE THE STORE IS CLOSED.
   - 1.5. FOR NEW CONSTRUCTION LOCATIONS ONLY, THERE IS A TEMPORARY PROGRAM TO KEEP SIGN AND SITE LIGHTS ON UNTIL MIDNIGHT RATHER THAN THE TIMES INDICATED ABOVE. O'REILLY WILL DISABLE THIS PROGRAM ONE YEAR AFTER STORE OPENING.
2. RESTROOMS AND OFFICES: ALL LIGHTING IN THESE AREAS ARE CONTROLLED BY OCCUPANT-SENSING DEVICES.

GENERAL NOTES

A. EXIT LIGHTING INSTALL EMERGENCY LIGHTING FIXTURES MINIMUM 12'-6" AFF. ALL EXIT SIGNS MUST BE CLEARLY VISIBLE, NOT OBSCURED BY SHELVING AND/OR MERCHANDISE. FIELD VERIFY SHELVING HEIGHT(S) WITH O'REILLY REPRESENTATIVE PRIOR TO INSTALLATION.

THE MAXIMUM HEIGHT FOR AN EXIT LIGHT ASSOCIATED WITH A SPECIFIC OPENING (I.E. MOUNTED OVER A DOOR OR OPENING) SHALL BE NO GREATER THAN THE CODE ALLOWED 6'-8" ABOVE THE TOP EDGE OF THE DOOR OR OPENING.

B. EMERGENCY/EXIT CIRCUITING ROUTE EMERGENCY/EXIT FIXTURE PORTION OF CIRCUIT DIRECTLY TO CIRCUIT BREAKER, FIXTURE SHALL NOT BE SWITCHED BY LIGHTING CONTROL SYSTEM. SEE DETAIL 1/E1. TYPICAL. SEE N.E.C. 700.12(F).

C. INTERIOR LIGHTING ZONES ALL INTERIOR LIGHTING WITHIN PARTS AREA "A" SHALL BE CONSIDERED "SALES" ZONE (ON ONLY WHEN STORE IS OPEN FOR BUSINESS). ALL INTERIOR LIGHTING WITH PARTS AREA "B", PARTS AREA "C", RESTROOMS, OFFICE, AND BREAK AREA SHALL BE CONSIDERED "WORK" ZONES (ON WHENEVER THERE IS MOTION OR THE STORE IS OPEN). LIGHTING SHALL BE CIRCUITED TO PANEL 'MP' UNLESS NOTED OTHERWISE.

D. CIRCUIT VIA CONTACTORS PARTS AREA AND EXTERIOR LIGHTING SHALL BE CIRCUITED VIA CONTACTORS AS NOTED ON PANEL SCHEDULES AND "VS" SHEETS.

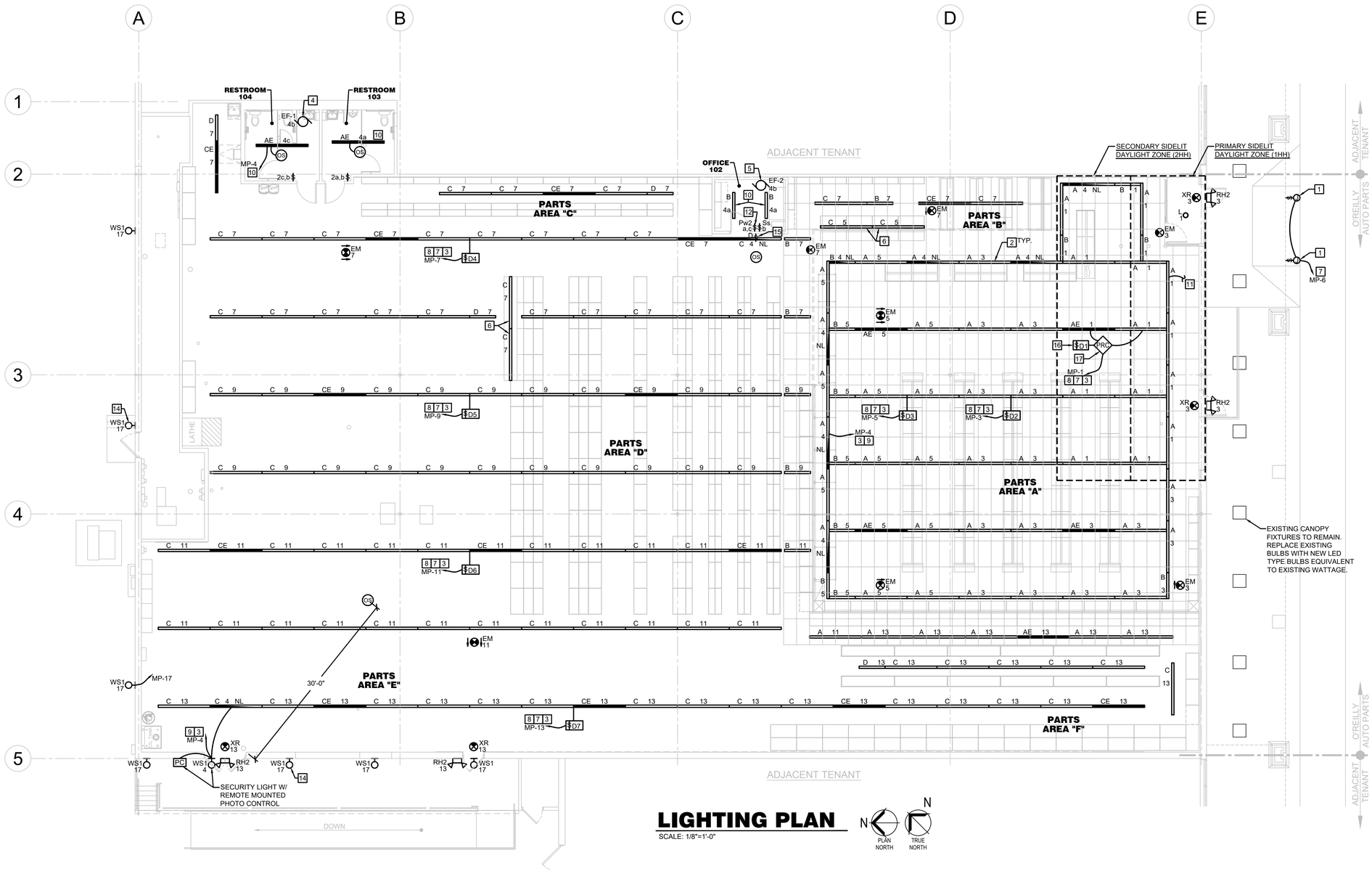
E. CONDUIT REQUIREMENTS: ALL WIRING SHALL BE IN CONDUIT, EXCEPT THAT MC-CABLE MAY BE SUBSTITUTED ONLY AS FOLLOWS:

- a.a. MC-CABLE (MAXIMUM CABLE LENGTH OF 10'-0") MAY BE INSTALLED ONLY FOR BRANCH CIRCUIT WIRING TO LIGHT FIXTURES.
- a.b. MC-CABLE (MAXIMUM CABLE LENGTHS SHOWN ON DETAIL 2/E2) MAY BE INSTALLED ONLY ABOVE SLAB AND ONLY AT LOCATIONS INDICATED ON SHEET E2. SEE SHEET E4 FOR MORE REQUIREMENTS.

LIGHT FIXTURES TO BE MOUNTED AT 12'-0" TO TOP OF FIXTURE WHILE MAINTAINING A MIN. 6" CLEARANCE BELOW DUCTWORK. IF THIS MOUNTING HEIGHT IS NOT ACHIEVABLE, NOTIFY THE ENGINEER OF RECORD IMMEDIATELY.

KEY NOTES

1. ILLUMINATED SIGN MOUNT J-BOX WITH SWITCH INSIDE BUILDING AND FLEX CONDUIT THRU WALL FOR POWER SUPPLY TO ILLUMINATED SIGN. EXACT LOCATIONS OF PENETRATIONS SHALL BE COORDINATED WITH SIGN COMPANY. PENETRATIONS SHALL BE BEHIND SIGNAGE. WATERPROOF WITH ELASTOMERIC POLYURETHANE (NO EXCEPTIONS) EQUAL TO "VULKEM" 116. WIRE TO SIGN WITH 15' OF WIRING "WHIP" (SHALL BE FLEX OR TYPE MC CABLE) & MAKE FINAL ELECTRICAL CONNECTIONS TO THE SIGN CABINET'S. TYPICAL.
2. SALES LIGHTING COORDINATE FIXTURE SPACING AND PLACEMENT WITH ON SITE O'REILLY REPRESENTATIVE. TYPICAL.
3. TRANSFER SWITCH SEE "E" PANEL TRANSFER SWITCH SCHEDULE ON SHEET E3 FOR POSITION OF CIRCUIT WIRES THROUGH TRANSFER SWITCH.
4. RESTROOM EXHAUST WIRE EXHAUST FAN EF-1 TO POWER ON WHEN EITHER BATHROOM LIGHT IS ON USING DOUBLE POLE WALL SWITCH. SEE DETAIL 2/E1.
5. EXHAUST WIRE EXHAUST FAN TO SPEED SWITCH. REFER TO FAN SCHEDULE ON SHEET M2.
6. FIXTURE MOUNTING SUSPEND FIXTURE AT 8'-0" A.F.F. THESE FIXTURES ONLY.
7. LCP CIRCUIT VIA LIGHTING CONTROL PANEL. SEE VS SHEETS.
8. CONTROL WIRE CONTRACTOR SHALL INSTALL 0-10V CONTROL WIRING TO ALL FIXTURES. SEE VS SHEETS.
9. NIGHT LIGHT ROUTE SECURITY AND EGRESS LIGHTING CIRCUIT DIRECTLY TO THE ELECTRICAL PANEL.
10. OFFICE/RESTROOM ROUTE THE OFFICE AND RESTROOM'S LIGHTING CIRCUIT THRU THE LOCAL OCCUPANCY SENSORS AND DIRECTLY TO THE CIRCUIT BREAKER. THESE FIXTURES SHALL NOT BE SWITCHED BY THE LIGHTING CONTROL PANEL. SEE "E" PANEL TRANSFER SWITCH SCHEDULE ON SHEET E3 FOR POSITION OF CIRCUIT WIRES THROUGH TRANSFER SWITCH.
11. OPEN SIGN CIRCUIT RECEPTACLE TO NEAREST LIGHTING CONTROL PANEL CONTROLLED LIGHTING CIRCUIT AND AHEAD OF ALL DIMMER SWITCHES AND DAY LIGHTING CONTROLS. "OPEN" SIGN CAN ALSO BE OPERATED BY WALL SWITCH. SEE DETAIL 1/E1.
12. OFFICE CONTROL PROVIDE CONTROL OF OFFICE GENERAL RECEPTACLES PER IECC 2021 C405.11.1 VIA OCCUPANCY SENSOR WALL SWITCH. SEE DETAIL 4/E1 AND SHEET E2 POWER PLAN. ALL CONTROLLED RECEPTACLES SHALL BE PERMANENTLY MARKED PER NEC.
13. NOT USED.
14. SCONCE MOUNTING: REFER TO ARCHITECTURAL ELEVATIONS SHEETS SHOWING DIMENSIONED LOCATIONS. TYPICAL ALL WALL SCONCES.
15. DIMMER CONTROLS: DIMMER LIGHTING CONTROL SWITCHES LOCATED ON OUTSIDE WALL OF MANAGER'S OFFICE. SEE LIGHTING PLAN FOR QUANTITY. SEE DETAILS ON E4 FOR MORE INFO.
16. DAYLIT CONTROLS: PRIMARY SIDELIT ZONE AND SECONDARY SIDELIT ZONE SHALL BE CONTROLLED SEPARATELY. SEE DETAIL 4/E4.
17. PROVOLT ROOM CONTROLLER: SEE DETAIL 4/E4.



LIGHTING PLAN

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

N — PLAN NORTH — TRUE NORTH

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08/20/2026
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SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

LIGHTING PLAN

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

DRAWN BY: BJG
CHECKED BY: MHK
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: E1.1

LIGHTING FIXTURE SCHEDULE

TYPE	MANFUFACTURER	CATALOG NUMBER	VOLT	FINISH	MOUNTING	LAMP	NOTES	WATTS	QUANTITY
LED DIMMABLE LIGHTS - ALL INDOOR LIGHT FIXTURES SHALL HAVE DISCONNECTING MEANS									
A	ILP	DSC8-6LHE-U-40-FCLGR-OTI-ORY (NO SUBSTITUTIONS)	120	WHITE	SURFACE CEILING	LED	3-1/2"W x 96"L LINEAR STRIP, GRID HANGER (OAPGH) (CEILING GRID ONLY). 0-10 VOLT DIMMING DRIVER STANDARD. 6437 LUMENS (NOMINAL)	40W	47
AE	ILP	DSC8-6LHE-U-40-FCLGR-EM10-OTI-ORY (NO SUBSTITUTIONS)	120	WHITE	SURFACE CEILING	LED	SAME AS TYPE "A" WITH 10W EMERGENCY BATTERY PACK INSTALLED. INSTALL UNSWITCHED POWER SOURCE TO EACH FIXTURE. SEE DIAGRAM 1/E1. 1386 LUMENS (BATTERY)	40W	6
B	ILP	DSC4-3LHE-U-40-FCLGR-OTI-ORY (NO SUBSTITUTIONS)	120	WHITE	SURFACE CEILING	LED	3-1/2"W x 48"L LINEAR STRIP, GRID HANGER (OAPGH) (CEILING GRID ONLY). 0-10 VOLT DIMMING DRIVER STANDARD. OMIT GRID HANGER @ HARD CLG. 3193 LUMENS (NOMINAL)	20W	13
C	ILP	DSC8-6LHE-U-40-FCLGR-OTI-ORY (NO SUBSTITUTIONS)	120	WHITE	CHAIN HUNG	LED	3-1/2"W x 96"L, 5' AIRCRAFT CABLE SET (ACxY) (1) PER FIXTURE. HANG TOP OF FIXTURE AT 12'-0" A.F.F. OR 12" ABOVE TOP OF SHELVING (WHICEVER IS HIGHER) WITH CABLE SET. VERIFY LENGTH OF AIRCRAFT CABLE REQUIRED. 0-10 VOLT DIMMING DRIVER STANDARD. 6437 LUMENS (NOMINAL)	40W	97
CE	ILP	DSC8-6LHE-U-40-FCLGR-EM10-OTI-ORY (NO SUBSTITUTIONS)	120	WHITE	CHAIN HUNG	LED	SAME AS TYPE "C" WITH 10W EMERGENCY BATTERY PACK INSTALLED (EM10). INSTALL UNSWITCHED POWER SOURCE TO EACH FIXTURE. SEE DIAGRAM 1/E1. 1386 LUMENS (BATTERY)	40W	15
D	ILP	DSC4-3LHE-U-40-FCLGR-OTI-ORY (NO SUBSTITUTIONS)	120	WHITE	CHAIN HUNG	LED	3-1/2"W x 48"L 5' AIRCRAFT CABLE SET(ACxY) (1) PER FIXTURE. HANG TOP OF FIXTURE AT 12'-0" A.F.F. OR 12" ABOVE TOP OF SHELVING (WHICEVER IS HIGHER) WITH CABLE SET. VERIFY LENGTH OF AIRCRAFT CABLE REQUIRED. 0-10 VOLT DIMMING DRIVER STANDARD. 3193 LUMENS (NOMINAL)	20W	10
L	LSI	LAD6 41 LED 40 75 UE TR6R SF-HAZ (NO SUBSTITUTIONS)	120	CLEAR	RECESSED	LED	6"W x 8"T RECESSED CAN. 3849 LUMENS (NOMINAL)	42W	1
EXTERIOR LIGHTS									
WS1	LSI	XWM-FT-LED-06L-50-UE-BRZ (NO SUBSTITUTIONS)	120	DARK BRONZE	SURFACE WALL	LED	12-3/4"W x 19-15/16"L x 5-5/16"T FULL CUT OFF FIXTURE, BUG RATING B2-U0-G2. SEE ARCHITECTURAL ELEVATIONS FOR DIMENSIONED LOCATIONS.	45W	8
COMBINATION EXIT/EMERGENCY LIGHTS AND EMERGENCY LIGHTS									
XR	HUBBELL LIGHTING	CCRRC	120	WHITE	SURFACE CEILING OR WALL	(2) LED	EXIT LIGHT UNIVERSAL (WALL/CLG.) SINGLE OR DOUBLE FACE. BACK UP BATTERIES SHALL MAINTAIN 100% ILLUMINATION FOR A MINIMUM OF 90 MINUTES TO COMPLY WITH NEC ARTICLE 700.12(A). IF CEILING HEIGHT IS 11'-7" OF LOWER, CEILING MOUNT. IF CEILING MOUNT IS HIGHER THAN 11'-7", WALL MOUNT AT 12'-6" AFF.	4W	4
EM	HUBBELL LIGHTING	CER	120	WHITE	SURFACE CEILING OR WALL	LED	EXIT LIGHT UNIVERSAL (WALL/CLG.). SINGLE OR DOUBLE FACE. BACK UP BATTERIES SHALL MAINTAIN 100% ILLUMINATION FOR A MINIMUM OF 90 MINUTES TO COMPLY WITH NEC ARTICLE 700.12(A). MOUNT 12'-6" MINIMUM AFF.	1.78W	8
RH2	HUBBELL LIGHTING	CORD	3.6 VDC	WHITE	SURFACE WALL	(2) LED	EXTERIOR EMERGENCY LIGHT UNIVERSAL (WALL/CLG.). POWERED BY TYPE XR.	2W	4

NOTES:
1. ALL ITEMS LISTED ON THE "LIGHT FIXTURE SCHEDULE" WILL BE SUPPLIED BY THE OWNER (O'REILLY). ITEMS SHALL BE DIRECT ORDERED AND/OR RELEASED FROM THE LISTED ELECTRICAL EQUIPMENT DISTRIBUTION.
2. NATIONAL ACCOUNT VENDOR:
SOURCEONE SOLUTIONS
4341 GREEN ASH DRIVE
EARTH CITY, MO. 63045
EMAIL: ncoreilly@sourceonesolutions.com
TOLL FREE: (314) 499-6400

LEVITON DAYLIGHT CONTROL SCHEDULE

ALL ITEMS LISTED ON THE "LEVITON CONTROL SCHEDULE" WILL BE SUPPLIED BY THE OWNER (O'REILLY). ITEMS SHALL BE DIRECT ORDERED AND OR RELEASED FROM THE LISTED ELECTRICAL EQUIPMENT DISTRIBUTOR:

SOURCEONE SOLUTIONS
4341 GREEN ASH DR.
EARTH CITY, MO. 63405

SOURCEONE SOLUTIONS OREILLY TEAM
EMAIL: ncoreilly@sourceonesolutions.com
TOLL FREE: (314) 499-6400

MARK	ITEM	MODEL	REMARKS
PRV	PROVOLT DIMMING CONTROLLER	O6C20-MDW	2-ZONE INTEGRATED ROOM CONTROLLER FOR PRIMARY AND SECONDARY DAYLIT ZONES. DAYLIGHT HARVESTING SHALL USE CLOSED LOOP OPERATION. E.C. SHALL WIRE AND PROGRAM CONTROLLER PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
$4	PROVOLT 4-BUTTON KEYPAD	PLVSW-4LW	24V-INPUT, 24V-OUTPUT TO CONTROLLER, WALL MOUNT WITH OTHER DIMMER SWITCHES AS SHOWN IN DETAIL 3/E4.

GENERAL NOTES

A. EXIT LIGHTING INSTALL EMERGENCY LIGHTING FIXTURES MINIMUM 12'-6" AFF. ALL EXIT SIGNS MUST BE CLEARLY VISIBLE, NOT OBSCURED BY SHELVING AND/OR MERCHANDISE. FIELD VERIFY SHELVING HEIGHT(S) WITH O'REILLY REPRESENTATIVE PRIOR TO INSTALLATION.
THE MAXIMUM HEIGHT FOR AN EXIT LIGHT ASSOCIATED WITH A SPECIFIC OPENING (I.E. MOUNTED OVER A DOOR OR OPENING) SHALL BE NO GREATER THAN THE CODE ALLOWED 6'-8" ABOVE THE TOP EDGE OF THE DOOR OR OPENING.
B. EMERGENCY/EXIT CIRCUITING ROUTE EMERGENCY/EXIT FIXTURE PORTION OF CIRCUIT DIRECTLY TO CIRCUIT BREAKER, FIXTURE SHALL NOT BE SWITCHED BY LIGHTING CONTROL SYSTEM. SEE DETAIL 1/E1. TYPICAL. SEE N.E.C. 700.12(F).
C. INTERIOR LIGHTING ZONES ALL INTERIOR LIGHTING WITHIN PARTS AREA "A" SHALL BE CONSIDERED "SALES" ZONE (ON ONLY WHEN STORE IS OPEN FOR BUSINESS). ALL INTERIOR LIGHTING WITH PARTS AREA "B", PARTS AREA "C", RESTROOMS, OFFICE, AND BREAK AREA SHALL BE CONSIDERED "WORK" ZONES (ON WHENEVER THERE IS MOTION OR THE STORE IS OPEN). LIGHTING SHALL BE CIRCUITED TO PANEL 'MP' UNLESS NOTED OTHERWISE.
D. CIRCUIT VIA CONTACTORS PARTS AREA AND EXTERIOR LIGHTING SHALL BE CIRCUITED VIA CONTACTORS AS NOTED ON PANEL SCHEDULES AND "VS" SHEETS.
E. CONDUIT REQUIREMENTS: ALL WIRING SHALL BE IN CONDUIT, EXCEPT THAT MC-CABLE MAY BE SUBSTITUTED ONLY AS FOLLOWS:
a.a. MC-CABLE (MAXIMUM CABLE LENGTH OF 10'-0") MAY BE INSTALLED ONLY FOR BRANCH CIRCUIT WIRING TO LIGHT FIXTURES.
a.b. MC-CABLE (MAXIMUM CABLE LENGTHS SHOWN ON DETAIL 2/E2) MAY BE INSTALLED ONLY ABOVE SLAB AND ONLY AT LOCATIONS INDICATED ON SHEET E2. SEE SHEET E4 FOR MORE REQUIREMENTS.

LIGHTING DEMO NOTES

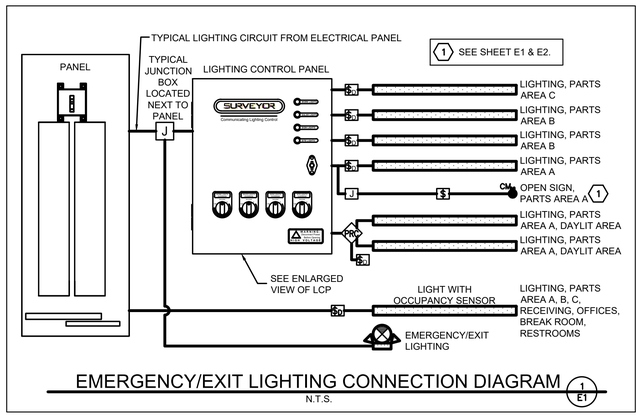
A. EXISTING LIGHTING: REMOVE ALL EXISTING LIGHT FIXTURES WITH ASSOCIATED CONDUIT, WIRING, SWITCHING, CONTROL DEVICES, ETC.. SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
B. EXISTING CEILING GRID: CONTRACTOR TO REMOVE ALL EXISTING CEILING GRID & TILE IN SHOWROOM AND HARD PARTS AREA. CONTRACTOR TO INSTALL NEW GRID & TILE IN SHOWROOM ONLY AT PREVIOUS HEIGHT. SEE ARCHITECTURAL PLANS FOR CEILING GRID CHANGES.
C. ENERGY MANAGEMENT SYSTEM: INSTALL NEW SYSTEM. SEE VS SHEETS. CONTRACTOR SHALL COORDINATE WITH SOURCEONE (314-499-6400 OPTION 5).

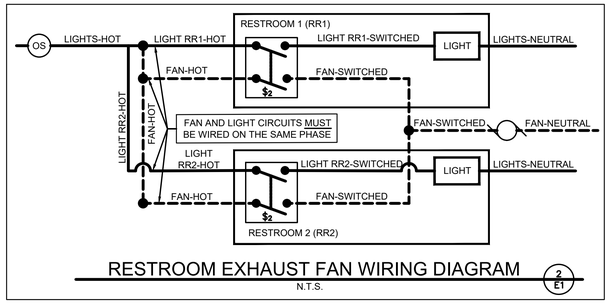
COMPLIANCE WITH ENERGY CODE IS ACHIEVED BY:

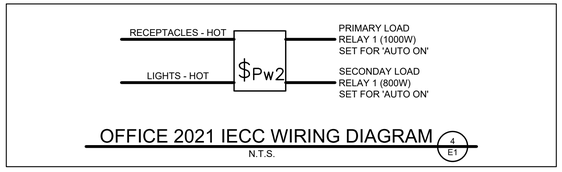
1. ONCE THE EMS HAS BEEN PROGRAMMED, THE INTERIOR AND EXTERIOR LIGHTS WILL TURN ON AND OFF USING THE FOLLOWING LOGIC: SEE VS1 AND VS2 SHEETS.
1.1. INTERIOR WORK LIGHTS WILL TURN ON WITH FIRST MOTION IN THE STORE AND WILL TURN OFF 15 MINUTES AFTER LAST MOTION ONCE THE STORE IS CLOSED.
1.2. INTERIOR SALES LIGHTS WILL TURN ON AT STORE OPENING AND TURN OFF 15 MINUTES AFTER STORE CLOSING.
1.3. EXTERIOR SIGN LIGHTS WILL TURN ON WHEN ITS DARK ENOUGH OUTSIDE ANYTIME DURING STORE HOURS, AND WILL TURN OFF AT STORE CLOSING.
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1.5. FOR NEW CONSTRUCTION LOCATIONS ONLY, THERE IS A TEMPORARY PROGRAM TO KEEP SIGN AND SITE LIGHTS ON UNTIL MIDNIGHT RATHER THAN THE TIMES INDICATED ABOVE. O'REILLY WILL DISABLE THIS PROGRAM ONE YEAR AFTER STORE OPENING.
2. RESTROOMS AND OFFICES: ALL LIGHTING IN THESE AREAS ARE CONTROLLED BY OCCUPANT-SENSING DEVICES.

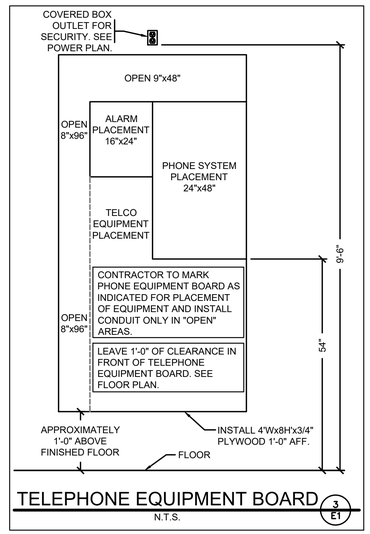
LIGHTING SCOPE OF WORK

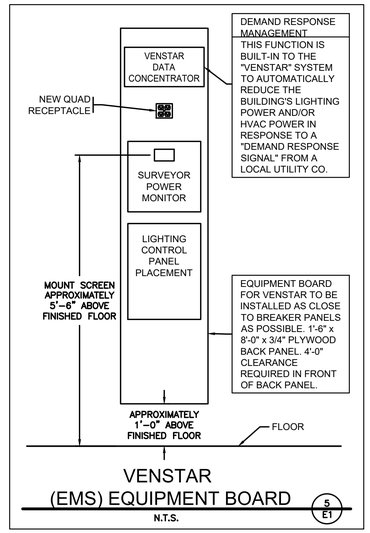
A. LIGHTING: AFTER REMOVAL / DEMOLITION COORDINATE WITH O'REILLY REPRESENTATIVE FOR ANY NEW LIGHTING NEEDED TO ADEQUATELY LIGHT SPACE. CIRCUIT TO PANEL MP.
B. SHOW ROOM LIGHTING: NEW LIGHTING SHALL BE INSTALLED IN SHOWROOM. REMOVE EXISTING LIGHTING FROM SHOWROOM.
C. EXISTING CEILING GRID: CONTRACTOR TO REMOVE ALL EXISTING CEILING GRID & TILE IN SHOWROOM AND HARD PARTS AREA. CONTRACTOR TO INSTALL NEW GRID & TILE IN SHOWROOM ONLY AT PREVIOUS HEIGHT. SEE ARCHITECTURAL PLANS FOR CEILING GRID CHANGES.
D. LIGHTING IN HARD PART AREAS HANG LIGHT FIXTURES TO ROOF STRUCTURE AT 12' IN HARD PART AREAS.
E. ENERGY MANAGEMENT SYSTEM: SEE ELECTRICAL SCOPE OF WORK ON SHEET E2.
F. EXISTING INTERIOR LIGHTING CONTROL: CONTRACTOR SHALL REMOVE EXISTING LIGHTING SWITCHING/CONTROL. NEW LIGHTS SHALL BE CIRCUITED TO BE CONTROLLED BY NEW ENERGY MANAGEMENT SYSTEM.
G. NEW EXTERIOR LIGHTING: INSTALL NEW LIGHTING AS SHOWN ON PLANS WITH ASSOCIATED CONDUIT, WIRING, SWITCHING, CONTROL DEVICES, ETC.. RUN NEW LIGHTING AS REQUIRED ON PLAN AND NOTED TO ENERGY MANAGEMENT SYSTEM.











COMMONWEALTH OF MASSACHUSETTS
MARK KUHLMAN
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08/20/2026
Mark Kuhlman
License #59258
Exp. Date: 06/30/28
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47 MEMORIAL PKWY
RANDOLPH, MA 02368

LIGHTING PLAN DETAILS

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

DRAWN BY: BJG
CHECKED BY: MHK
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: E1

GENERAL NOTES

A. TELEPHONE AND COMPUTER DATA SYSTEMS:
- PROVIDE AND INSTALL ALL TELEPHONE AND DATA CONDUITS.
- VACUUM OUT ALL CONDUITS TO REMOVE WATER.
- PROVIDE PULL-STRING IN EACH CONDUIT.
- OWNER SHALL PROVIDE ALL TELEPHONE AND DATA WIRING.

B. FIRE ALARM NOTE: IN THE EVENT A MONITORED FIRE SPRINKLER SYSTEM IS REQUIRED BY THE AUTHORITY HAVING JURISDICTION, THE FIRE ALARM SYSTEM WILL BE CONTRACTED DIRECTLY BY THE DIRECTOR OF FACILITY SECURITY, LEIGH SIDES, WITH THE OREILLY AUTOMOTIVE CORPORATE OFFICE. THE GENERAL CONTRACTOR SHALL NOT PROCURE ANYONE TO INSTALL OR QUOTE THESE SYSTEMS UNLESS THEY HAVE BEEN ASKED TO DO SO BY LEIGH SIDES. PLEASE CONTACT LEIGH SIDES @ 417-874-7132 IF A SYSTEM IS NEEDED OR IF THERE ARE ANY QUESTIONS.

C. SEISMIC RESTRAINTS: CONTRACTOR TO PROVIDE ENGINEERED SEISMIC-RESTRAINT DRAWINGS, SIGNED AND SEALED BY A QUALIFIED PROFESSIONAL ENGINEER LICENSED IN THE STATE IF REQUIRED. SUBMIT COPIES, INCLUDE ALL CALCULATIONS AND DETAILS REQUIRED BY AHJ TO ARCHITECT AND TO AHJ FOR REVIEW AND APPROVAL.

D. CONDUIT REQUIREMENTS: ALL WIRING SHALL BE IN CONDUIT, EXCEPT THAT MC-CABLE MAY BE SUBSTITUTED ONLY AS FOLLOWS:

a. MC-CABLE (MAXIMUM CABLE LENGTH OF 10'-0") MAY BE INSTALLED ONLY FOR BRANCH CIRCUIT WIRING TO LIGHT FIXTURES.

b. MC-CABLE (MAXIMUM CABLE LENGTHS SHOWN ON DETAIL 2/E2) MAY BE INSTALLED ONLY ABOVE SLAB AND ONLY AT LOCATIONS INDICATED ON SHEET E2. SEE SHEET E4 FOR MORE REQUIREMENTS.

KEY NOTES

1. TANK WATER HEATER ON SHELF ABOVE MOP SINK. REFER TO DETAIL 6/P2.
2. INSTALLER COUNTER PROVIDE 4"x4" BOXES HUNG @ 60" A.F.F. TO BOTTOM OF BOX. CONDUIT SHALL EXTEND MAX. OF 5" ABOVE BOX. SEE PANEL E TRANSFER SWITCH SCHEDULE ON SHEET E3 FOR POSITION OF CIRCUIT WIRES THROUGH TRANSFER SWITCH.
3. TEMPORARY GENERATOR OUTLET RELIANCE OUTDOOR RECEPTACLE. WIRE TO GENERATOR TRANSFER SWITCH "E". SEE SHEET E3. PROVIDE SIGN THAT GENERATOR OPERATION IS REQUIRED TO BE OUTSIDE OF BUILDING.
4. SHOW WINDOW RECEPTACLE. RECEPTACLE SHALL BE MOUNTED BELOW PAINTED GREEN STRIPE AND WITHIN 18" ABOVE WINDOW. WHERE BOX CAN NOT BE RECESSED ABOVE WINDOW, MOUNT IN CEILING TILE ADJACENT TO WALL. (TYPICAL.)
5. OPEN SIGN MOUNT RECEPTACLE IN CEILING FOR "OPEN" SIGN. "OPEN" SIGN CAN ALSO BE OPERATED BY WALL SWITCH. SEE DETAIL 1/E1.
6. PRINTER PROVIDE POWER VIA GENERATOR TRANSFER SWITCH. REFER TO DETAIL 2/E2. SEE SCHEDULE ON E3.
7. EMS LOCATE VENSTAR SURVEYOR SYSTEM AND LIGHTING CONTROL PANEL NEAR PANELS "MP" AND "PLP". SEE 4/E1.
8. DATA PROVIDE 4"x4" DATA OUTLET BOX AT THIS LOCATION.
9. GENERATOR CORD BOX: INSTALL ORBIT 12124NK BOX AT THIS LOCATION FOR STORAGE OF GENERATOR CORD.
10. SECURITY LOCATE DUPLEX OUTLET 9-6" AFF TO BOTTOM WITHIN HUBBELL DEEP SINGLE GANG HINGED COVER #RW57350.
11. OFFICE PROVIDE POWER VIA STAND BY GENERATOR TRANSFER SWITCH. SEE SCHEDULE ON E3.
12. TELEPHONE INSTALL 4'Wx8'Hx3/4" PLYWOOD 1'-0" AFF. SEE DETAIL 3/E1. PROVIDE POWER VIA STAND BY GENERATOR TRANSFER SWITCH. SEE SCHEDULE ON E3.
13. FIRE ALARM: J-BOX/CIRCUIT FOR FIRE ALARM SYSTEM INSTALLED IF, AND ONLY IF, FIRE ALARM SYSTEM IS REQUIRED. CONTRACTOR SHALL CONFIRM THAT SYSTEM IS REQUIRED PRIOR TO ROUGH-IN. THE BREAKER SHALL BE PAINTED RED AND LOCKABLE.
14. FIRE ALARM: CONTRACTOR TO INSTALL J-BOX, CONDUIT AND PULL STRING FOR FIRE ALARM. MOUNT J-BOX BELOW CONVENIENCE OUTLET LOCATION. REFERENCE SHEET M2.
15. DOOR POSITION SWITCH: INSTALL JUNCTION BOXES FOR ENERGY MANAGEMENT SYSTEM DOOR POSITION SWITCHES AND WIRE TO CONTROLLING HVAC IN AREA OF BACK DOOR, PER EQUIPMENT SUPPLIER REQUIREMENTS. SEE SHEET VS1.

SHOW ROOM COUNTERS & PRINTER LOCATION KEYNOTES

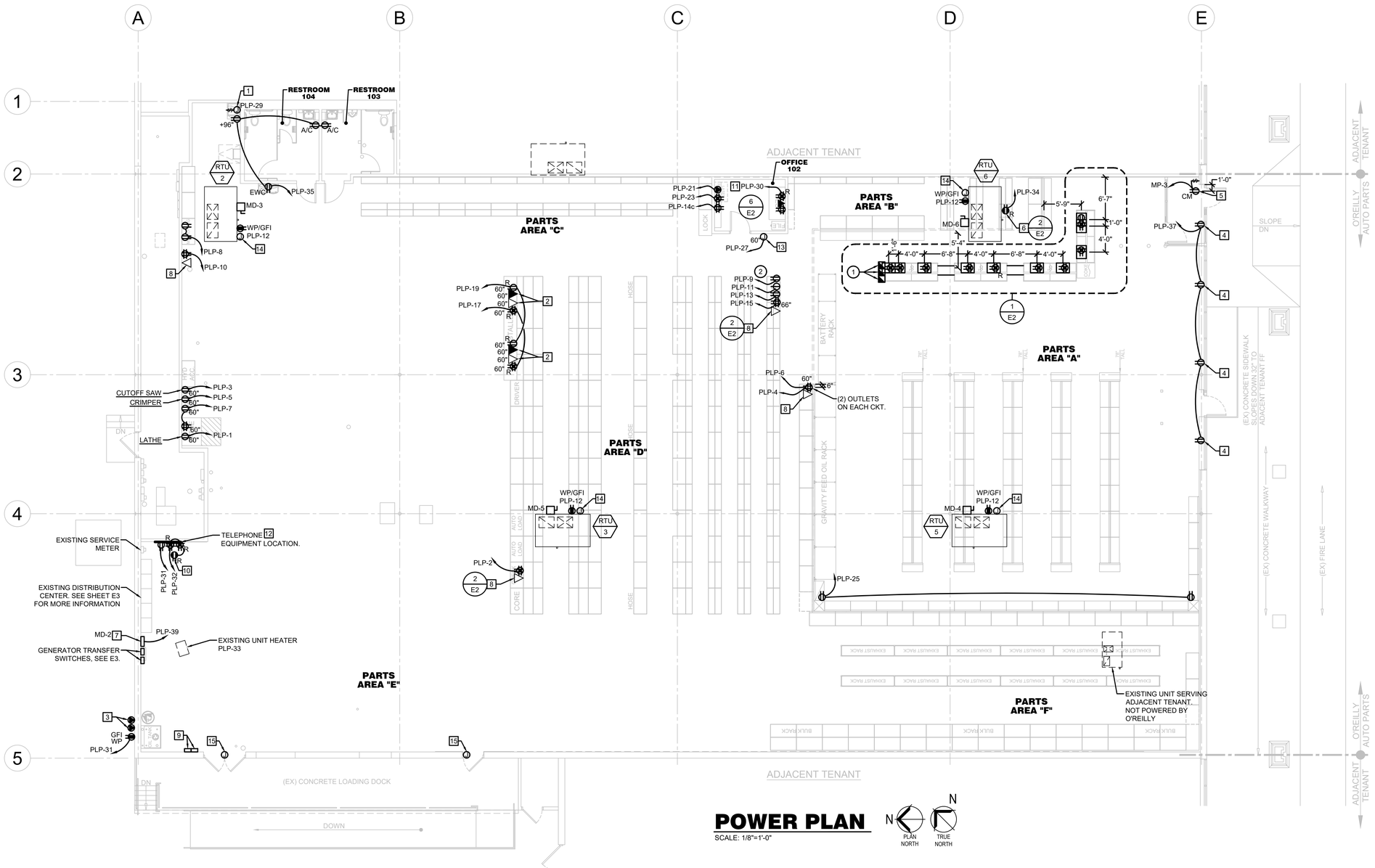
1. POWER POLE: 12'-0", BLANK TWO CHANNEL, ALUMINUM FINISH, TELE-POWER POLE FOR FEED TO OUTLETS AND FOR COMMUNICATIONS/DATA WIRING AT COUNTER, (EQUAL TO "WIREMOLD" PRODUCT). TYPICAL.
2. TEST OUTLET BOX: 120V. INSTALL (2) DUPLEX OUTLETS EACH ON THEIR OWN CIRCUIT, (1) SINGLE OUTLET ON ONE CIRCUIT, (1) QUADPLEX OUTLET ON ONE CIRCUIT & A COMPUTER DATA OUTLET BOX. ALL MOUNTED AT 66" ABOVE FLOOR. SEE DETAIL 5/E2.
3. FRONT COUNTER COKE FLOOR RECEPTACLE: PROVIDE DUPLEX RECEPTACLE FOR COKE MACHINE. SEE DETAIL 4/E2 SIMILAR.
4. COMPACT CABLE PROTECTOR: CONTRACTOR TO SUPPLY AND INSTALL "ADAM HALL DEFENDER MIDI 5" RACEWAY & 85103 BASE (ALL BLACK) ON FLOOR BETWEEN COUNTERS. TYPICAL.
5. COUNTER IG FLOOR RECEPTACLE: PROVIDE 4-PLEX ISOLATED GROUND RECEPTACLE. SEE DETAIL 4/E2.

BRANCH CIRCUIT CONDUCTORS SCHEDULE

MINIMUM WIRE SIZE FOR POWER CIRCUITS SHALL BE #12 (UNLESS NOTED OTHERWISE ON PLANS). FOR ALL 20A BRANCH CIRCUITS, WIRE SIZES SHALL BE NOT LESS THAN THOSE SPECIFIED BELOW:

120V CIRCUITS - RUN DISTANCE IN FEET	WIRE SIZE IN AWG
UP TO 60	#12
61 TO 95	#10
96 TO 150	#8
151 TO 230	#6

NOTES:
- WHERE WIRE SIZE IS TOO LARGE TO TERMINATE ON DEVICE, CONTRACTOR SHALL PROVIDE J-BOX ADJACENT TO DEVICE EXTEND WITH LARGEST SIZE CONDUCTOR (#8 WIRE) THAT WILL TERMINATE ON DEVICE.
- UPSIZE EQUIPMENT GROUNDING CONDUCTOR PROPORTIONATELY PER NEC 250.122(B).



POWER PLAN

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

PLAN NORTH / TRUE NORTH

COMMONWEALTH OF MASSACHUSETTS
MARK KUHLMAN
No. 59298
REGISTERED PROFESSIONAL ENGINEER
Mark Kuhlman
08/20/2026
Mark Kuhlman
License #59298
Exp. Date: 06/30/28
Professional of Record

CASCO
12 Sunnen Drive, Suite 100,
St. Louis, MO 63143
T: 314.821.1100

SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

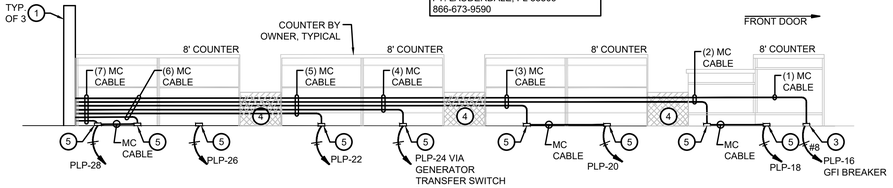
POWER PLAN

PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

DRAWN BY: BJG
CHECKED BY: MHK
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: E2.1

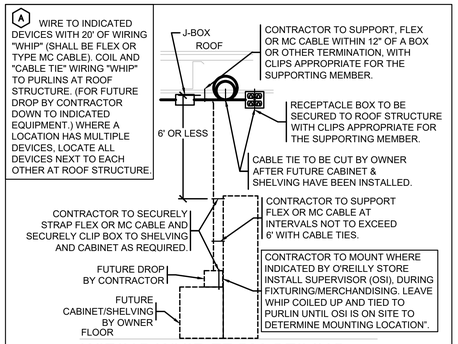


FLOOR MOUNTED RECEPTACLES UNDER COUNTERS

1 / E2

N.T.S.

(A) WIRE TO INDICATED DEVICES WITH 20' OF WIRING "WHIP" (SHALL BE FLEX OR TYPE MC CABLE). COIL AND "CABLE TIE" WIRING "WHIP" TO PURLINS AT ROOF STRUCTURE. (FOR FUTURE DROP BY CONTRACTOR DOWN TO INDICATED EQUIPMENT.) WHERE A LOCATION HAS MULTIPLE DEVICES, LOCATE ALL DEVICES NEXT TO EACH OTHER AT ROOF STRUCTURE.

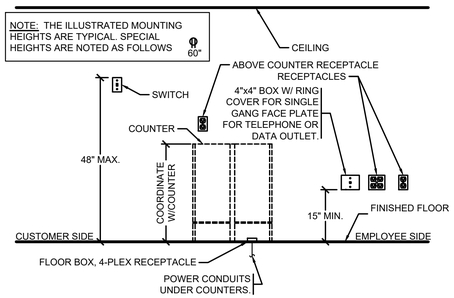


WIRING WHIP FROM CEILING

2 / E2

N.T.S.

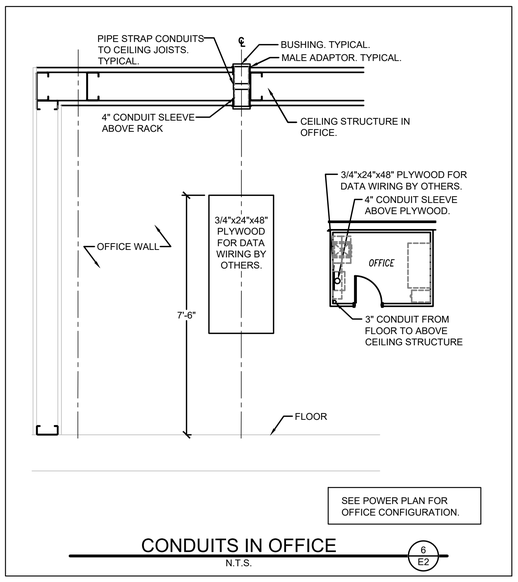
NOTE: THE ILLUSTRATED MOUNTING HEIGHTS ARE TYPICAL. SPECIAL HEIGHTS ARE NOTED AS FOLLOWS



TYPICAL OUTLET MOUNTING HEIGHTS

3 / E2

N.T.S.



CONDUITS IN OFFICE

6 / E2

N.T.S.

(#) SHOW ROOM COUNTERS & PRINTER LOCATION KEYNOTES

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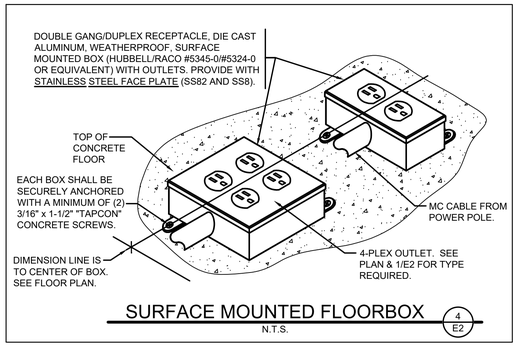
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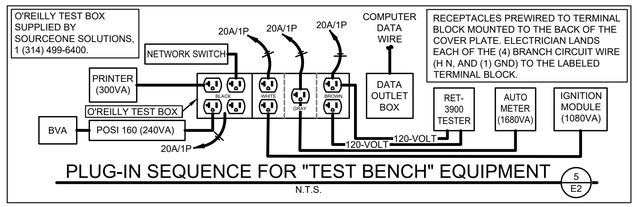
b. MC-CABLE (MAXIMUM CABLE LENGTHS SHOWN ON DETAIL 2/E2) MAY BE INSTALLED ONLY ABOVE SLAB AND ONLY AT LOCATIONS INDICATED ON SHEET E2. SEE SHEET E4 FOR MORE REQUIREMENTS.



SURFACE MOUNTED FLOORBOX

4 / E2

N.T.S.



PLUG-IN SEQUENCE FOR "TEST BENCH" EQUIPMENT

5 / E2

N.T.S.

ELECTRICAL DEMO NOTES

A. EXISTING WALLS TO BE DEMOLISHED: REMOVE ALL EXISTING RECEPTACLES, DATA, DEVICES WITH ASSOCIATED WIRING, CONDUIT AND BOXES FROM ALL DEMOLISHED WALLS. REFER TO ARCHITECTURAL DEMO PLAN FOR ADDITIONAL INFORMATION.

B. EXISTING WALLS TO REMAIN: ABANDON EXISTING OUTLETS AND ASSOCIATED CONDUIT, WIRING AND BOXES IN EXISTING REMAINING WALLS. REMOVE OUTLETS AND CAP EXISTING WIRES. INSTALL BLANK COVER PLATE ON EXISTING BOX UNLESS OTHERWISE STATED. REFER TO ARCHITECTURAL DEMO PLAN FOR ADDITIONAL INFORMATION.

C. EXISTING ELECTRICAL PANELS: TO REMAIN. SEE POWER PLAN AND ELECTRICAL RISER DIAGRAM FOR ADDITIONAL INFORMATION.

D. EXISTING ENERGY MANAGEMENT SYSTEM: CONTRACTOR TO REMOVE EXISTING ENERGY MANAGEMENT SYSTEM AND INSTALL NEW SYSTEM. SEE VS SHEETS.

E. EXISTING TELEPHONE EQUIPMENT SHALL BE REMOVED. EXISTING TELEPHONE CONDUIT AND WIRING TO REMAIN. EXTEND TO NEW TELEPHONE LOCATION.

ELECTRICAL SCOPE OF WORK

A. ENERGY MANAGEMENT SYSTEM: INSTALL NEW SYSTEM. SEE VS SHEETS. CONTRACTOR SHALL COORDINATE WITH SOURCEONE (314-499-6400).

B. NEW CIRCUITS: CONTRACTOR TO INSTALL NEW CIRCUITS ON EXISTING ELECTRIC PANELS AS REQUIRED.

C. ELECTRICAL PANELS: EXISTING ELECTRIC PANELS TO REMAIN, UNLESS OTHERWISE NOTED. NEW CIRCUITS TO BE ROUTED TO EXISTING PANELS AS REQUIRED. CONTRACTOR TO FIELD VERIFY SPACE IN EXISTING PANELS AND LOAD CAPACITY PRIOR TO INSTALLING NEW CIRCUITS.

D. TRANSFER SWITCH: INSTALL NEW TRANSFER SWITCH(ES) ("E" PANEL) NEXT TO ELECTRICAL PANELS. SEE POWER AND LIGHTING PLAN FOR CIRCUITS TO BE INSTALLED TO TRANSFER SWITCH.

BRANCH CIRCUIT CONDUCTORS SCHEDULE

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NOTES:
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- UPSIZE EQUIPMENT GROUNDING CONDUCTOR PROPORTIONATELY PER NEC 250.122(B).

MARKING OF ELECTRICAL WORKING SPACE

IN FRONT OF ALL METER PANELS, SUB PANELS, TRANSFORMERS, AND DISCONNECTS, PROVIDE A WORKING SPACE IN FRONT, ON THE FLOOR. RECTANGLE, PAINT WITH CONTRASTING COLOR. 4-INCH BRUSH STROKES WITH DIAGONAL LINES INSIDE, WITH 6-INCH LETTERS, "NO STORAGE" BLOCKED IN, AND/OR LARGE STICKER SAYING THE SAME THING. 4'-0" DEPTH TYPICAL AT ALL LOCATIONS.

ALL PANELBOARDS, TRANSFORMERS, TRANSFER SWITCH KIT AND DISCONNECTS WILL BE SUPPLIED BY THE OWNER (O'REILLY). ELECTRICAL GEAR SHALL BE DIRECT ORDERED AND/OR RELEASED FROM THE LISTED ELECTRICAL EQUIPMENT DISTRIBUTOR LISTED ON SHEET E3.

COMMONWEALTH OF MASSACHUSETTS
MARK KUHLMAN
No. 59298
REGISTERED PROFESSIONAL ENGINEER
08/20/2026
Mark Kuhlman
License #59298
Exp. Date: 06/30/28
Professional of Record

CASCO
12 Summit Drive, Suite 100,
St. Louis, MO 63143
T: 314.821.1100

SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

POWER PLAN DETAILS

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

DRAWN BY: BJG
CHECKED BY: MHK
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: E2

ALL PANELBOARDS, TRANSFORMERS, TRANSFER SWITCH KIT AND DISCONNECTS WILL BE SUPPLIED BY THE OWNER (OREILLY). ELECTRICAL GEAR SHALL BE DIRECT ORDERED AND/OR RELEASED FROM THE LISTED ELECTRICAL EQUIPMENT DISTRIBUTOR. SEE 'ELECTRIC SERVICE RESPONSIBILITIES' FOR ADDITIONAL CLARIFICATION:

SOURCEONE SOLUTIONS
4341 GREEN ASH DR.
EARTH CITY, MO. 63045

SOURCEONE SOLUTIONS OREILLY TEAM
EMAIL: ncoreilly@sourceonesolutions.com
TOLL FREE: (314) 499-6400

MOUNT: SURFACE | 120/208 | 3-PHASE, 4W | PANEL MD | CAPACITY: 800A | INT CAP: EXISTING
LOCATION: BACK OF BLDG. | LUGS: MLO | DEMAND LOAD: 158A | AV. FAULT: EXISTING

NOTES	CKT	LTG	REC	HVAC	MISC	NP	DESCRIPTION	AMP	POLE		AMP	POLE	DESCRIPTION	LTG	REC	HVAC	MISC	NP	CKT	NOTES
							SPARE			A			**ENERGY METER**				**0.1**			
	1							30	3	B	**20**	**3**					**0.1**		2	
										C							**0.1**			
				5.9			**RTU 2**			A			**RTU 5**			**5.9**				
	3			**5.9**				60	3	B	**60**	**3**				**5.9**			4	
				5.9						C						**5.9**				
				5.9			**RTU 3**			A			**RTU 6**			**5.9**				
	5			**5.9**				60	3	B	**60**	**3**				**5.9**			6	
				5.9						C						**5.9**				
							SPARE			A			**SPARE**							
	7							100	3	B	100	3							8	
										C										
							SPARE			A			**SPARE**							
	9							100	3	B	100	3							10	
										C										

PHASE BALANCE			LOAD TYPE	CONNECTED	DEMAND	DEMAND FORMULA	TOTAL LOAD	
			LIGHTING	0.0 KVA	0.0 KVA	LOAD X 125% NEC 210.19 CONTINUOUS	CONNECTED	DEMAND
Ø	LOAD	%	RECEPTACLE	0.0 KVA	0.0 KVA	10KVA + 50% REMAINDER NEC 220.44	70.9 KVA	56.8KVA
A	18.9 KVA	33%	HVAC	70.6 KVA	56.5 KVA	LOAD X 80% (USED MCA IN CALCULATION)	196.8A	157.6A
B	18.9 KVA	33%	MISC	0.3 KVA	0.3 KVA	LOAD X 100% NEC 210.19 NON-CONT.	FILENAME:	
C	18.9 KVA	33%	NP	0.0 KVA	0.0 KVA	0 NONCOINCIDENTAL LOADS NEC 220.60	2605608 LOAD.xlsm	

NOTES:
EXISTING PANEL TO REMAIN.
NEW BREAKERS SHALL MATCH EXISTING MANUFACTURER, MODEL AND AIC RATING.

MOUNT: SURFACE | 120/208 | 3-PHASE, 4W | PANEL MP | CAPACITY: 200A | INT CAP: EXISTING
LOCATION: BACK OF BLDG. | LUGS: MLO | DEMAND LOAD: 30A | AV. FAULT: EXISTING

NOTES	CKT	LTG	REC	HVAC	MISC	NP	DESCRIPTION	AMP	POLE	Ø	AMP	POLE	DESCRIPTION	LTG	REC	HVAC	MISC	NP	CKT	NOTES
GL	1	**0.5**					**DAY LIGHTING (A)**	20	1	A	20	1	**SPARE**						2	
GM	3	**0.7**					**SHOWROOM LTG. (A)**	20	1	B	20	1	**LIGHTING/EXHUAST**	**0.5**	**0.2**				4	**GK**
GN	5	**0.8**					**SHOWROOM LTG. (A)**	20	1	C	20	1	**LED SIGN BUILDING**	**1.2**					6	**LO**
GO	7	**1.3**					**LIGHTING (B & C)**	20	1	A	20	1	**SPARE**						8	
GP	9	**0.9**					**LIGHTING (D)**	20	1	B	20	1	**SPARE**						10	
GQ	11	**1.0**					**LIGHTING (D & E)**	20	1	C		1	PROVISION						12	
GR	13	**1.2**					**LIGHTING (E & F)**	20	1	A	20	1	**SPARE**						14	
	15						**SPARE**	20	1	B	20	1	**SPARE**						16	
	17	**0.3**					**WALL PACKS**	20	1	C	20	1	**SPARE**						18	
	19						**SPARE**	20	1	A	20	1	**SPARE**						20	
	21						**SPARE**	20	1	B	20	1	**SPARE**						22	
	23						**SPARE**	20	1	C	20	1	**SPARE**						24	
	25						**SPARE**	30	2	A	20	1	**SPARE**						26	
	27									B		1	PROVISION						28	
	29						**SPARE**	40	2	C		1	PROVISION						30	
	31									A		1	PROVISION						32	
	33						PROVISION		1	B		1	PROVISION						34	
	35						PROVISION		1	C		1	PROVISION						36	
	37						PROVISION		1	A		1	PROVISION						38	
	39						PROVISION		1	B		1	PROVISION						40	
	41						PROVISION		1	C		1	PROVISION						42	

PHASE BALANCE			LOAD TYPE	CONNECTED	DEMAND	DEMAND FORMULA	TOTAL LOAD	
			LIGHTING	8.4 KVA	10.5 KVA	LOAD X 125% NEC 210.19 CONTINUOUS	CONNECTED	DEMAND
Ø	LOAD	%	RECEPTACLE	0.2 KVA	0.2 KVA	10KVA + 50% REMAINDER NEC 220.44	8.6 KVA	10.7KVA
A	3.8 KVA	35%	HVAC	0.0 KVA	0.0 KVA	LOAD X 80% (USED MCA IN CALCULATION)	23.9A	29.7A
B	2.8 KVA	26%	MISC	0.0 KVA	0.0 KVA	LOAD X 100% NEC 210.19 NON-CONT.	FILENAME:	
C	4.1 KVA	39%	NP	0.0 KVA	0.0 KVA	0 NONCOINCIDENTAL LOADS NEC 220.60	2605608 LOAD.xlsm	

NOTES:
EXISTING PANEL 'LA' RENAMED.
NEW BREAKERS SHALL MATCH EXISTING MANUFACTURER, MODEL AND AIC RATING.
PANEL EQUIPPED WITH ISOLATED GROUND BAR AND FEED THRU LUGS.
"LO" PROVIDE SIEMENS #ECPLD1, LOCKABLE CLIPS.
"GX" CIRCUITS THAT ARE ASSOCIATED WITH GENERATOR TRANSFER SWITCH. SEE TRANSFER SWITCH SCHEDULE FOR MORE INFORMATION.

MOUNT: SURFACE | 120/208 | 3-PHASE, 4W | PANEL PLP | CAPACITY: 200A | INT CAP: EXISTING
LOCATION: BACK OF BLDG. | LUGS: MLO | DEMAND LOAD: 62A | AV. FAULT: EXISTING

NOTES	CKT	LTG	REC	HVAC	MISC	NP	DESCRIPTION	AMP	POLE		AMP	POLE	DESCRIPTION	LTG	REC	HVAC	MISC	NP	CKT	NOTES
A	1		**1.7**				**LATHE**	20	1	A	20	1	**CHECK-IN REC.**		**0.5**				2	**IG**
A	3		**1.7**				**CUTOFF SAW**	20	1	B	20	1	**BATTERY RACK REC.**		**0.2**				4	**A**
A	5		**1.8**				**CRIMPER**	20	1	C	20	1	**BATTERY RACK REC.**		**0.2**				6	**A**
	7		**0.5**				**RECEPTACLES**	20	1	A	20	1	**BREAK AREA RECS.**		**1.0**				8	
A	9		**1.7**				**STARTER/ALT**	20	1	B	20	1	**BREAK AREA RECS.**		**0.4**				10	
A	11		**1.7**				**STARTER/ALT**	20	1	C	20	1	**RTU RECS.**		**0.5**				12	
A	13		**1.7**				**STARTER/ALT**	20	1	A	20	1	**OFFICE RECS**		**0.7**				14	
	15		**0.4**				**RECEPTACLES**	20	1	B	20	1	**COKE MACHINE**		**1.8**				16	**B**
GD	17		**0.7**				**ISOLATED GRD.**	20	1	C	20	1	**ISOLATED GRD.**		**0.4**				18	
GE	19		**0.9**				**INSTALLER**	20	1	A	20	1	**ISOLATED GRD.**		**0.4**				20	
A/IG	21		**3.0**				**BATTERY BACKUP**	30	1	B	20	1	**ISOLATED GRD.**		**0.4**				22	
	23		**0.4**				**ISOLATED GRD. REC**	20	1	C	**20**	**1**	**ISOLATED GRD.**		**0.4**				24	**GB**
	25		**1.0**				**SALES RECS**	20	1	A	**20**	**1**	**ISOLATED GRD.**		**0.4**				26	
LO	27				**0.3**		**FIRE ALARM (IF REQ'D)**	20	1	B	20	1	**ISOLATED GRD.**		**0.4**				28	
LO	29		**2.5**				**WH 1**	**30**	**1**	C	20	1	**ISOLATED GRD.**		**0.4**				30	**GA**
	31		**0.4**				**RECEPTACLES**	20	1	A	20	1	**PHONE EQ./SECURITY**		**0.9**				32	**GC**
LO	33			1.2			UNIT HEATER	20	1	B	20	1	**PRINTER REC.**		**0.5**				34	**GF**
B	35		**0.9**				**WATER COOLER**	20	1	C	20	1	**SPARE**						36	
	37		**0.7**				**SHOW WINDOW**	20	1	A	20	1	**SPARE**						38	
GG	39		**0.6**				**DATA CONCENTRATOR**	20	1	B		1	PROVISION						40	
	41						PROVISION		1	C		1	PROVISION						42	

PHASE BALANCE			LOAD TYPE	CONNECTED	DEMAND	DEMAND FORMULA	TOTAL LOAD	
			LIGHTING	0.0 KVA	0.0 KVA	LOAD X 125% NEC 210.19 CONTINUOUS	CONNECTED	DEMAND
Ø	LOAD	%	RECEPTACLE	31.8 KVA	20.9 KVA	10KVA + 50% REMAINDER NEC 220.44	33.3 KVA	22.2KVA
A	10.4 KVA	32%	HVAC	1.2 KVA	1.0 KVA	LOAD X 80% (USED MCA IN CALCULATION)	92.4A	61.5A
B	11.8 KVA	37%	MISC	0.3 KVA	0.3 KVA	LOAD X 100% NEC 210.19 NON-CONT.	FILENAME:	
C	9.9 KVA	31%	NP	0.0 KVA	0.0 KVA	0 NONCOINCIDENTAL LOADS NEC 220.60	2605608 LOAD.xlsm	

NOTES:
EXISTING PANEL 'LB' RENAMED.
NEW BREAKERS SHALL MATCH EXISTING MANUFACTURER, MODEL AND AIC RATING.
PANEL EQUIPPED WITH ISOLATED GROUND BAR.
"A" USE #10 WIRE.
"LO" PROVIDE SIEMENS #ECPLD1, LOCKABLE CLIPS.
"GX" CIRCUITS THAT ARE ASSOCIATED WITH GENERATOR TRANSFER SWITCH.
"IG" ISOLATED GROUND.
"B" PROVIDE SIEMENS #BF120AH, GFCI CIRCUIT BREAKER.

EQUIPMENT SCHEDULE

FILE: 2605608 LOAD.xlsm

PLAN MARK	EQUIPMENT SERVED	LOAD	VOLT/ PHASE	FED BY	DISC BY	MCA	MOCPD	FEEDER	REMARKS
RTU 2	ROOF TOP UNIT	17.65KVA	208/3	MDP	EC	49.0A	60A	(3)#4,#8G 1"C	PROVIDE 60A, NF, 3P DISCONNECT AT UNIT
RTU 3	ROOF TOP UNIT	17.65KVA	208/3	MDP	EC	49.0A	60A	(3)#4,#8G 1"C	PROVIDE 60A, NF, 3P DISCONNECT AT UNIT
RTU 5	ROOF TOP UNIT	17.65KVA	208/3	MDP	EC	49.0A	60A	(3)#4,#8G 1"C	PROVIDE 60A, NF, 3P DISCONNECT AT UNIT
RTU 6	ROOF TOP UNIT	17.65KVA	208/3	MDP	EC	49.0A	60A	(3)#4,#8G 1"C	PROVIDE 60A, NF, 3P DISCONNECT AT UNIT
WH 1	WATER HEATER	2.50KVA	120/1	PLP	EC	20.8A	30A	(2)#10,#10G 1/2"C	PROVIDE 30A, NF, 2P DISCONNECT AT UNIT
EF 1	EXHAUST FAN	0.19KVA	120/1	MP	MC	1.6A	20A	(2)#12,#12G 1/2"C	DISCONNECT FURNISHED W/ UNIT
EF 2	EXHAUST FAN	0.19KVA	120/1	MP	MC	1.6A	20A	(2)#12,#12G 1/2"C	DISCONNECT FURNISHED W/ UNIT

MOUNT: SURFACE | 120/208 | 3-PHASE, 4W | PANEL LOAD | CAPACITY: 800A | INT CAP: EXISTING
LOCATION: BACK OF BLDG. | LUGS: MLO | DEMAND LOAD: 249A | AV. FAULT: EXISTING

CKT	LTG	REC	HVAC	MISC	NP	DESCRIPTION	AMP	POLE	Ø	AMP	POLE	DESCRIPTION	LTG	REC	HVAC	MISC	NP	CKT
1	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	PANEL LC			A			PANEL LA RENAMED MP	**3.0**	**0.0**	**0.0**	**0.0**	**0.0**	2
3	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**				B				**2.1**	**0.2**	**0.0**	**0.0**	**0.0**	4
5	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**				C				**3.3**	**0.0**	**0.0**	**0.0**	**0.0**	6
7	**0.0**	**10.8**	**0.0**	**0.0**	**0.0**	PANEL LB RENAMED PLP			A			DISTRIBUTION SECTION (PANEL MD)	**0.0**	**0.0**	**23.5**	**0.1**	**0.0**	8
9	**0.0**	**11.1**	**1.2**	**0.3**	**0.0**				B				**0.0**	**0.0**	**23.5**	**0.1**	**0.0**	10
11	**0.0**	**9.9**	**0.0**	**0.0**	**0.0**				C				**0.0**	**0.0**	**23.5**	**0.1**	**0.0**	12

PHASE BALANCE			LOAD TYPE	CONNECTED	DEMAND	DEMAND FORMULA	TOTAL LOAD	
			LIGHTING	8.4 KVA	10.5 KVA	LOAD X 125% NEC 210.19 CONTINUOUS	CONNECTED	DEMAND
Ø	LOAD	%	RECEPTACLE	32.0 KVA	21.0 KVA	10KVA + 50% REMAINDER NEC 220.44	112.8 KVA	89.5KVA
A	33.1 KVA	33%	HVAC	71.8 KVA	57.4 KVA	LOAD X 80% (USED MCA IN CALCULATION)	313.1A	248.6A
B	33.5 KVA	34%	MISC	0.6 KVA	0.6 KVA	LOAD X 100% NEC 210.19 NON-CONT.	FILENAME:	
C	33.0 KVA	33%	NP	0.0 KVA	0.0 KVA	0 NONCOINCIDENTAL LOADS NEC 220.60	2605608 LOAD.xlsm	

NOTES:
THIS IS FOR REFERENCE ONLY TO SHOW OVERALL LOAD ON THE SYSTEM.

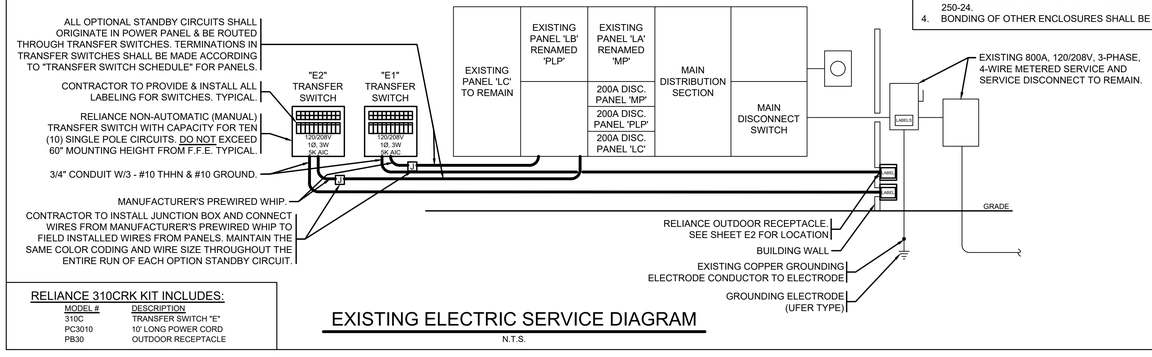
PORTABLE, PLUG-IN GENERATOR IS FOR NEC ARTICLE 702 OPTIONAL STANDBY LOADS FOR DISRUPTION OF BUSINESS ONLY.

NOTE: ALL ABOVE GRADE FEEDER CONDUIT SHALL BE IMC.

EXISTING PANEL 'LC' PANEL SCHEDULE NOT SHOWN. THIS PANEL SHALL CONTAIN ALL 'SPARE' CIRCUITS

CONTRACTOR SHALL VERIFY VOLTAGE & AVAILABLE FAULT CURRENT FROM UTILITY CO.
IF FAULT CURRENT EXCEEDS RATINGS OR VOLTAGE IS OTHER THAN INDICATED, NOTIFY ENGINEER OF ACTUAL INFORMATION IMMEDIATELY UPON COMMENCEMENT OF WORK.

NOTE:
1. BOND ALL NONCURRENT CARRYING METAL PARTS OF SERVICE EQUIPMENT (INCLUDING METER ENCLOSURE) TO GROUNDING ELECTRODE AS REQUIRED PER NEC 250-92.
2. ALL ELECTRIC SERVICE EQUIPMENT, PANELBOARDS, CIRCUIT BREAKERS, & FUSED SWITCHES SHALL HAVE A MINIMUM 22K AIC INTERRUPTING RATING.
3. THE GROUNDED NEUTRAL CONDUCTOR SHALL BE RUN TO & BONDED TO EACH SERVICE DISCONNECTING MEANS ENCLOSURE N ACCORDANCE WITH NEC 250-24.
4. BONDING OF OTHER ENCLOSURES SHALL BE IN ACCORDANCE WITH NEC 250-96.



EXISTING ELECTRIC SERVICE DIAGRAM
N.T.S.

RELIANCE 310CRK KIT INCLUDES:

MODEL #	DESCRIPTION
310C	TRANSFER SWITCH "E"
PC3010	10' LONG POWER CORD
PB30	OUTDOOR RECEPTACLE

E1 TRANSFER SWITCH SCHEDULE

POSITION	CKT. BKR.	LOAD DESCRIPTION	(KVA)	BREAKER
A	*20A/1P	OFFICE COMPUTER	0.36	PLP-30
B	*20A/1P	COUNTER RECEPTACLES	0.36	PLP-24
C	*20A/1P	TELEPHONE EQUIPMENT/SECURITY	0.90	PLP-32
D	*20A/1P	INSTALLER (ISOLATED GRD. RECEPTACLE)	0.90	PLP-17
E	*20A/1P	INSTALLER (REC)	0.36	PLP-19
F	*20A/1P	PRINTER	0.50	PLP-34
G	*20A/1P	DATA CONCENTRATOR	0.60	PLP-39
H	-	SPACE	0.00	
I	-	SPACE	0.00	
J	-	SPACE	0.00	
GENERATOR (6,000 WATTS) RATED. MAX KVA = 5.0 LOAD			3.98	TOTAL

E2 TRANSFER SWITCH SCHEDULE

POSITION	CKT. BKR.	LOAD DESCRIPTION	(KVA)	BREAKER
K	*20A/1P	LTG SECURITY/OFFICE/BATHROOMS (100% ON)	0.46	MP-4
L	*20A/1P	LIGHTING SHOWROOM (100% ON)	0.64	MP-1
M	*20A/1P	LIGHTING SHOWROOM (100% ON)	0.70	MP-3
N	*20A/1P	LIGHTING SHOWROOM (100% ON)	0.76	MP-5
O	*20A/1P	LIGHTING HARD PARTS (DIMMED TO 50% ON)	0.66	MP-7
P	*20A/1P	LIGHTING HARD PARTS (DIMMED TO 50% ON)	0.46	MP-9
Q	*20A/1P	LIGHTING HARD PARTS (DIMMED TO 50% ON)	0.51	MP-11
R	*20A/1P	LIGHTING HARD PARTS (DIMMED TO 50% ON)	0.62	MP-13
S	-	SPACE	0.00	
T	-	SPACE	0.00	
GENERATOR (6,000 WATTS) RATED. MAX KVA = 5.0 LOAD			4.81	TOTAL

EQUIPMENT LABELS CHART

SEE ELECTRICAL SERVICE DIAGRAM.

EQUIPMENT	LABELS: SERVICE DISCONNECT	OPTIONAL STANDBY SOURCE	SERIES RATING	GENERATOR POWER INLET	AVAILABLE FAULT CURRENT
MP					X
PLP					X
E					
GENERATOR POWER INLET				X	
CT CABINET					X

GENERATOR POWER INLET LABEL

PERMANENT LABEL SHALL BE 2 x 3 IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. LABEL TO BE PLACED 6 INCHES ABOVE GENERATOR RECEPTACLE.

WARNING:

FOR CONNECTION OF A NONSEPARATELY DERIVED (FLOATING NEUTRAL) SYSTEM ONLY (MAX. 6,000 WATT GENERATOR)

EXAMPLE OF LABELING ABOVE.

OPTIONAL STANDBY SOURCE LABEL

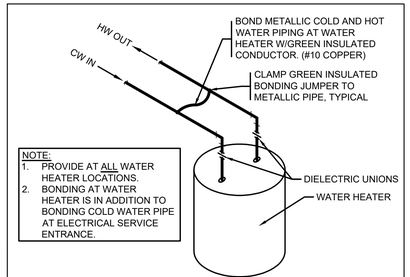
PERMANENT LABEL SHALL BE 2 x 3 IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. LABEL TO BE PLACED ON DISCONNECT DOOR.

CAUTION

TWO SOURCES OF SUPPLY

STANDBY POWER SOURCE: PORTABLE 6kw GENERATOR
LOCATION: OVERHEAD DOOR.

EXAMPLE OF OPTIONAL STANDBY SOURCE LABELING ABOVE.



METALLIC WATER PIPE BONDING (4/E3)
N.T.S.

NOTE:
1. BOND ALL NONCURRENT CARRYING METAL PARTS OF SERVICE EQUIPMENT (INCLUDING METER ENCLOSURE) TO GROUNDING ELECTRODE AS REQUIRED. PER NEC 250-92.
2. THE GROUNDED NEUTRAL CONDUCTOR SHALL BE RUN TO AND BONDED TO EACH SERVICE DISCONNECTING MEANS ENCLOSURE IN ACCORDANCE WITH NEC 250-24c.
3. BONDING OF OTHER ENCLOSURES SHALL BE IN ACCORDANCE WITH NEC 250-96.

SERVICE EQUIPMENT GROUNDING & BONDING SHALL BE IN ACCORDANCE WITH:
•NEC 250-24 •NEC 250-28 •NEC 250-53 •NEC 250-66
•NEC 250-90 •NEC 250-92 •NEC 250-130

BONDING REQUIREMENTS (3/E3)
N.T.S.

WIRING & LABELING OF EXIT & EMERGENCY LIGHT CIRCUITS

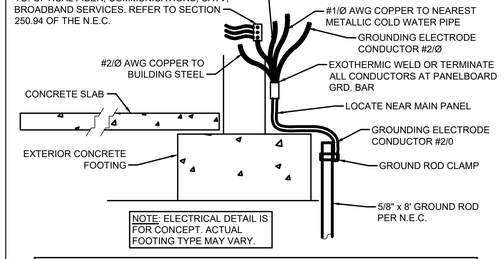
1. SEE DETAIL 1/E1 FOR WIRING OF EXIT & EMERGENCY LIGHTS ON THESE CIRCUITS.
2. ALL EXIT & EMERGENCY LIGHTING CIRCUITS SHALL BE LABELED BY THE CONTRACTOR ON THE "PANEL DIRECTORY". (SPEC: NFPA 70 408.4 & 700.12)

SERVICE DISCONNECT LABEL

THE SERVICE DISCONNECTING MEANS SHALL BE PROPERLY MARKED "SERVICE DISCONNECT". REFER TO SPEC SECTION 26_00_20 FOR FURTHER IDENTIFICATION PLATE REQUIREMENTS.

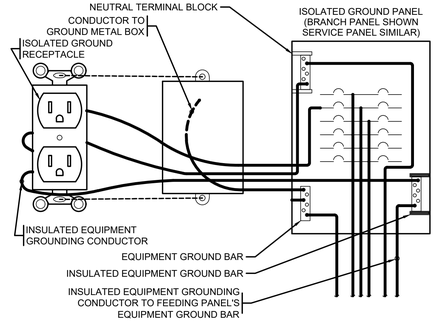
#6 AWG SHALL TERMINATE IN A LISTED INTERSYSTEM BONDING TERMINATION EQUAL TO "ERICO IBTB" WITH A MINIMUM OF THREE(3) TERMINATIONS FOR GROUNDING OTHER BUILDING SYSTEMS INCLUDING BUT NOT LIMITED TO: OPTICAL FIBER, COMMUNICATIONS, CATV, BROADBAND SERVICES. REFER TO SECTION 250.94 OF THE N.E.C.

#3 AWG. CU. BONDING JUMPER TO NEAREST METALLIC GAS PIPING PER NEC SECTION 250.104. E.C. SHALL VERIFY THAT GAS SUPPLIER'S EQUIPMENT PROVIDES ELECTRICAL ISOLATION BETWEEN BONDED AND UNDERGROUND SEGMENTS OF METAL GAS PIPING.



NOTE: GROUNDING ELECTRODE TEST
MEASURE AND RECORD GROUND RESISTANCE FROM SYSTEM NEUTRAL CONNECTION AT SERVICE ENTRANCE TO CONVENIENT GROUND REFERENCE POINT USING SUITABLE GROUND TESTING EQUIPMENT. MAXIMUM ACCEPTABLE RESISTANCE: 25 OHMS. WHEN RESISTANCE EXCEEDS 25 OHMS DRIVE AND BOND (#6 COPPER MINIMUM) ANOTHER GROUND ROD, ONE GROUND ROD LENGTH AWAY (MINIMUM 6'-0") AND REPEAT TEST.

GROUNDING ELECTRODE & BONDING JUMPER(S) DETAIL (2/E3)
N.T.S.



TYPICAL ISOLATED GROUND RECEPTACLE (1/E3)
N.T.S.

Mark Kuhlman
No. 39298
REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS
08/20/2026
Mark Kuhlman
License #59298
Exp. Date: 06/30/28
Professional of Record

CASCO
12 Summit Drive, Suite 100,
St. Louis, MO 63143
T: 314.821.1100

SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

ELECTRICAL SCHEDULES

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

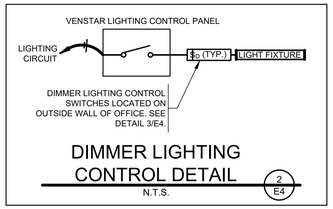
DRAWN BY: BJG | CHECKED BY: MHK
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: E3

GENERAL ELECTRIC NOTES

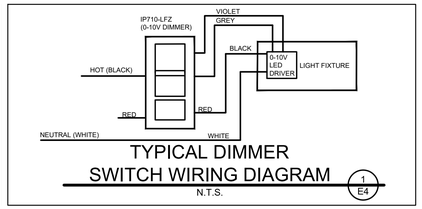
1. DRAWINGS ARE DIAGRAMMATIC & ARE NOT TO BE SCALED. SEE THE ARCHITECTURAL PLANS & FIELD VERIFY CONDITIONS FOR DIMENSIONS.
2. ALL ELECTRICAL WORK SHALL COMPLY WITH THE EDITION OF NFPA 70-NATIONAL ELECTRIC CODE (NEC) AS NOTED ON THE COVER SHEET.
3. ALL WIRING SHALL BE IN CONDUIT, EXCEPT THAT MC-CABLE MAY BE SUBSTITUTED ONLY AS FOLLOWS:
   - 3.1. MC-CABLE (MAXIMUM CABLE LENGTH OF 10'-0") MAY BE INSTALLED ONLY FOR BRANCH CIRCUIT WIRING TO LIGHT FIXTURES.
   - 3.2. MC-CABLE (MAXIMUM CABLE LENGTHS SHOWN ON DETAIL 2/E2) MAY BE INSTALLED ONLY ABOVE SLAB AND ONLY AT LOCATIONS INDICATED ON E2 SHEET.
4. FEEDER CONDUIT SHALL BE IMC OR RGS ABOVE GRADE & PVC BELOW GRADE WITH IMC OR RGS ELLS & RISERS. INTERIOR BRANCH CIRCUIT CONDUIT SHALL BE ELECTRICAL METALLIC TUBING. EXTERIOR BRANCH CIRCUIT CONDUIT SHALL BE PVC BELOW GRADE WITH IMC OR RIGID GALVANIZED STEEL CONDUIT CONTINUING ABOVE GRADE. (SPEC 26 05 33)
5. COORDINATE ALL WORK WITH OTHER TRADES TO AVOID CONFLICTS. COORDINATION DOES NOT MEAN "I WAS HERE FIRST."
6. ALL WIRING IN FINISHED SPACES SHALL BE CONCEALED, UNLESS NOTED OTHERWISE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE & FUNCTIONAL SYSTEM IN ACCORDANCE WITH THE INTENT OF THE PLANS, WHETHER OR NOT EVERY ELEMENT THEREOF IS SPECIFICALLY CALLED OUT.
8. COORDINATE ALL EQUIPMENT ROUGH-IN CONNECTION REQUIREMENTS.
9. ALL OUTLET BOXES SHALL BE METALLIC. (SPEC 26 05 34)
10. ALL CAULKING ON BUILDING PENETRATIONS SHALL BE ELASTOMERIC POLYURETHANE (NO EXCEPTIONS), EQUAL TO "VULKEM" 116. ANY CONTRACTOR WHO USES SILICONE OR ANY OTHER CAULKING WILL BE REQUIRED TO REMOVE & REPLACE WITH ELASTOMERIC POLYURETHANE.
11. RECEPTACLES INSTALLED IN RESTROOMS SHALL BE GFCI TYPE OR SHALL BE PROTECTED BY A GFI DEVICE.
12. ALL DEVICES SHALL BE IVORY & SHALL BE EQUAL TO THE FOLLOWING:
    SINGLE POLE SWITCHES --
    THREE-WAY SWITCHES --
    DUPLEX RECEPTACLE -- (SPEC 26 27 26)
    GFCI DUPLEX RECEPTACLE --
    ISO. GRD. RECEPTACLES --
13. USE DEVICE PLATES MANUFACTURED BY THE DEVICE MANUFACTURER. (SPEC 26 27 26)
14. FEEDER & BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER, STRANDED, 600V THHN/THWN INSULATION. EXCEPTION: WIRE SIZES #10 AWG & SMALLER SHALL BE SOLID. (SPEC 26 05 19)
15. CONTRACTOR SHALL PROVIDE A TYPED CIRCUIT DIRECTORY FOR ALL PANELS. (SPEC 26 05 53)
16. CONTRACTOR SHALL PROVIDE A ONE(1) YEAR WARRANTY ON ALL WORK PERFORMED.
17. CONTRACTOR SHALL PROVIDE NEW WORKING LAMPS IN ALL LIGHT FIXTURES AT JOB COMPLETION.
18. CONTRACTOR SHALL COORDINATE WITH & SHALL INCLUDE ALL FEES FOR THE SERVING "ELECTRIC UTILITY CO." TO PROVIDE ELECTRIC SERVICE AS SHOWN. CONTRACTOR SHALL ALSO INCLUDE ALL FEES FOR THE "SERVING PHONE COMPANY" TO INSTALL NO LESS THAN 10 PAIR CABLE TO BUILDING.
19. CONTRACTOR SHALL ARRANGE FOR & INCLUDE ALL PERMITS & FEES FOR HIS SCOPE OF WORK.
20. CONTROL WIRING BY HVAC CONTRACTOR. FINAL CONNECTIONS BY HVAC CONTRACTOR. SEE SHEET M1.
21. APPROVED MANUFACTURERS:
22. PANELBOARDS & SAFETY SWITCHES (DISCONNECTS):
    - --'SQUARE D'
    - --'G.E'
    - --'SEIMENS'
    - --'CUTLER-HAMMER' (SPEC 26 24 00)

    V1. DEVICES:
    - -- 'HUBBELL'
    - -- 'LEVITON'
    - -- 'PASS & SEYMOUR' (SPEC 26 27 26)

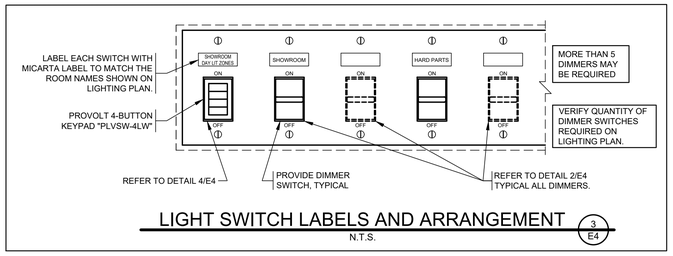
    V2. FLOOR BOXES:
    - -- 'STEEL CITY'
    - -- 'APPLETON'
    - -- 'HUBBELL' (SPEC 26 05 34)
23. MULTIWIRE BRANCH CIRCUITS WITH A "SHARED NEUTRAL" ARE NOT ALLOWED FOR SINGLE PHASE CIRCUITS.
24. ALL BRANCH CIRCUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR ROUTED WITH THE CIRCUIT CONDUCTORS. THIS MEANS THAT ALL CONDUITS MUST HAVE A "GREEN" WIRE INSTALLED IN THEM AND SIZED IN ACCORDANCE WITH TABLE 250.122 OF THE NEC.



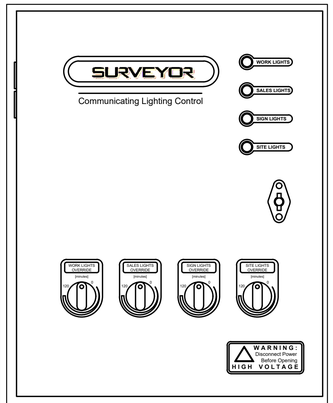
DIMMER LIGHTING CONTROL DETAIL 2/E4
N.T.S.



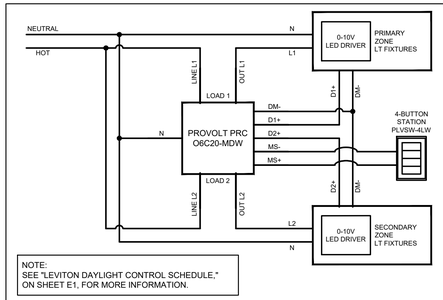
TYPICAL DIMMER SWITCH WIRING DIAGRAM 1/E4
N.T.S.



LIGHT SWITCH LABELS AND ARRANGEMENT 3/E4
N.T.S.



ENLARGED VIEW OF LCP



NOTE:
SEE "LEVITON DAYLIGHT CONTROL SCHEDULE," ON SHEET E1, FOR MORE INFORMATION.

DAYLIGHT CONTROL WIRING DIAGRAM DETAIL 4/E4
N.T.S.

ELECTRICAL SYMBOL LEGEND & ABBREVIATIONS

$	SINGLE POLE SWITCH
$2	TWO POLE SWITCH
$3	THREE-WAY SWITCH
$MP	MOTOR STARTING SWITCH WITH PILOT LIGHT
$X	CLASS 1, DIVISION 1 HAZARDOUS LOCATION RATED SWITCH ASSEMBLY
$PW	WALL MOUNTED OCCUPANCY SENSOR EQUAL TO "PASS & SEYMOUR, PW-301-W"
$PW2	WALL MOUNTED OCCUPANCY SENSOR EQUAL TO "PASS & SEYMOUR, PW-302-W" CONTRACTOR SHALL DISABLE MANUAL SWITCHES PER MANUFACTURERS INSTRUCTIONS. SWITCH SHALL BE FULLY AUTOMATIC.
$SS	FAN SPEED SWITCH (SUPPLIED BY HVAC CONTRACTOR / INSTALLED BY ELECTRICAL CONTRACTOR)
	SINGLE RECEPTACLE
	DUPLEX RECEPTACLE
	ISOLATED GROUND DUPLEX RECEPTACLE. DEVICES AND COVERPLATE SHALL BE ORANGE. SEE DETAIL 1/E3
R	DUPLEX RECEPTACLE. DEVICES AND COVERPLATE SHALL BE RED
IR	ISOLATED GROUND DUPLEX RECEPTACLE. DEVICES AND COVERPLATE SHALL BE RED
	QUADPLEX RECEPTACLE (TWO DUPLEX RECEPTACLES IN ONE 2-GANG BOX UNDER A SINGLE COVERPLATE)
	EXISTING UNPOWERED DUPLEX RECEPTACLE
IR	ISOLATED GROUND QUADPLEX RECEPTACLE (TWO ISO. GRD. DUPLEX RECEPTACLES IN ONE 2-GANG BOX UNDER A SINGLE COVERPLATE. DEVICES AND COVERPLATE SHALL BE RED
S	QUADPLEX RECEPTACLE (CIRCUIT TO BE WIRED THRU OCCUPANCY SENSOR) INSTALL A PERMANENT LABEL ON EACH OUTLET STATING "SENSOR CONTROLLED OUTLET". SEE DETAIL ON SHEET E2
GFCI	GFCI (GROUND FAULT CIRCUIT INTERRUPTING) DUPLEX RECEPTACLE
AC	ABOVE COUNTER GFCI (GROUND FAULT CIRCUIT INTERRUPTING) DUPLEX RECEPTACLE
WP	WEATHER PROOF GFCI (GROUND FAULT CIRCUIT INTERRUPTING) DUPLEX RECEPTACLE. COVER TO PROVIDE WEATHER PROOF PROTECTION WITH CORD AND PLUG IN USE.
	TELE-POWER POLE
J	JUNCTION BOX
PC	REMOTE PHOTO CONTROL
	COMPUTER DATA OUTLET BOX
	TELEPHONE OUTLET BOX
	4" SQUARE STEEL BOX MOUNTED FLUSH ON FLOOR W/QUADPLEX RECEPTACLE (SEE ABOVE RECEPTACLE DESCRIPTION). SEE DETAIL 4/E2 FOR INSTALLATION OF BOX
	4" SQUARE STEEL BOX MOUNTED FLUSH ON FLOOR W/QUADPLEX ISOLATED GROUND RECEPTACLE (SEE ABOVE ISOLATED GROUND RECEPTACLE DESCRIPTION). SEE DETAIL 4/E2 FOR INSTALLATION OF BOX
IR	4" SQUARE STEEL BOX MOUNTED FLUSH ON FLOOR W/QUADPLEX ISOLATED GROUND RECEPTACLE (SEE ABOVE ISOLATED GROUND RECEPTACLE DESCRIPTION). SEE DETAIL 4/E2 FOR INSTALLATION OF BOX. DEVICES AND COVERPLATE SHALL BE RED.
	2" x 4" RECTANGULAR STEEL BOX MOUNTED FLUSH ON FLOOR W/DUPLEX RECEPTACLE (SEE ABOVE RECEPTACLE DESCRIPTION). SEE DETAIL 4/E2 FOR INSTALLATION OF BOX
	NEMA L5-30R - SPECIAL RECEPTACLE. SEE PLANS TO VERIFY CONFIGURATION.
	MOTOR
XX/XX	FUSED DISCONNECT (SAFETY) SWITCH W/ SWITCH AMPACITY / FUSE AMPACITY AS INDICATED
	NON-FUSED DISCONNECT (SAFETY) SWITCH
	POWER OR LIGHTING PANEL W/PANEL DESIGNATION SHOWN ON PLAN (SIZES & MOUNTING INDICATED ON PLANS)
	24 HOUR EGRESS & SECURITY LIGHT, WIRE DIRECT TO ELECTRIC PANEL AHEAD OF ANY LOCAL SWITCHES AND LIGHTING CONTROL PANEL
XR	WALL/CEILING MOUNTED COMBINATION "EXIT/EMERGENCY" SIGN W/SHADING INDICATING FACES
EM	EMERGENCY LIGHTING FIXTURE WITH BATTERY
PLP-11,13	FEEDING PANEL AND CIRCUIT NUMBER(S) NOTE: EQUIPMENT GROUND CONDUCTOR NOT SHOWN CIRCUIT CONDUCTORS GROUNDED CIRCUIT CONDUCTOR (OR NEUTRAL)
OS	OCCUPANCY SENSOR PROVIDED BY ELECTRICAL GEAR SUPPLIER - REFER TO VS SHEETS
RO	ROOM OCCUPANCY SENSOR EQUAL TO "PASS & SEYMOUR, DT-305" WITH POWER PACK EQUAL TO "PASS & SEYMOUR, B-50"

AC	LOCATED ABOVE COUNTER	RTU	PACKAGED ROOFTOP UNIT	UPO	UN-POWERED OUTLET
AFF	ABOVE FINISHED FLOOR	IMC	INTERMEDIATE METALLIC TUBING	TS	TIME SWITCH
BCU	BLOWER COIL UNIT	LC	LIGHTING CONTRACTOR	W	WALL OUTLET (46" AFF SEE MOUNTING HEIGHTS)
CDU	CONDENSING UNIT	M	MOTOR STARTING		
EF	EXHAUST FAN	R	RED IN COLOR DEVICES & COVERPLATE	WP	WEATHERPROOF (ENCLOSURE)
EFU	ELECTRIC FURNACE			X	EXPLOSION PROOF ASSEMBLY
FURN	GAS FURNACE	MP	MOTOR STARTING W/PILOT LIGHT	GFCI	GRD./FAULT CIRCUIT INTERRUPT
AHU	AIR HANDLER	NL	NIGHT LIGHT	EMT	ELECTRICAL METALLIC TUBING
HP	HEAT PUMP UNIT	PEC	PHOTOELECTRIC CONTROL	CM	CEILING MOUNTED
PP	POWER PACK	RGS	RIGID GALVANIZED STEEL		

COMMONWEALTH OF MASSACHUSETTS
MARK KUHLMAN
No. 59258
REGISTERED PROFESSIONAL ENGINEER
08/20/2026
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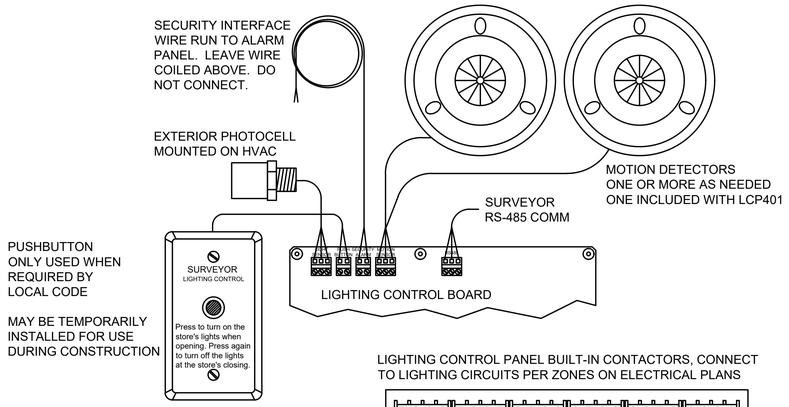
PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

ELECTRICAL NOTES

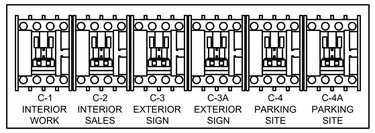
O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
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DRAWN BY: BJG
CHECKED BY: MHK
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: E4



LIGHTING CONTROL PANEL BUILT-IN CONTACTORS, CONNECT TO LIGHTING CIRCUITS PER ZONES ON ELECTRICAL PLANS

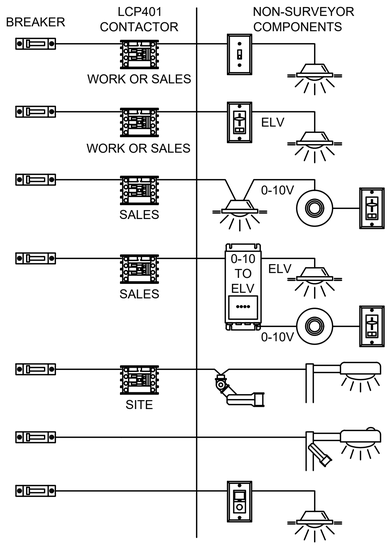


LOGIC WHEN PUSHBUTTON IS USED:

OPEN - SALES AND WORK LIGHTS STAY ON REGARDLESS OF MOTION. SIGN AND SITE LIGHTS TURN ON AS NECESSARY BASED ON OUTSIDE LIGHT LEVEL.

CLOSED - WORK LIGHTS COME ON WITH MOTION. SITE LIGHTS COME ON WITH MOTION IF IT IS ALSO DARK OUTSIDE. SALES AND SIGN LIGHTS REMAIN OFF, UNLESS TURNED ON WITH THE OVERRIDE TWIST TIMERS.

LIGHTING CONTROL



EXAMPLE CONFIGURATIONS AS REQUIRED

ZONE REQUIRING MANUAL OFF CONTROL USE INLINE TOGGLE SWITCH.

ZONE WITH MANUAL DIMMING REQUIREMENT USING ELV DIMMABLE FIXTURES.

DAYLIGHT HARVESTING ZONE USING 0-10V DIMMABLE FIXTURES, 0-10V PHOTOCELL/DAYLIGHT CONTROL AND OPTIONAL MANUAL DIMMING.

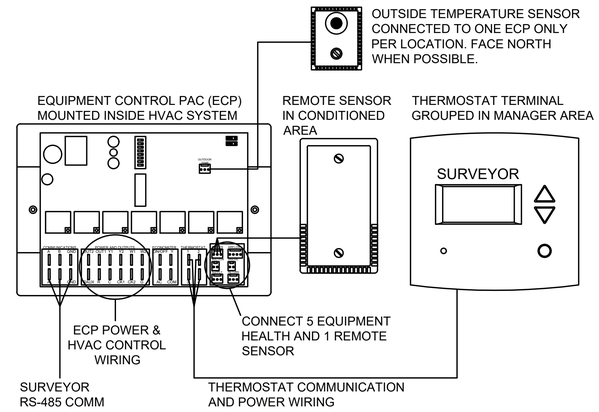
DAYLIGHT HARVESTING ZONE USING ELV DIMMABLE FIXTURES, 0-10V TO ELV DRIVER, 0-10V PHOTOCELL/DAYLIGHT CONTROL AND OPTIONAL MANUAL DIMMING.

OUTDOOR ZONE WITH MOTION SENSING. SURVEYOR CONTROLLING BASED ON LIGHT LEVEL.

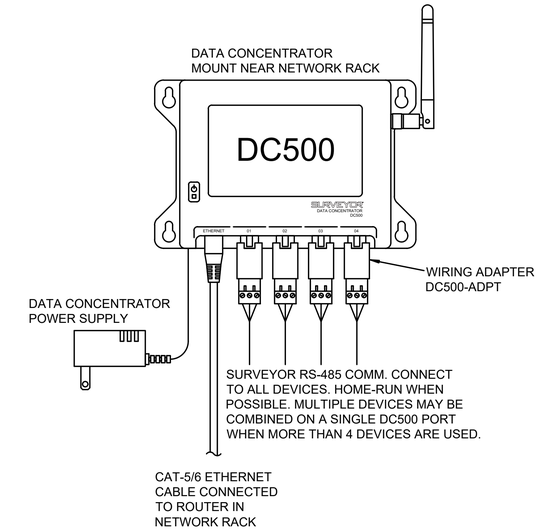
OUTDOOR ZONE WITH INTEGRATED PHOTOCELL AND MOTION IN FIXTURE. OPERATES INDEPENDENT OF SURVEYOR.

RESTROOM OR ENCLOSED OFFICE WITH OCCUPANCY SWITCH. OPERATES INDEPENDENT OF SURVEYOR.

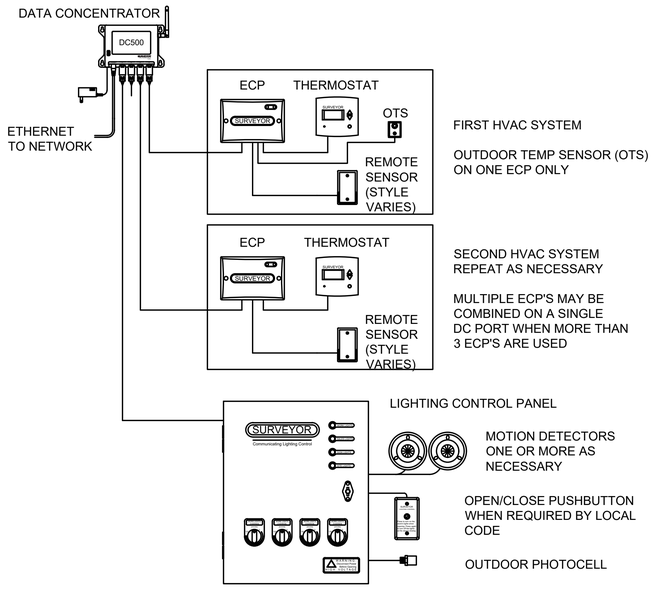
ADVANCED LIGHTING



HVAC CONTROLS



DATA CONCENTRATOR



BASIC LOW VOLTAGE WIRE RUNS

GENERAL NOTES

1. DRAWING FOR GENERAL INFORMATION ONLY.
2. LOCAL BUILDING CODES TAKE PRECEDENCE OVER THIS DOCUMENT.
3. NOT ALL WIRING IS SHOWN ON THIS DRAWING. FOR CLARITY, ONLY ONE EXAMPLE OF EACH TYPE OF DEVICE IS SHOWN.
4. REFER TO THE SURVEYOR INSTALLATION INSTRUCTIONS FOR EACH COMPONENT FOR DETAILED WIRING AND ADDITIONAL CRITICAL INFORMATION.
5. CAUTION! INSTALLATION REQUIRES THE REMOVAL OF SAFETY COVERS AND EXPOSE THE INSTALLER TO HIGH VOLTAGE AND ELECTRICAL HAZARDS. USE OF A LICENSED ELECTRICIAN IS REQUIRED. FOLLOW ALL APPROPRIATE SAFETY PRECAUTIONS. ADDITIONAL SAFETY INFORMATION IS IN THE SURVEYOR INSTALLATION INSTRUCTIONS.

.	-	.
DC500		
DC500-ADPT	DATA CONCENTRATOR ADAPTER	
ECP400		

FOR SURVEYOR EMS TECHNICAL SUPPORT AND SYSTEM COMMISSIONING, PLEASE CONTACT:

SURVEYOR TECHNICAL SUPPORT
(818) 812-9812
MON-FRI 6:00 AM - 5:00 PM PACIFIC
surveyorsupport@venstar.com

VENSTAR INC.

TITLE

SURVEYOR

GENERAL INSTALLATION OVERVIEW

DESIGN BY OTHERS - FOR REFERENCE ONLY

Professional of Record

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12 Summit Drive, Suite 100,
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SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

EMS SHEETS

PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

DRAWN BY: BJG
CHECKED BY: DAT
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: VS1

General Notes

- The Venstar Surveyor Energy Management System is supplied by O'Reilly Auto Parts and installed by the contractor. Please note: Local building codes and building plans take precedence over this document.
- More details can be found on the VS1 and VS2 drawings, as well as the installation instructions included with each Surveyor hardware component.

Surveyor EMS Components

Description	Part #	Quantity
Data Concentrator	DC500	One per location
Lighting Control Panel	LCP401-R1	One per location
Outdoor Temp Sensor	OTS400	One per location
Equipment Control Pac	ECP400-R1	One per HVAC unit
Communicating Thermostat	CT414	One per HVAC unit
Sensor Pac	SP400	One per HVAC unit
Remote Sensor (Wall Mount)	RS410	One per HVAC unit
Additional Motion Detector (one included w LCP401)	MD400	Two total per location (typical)
Building Power Monitor	PM401	One per location
600 A Split CT		Three per location
Back Door Switch(es) – Rollup Door & Rear Man Door	SWP400	Two per location (typical)
Front Door Switch(es) – New Construction & Select Retrofits only	SWP400	One per location (typical)
Single Channel Input Module (Digital) - New Construction & Select Retrofits only	SCIM400D	One per location

Installing the Data Concentrator

Hardware Placement
- Connect to the "Low Side" router and plug into the first available port. (This is the same router as the store's training computer and/or the same router that the DM connects to when making store visits.)

Wiring Instructions
- Connect Cat 5 cable from Data Concentrator to the store router in the designated port
- Connect power supply to Data Concentrator

Hardware Configuration
- The Data Concentrator ships to the job site pre-programmed with network settings provided by O'Reilly. Additional hardware configuration is not typically required.

Installing the Equipment Control Pac, Communicating Thermostat, and sensors

Hardware Placement
- Mount an Equipment Control Pac (ECP) inside each HVAC unit
  - Label each ECP per O'Reilly terminology with exactly the same unique identifying "code" as shown on the "HVAC Plan" on sheet M1 (For example: RTU-1, RTU-2, etc... or FURN-1, FURN-2, etc..)
- Connect sensors from Sensor Pac
- Communicating Thermostat(s):
  - Mount the thermostats at a level permitting easy access near the manager's workstation, if possible
  - Label front of thermostat doors per O'Reilly terminology (HVAC 1, HVAC 2, etc.) to be consistent with labels on ECPs.
- Remote temperature sensors are to be mounted in an optimal position:
  - Use RS410 (wall-mount) sensor for Showroom's HVAC units and place it 7'-3" AFF (above finished floor)
  - Use RS410 (wall-mount) sensor for Hard Parts HVAC units and place it 5'-6" AFF (above finished floor)
  - The sensor should be placed in the zone it is controlling
  - Identify a location where the sensor does not have airflow interference from a supply vent. Given the choice, place closer to return air vent instead of supply air vent.

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SURVEYOR™ ENERGY MANAGEMENT SYSTEM

O'Reilly New Construction Statement of Work (SOW)

DO NOT:
  - Place the remote sensor on the decorative wall striping
  - Place the sensor in direct airflow stream between a supply and return grille (where supply air is pulled directly into return)
  - Place sensor where it receives direct heat from any piece of equipment
  - Place sensor where it will be impacted by any door opening
  - Place sensor near the windows where it will receive sun interference (radiant heat)
  - Place sensor where it will receive heat interference from the lighting
- Outside Temperature Sensor:
  - One per location, mount outside on roof, facing north
- Door Switches (delivery and rear man door), when applicable
  - One switch per door, normally closed, wired in series
  - Do not install rear door switch(es) for:
    - Stores with one HVAC unit
    - Stores that only receive deliveries through the front door

Wiring Instructions
- Connect ECP to HVAC terminal board
- Connect Communicating Thermostat to ECP
- Connect Sensor Pac sensors to ECP
- Connect Remote Sensor to ECP
- Connect door switches (loading and rear man door) to ECP that conditions the space near doors
- Connect the RS485 terminals of the ECP to the Data Concentrator
- All wiring shall be installed and terminated in accordance with the NEC as well as any applicable state and local regulations

Hardware Configuration
- Set ECP address dip switch for each unit
- Set ECP jumper for Heat Pump or Gas/Electric
- Set ECP jumper to O or B reversing valve (Heat Pump only)

Installing the Lighting Control Panel

Hardware Placement
- Surface mount the Lighting Control Panel (LCP) at a level as convenient and feasible to the existing breaker panel
  - It is permissible to recess the panel, if necessary
- Photocell for exterior lighting:
  - One per location
  - Mount outside on one of the HVAC units, pointing photocell to the north with no influence from shade or surroundings (trees, equipment, etc.) . Mount photocell above/below the outdoor temp sensor.
  - Connect photocell to LCP
- Motion Detectors for interior lighting:
  - Two per location typical, unless otherwise shown on MEP drawings.
  - Refer to MEP drawings for exact locations.
- Alarm Interface:
  - One per location, leave coiled above panel for connection by alarm company
- Push Button:
  - Temporary push button may be installed for use during construction.
  - Permanent push button will **not** be installed at O'Reilly Auto Parts stores except in rare cases when required by code.

Lighting Circuit Identification
- All lighting circuits shall be identified and classified into lighting zones
- Each lighting circuit shall be identified by breaker circuit number and assigned to a specific contactor number within the LCP

Lighting Zone Configuration

The following describes the lighting zones controlled by Surveyor:
- Interior Lighting (Work) - Work and stock areas, excluding nighttime delivery and emergency lights
- Interior Lighting (Sales) - Sales floor, customer areas, and interior open/close sign
- Exterior Lighting (Sign) - Lights for store signs on building and other store signage
- Exterior Lighting (Site) - Parking lot lights, building accent lights, and other exterior lights
- ***NOTE: Certain fixtures are designated night lights and are zoned to be on 24/7 for safety and security.***

Wiring Instructions
- Connect lighting accessories to LCP, as appropriate
- Connect the RS485 terminal of the LCP to the Data Concentrator
- All wiring shall be installed and terminated in accordance with the NEC as well as any applicable state and local regulations

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SURVEYOR™ ENERGY MANAGEMENT SYSTEM

O'Reilly New Construction Statement of Work (SOW)

Installing the Front Door Counter (Single Channel Input Module)

Hardware Placement
- One switch per door at front entrance, normally closed, wired in series (for more than one door)
- Mount SCIM400D in back of store near other Surveyor hardware

Wiring Instructions
- Connect door switch(es) to SCIM400D
- Connect the RS485 terminals of the SCIM400D to the Data Concentrator
- All wiring shall be installed and terminated in accordance with the NEC as well as any applicable state and local regulations

Installing the Building Power Monitor

Hardware Placement
- Place PM401 near the breaker panel or main electrical service, as appropriate
- Place CTs to measure all phases of building power

Wiring Instructions
- Connect CTs to Power Monitor (PM401)
- Connect voltage leads and ground terminal
- Connect the RS485 terminals of the Power Monitor (PM401) to the Data Concentrator
- All wiring shall be installed and terminated in accordance with the NEC as well as any applicable state and local regulations

Hardware Configuration
- Set slide switch for CT type
- Set CH1 rotary switch for CT size
- Set Load rotary switch for electrical service type

Commissioning

Upon completion of the installation, the contractor shall contact Surveyor Support for commissioning. The contractor shall be onsite and provide all support required during the commissioning process. The checklist below serves as a quick reference for the contractor to verify that the installation was completed successfully.

Surveyor Technical Support
surveyorsupport@venstar.com
Direct: 818-812-9812
Office: 818-341-8760
Mon-Fri 6:00am-5:00pm Pacific Time

Data Concentrator
- Confirm power and Ethernet connections
- Verify communication to **all** Surveyor equipment
- Contact the Surveyor Support line at **818-812-9812** to verify connectivity to the O'Reilly server

Equipment Control Pacs
- Verify proper addressing
- Verify door switch functionality (loading and rear man door)
- Re-start all HVAC equipment and verify heating/cooling operation

Communicating Thermostat(s)
- Test operation in all modes
- Verify sensor readings

Lighting Control Panel and accessories
- Test Photocell
- Test Motion Detectors
- Test operation and function of twist-timer overrides
- Confirm lighting circuitry does not affect any other store equipment

Building Power Monitor
- Verify sensor readings

Front Door Counter (Single Channel Input Module)
- Verify door switch functionality

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DESIGN BY OTHERS - FOR REFERENCE ONLY

Professional of Record

CASCO
12 Sunnen Drive, Suite 100,
St. Louis, MO 63143
T: 314.821.1100

PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

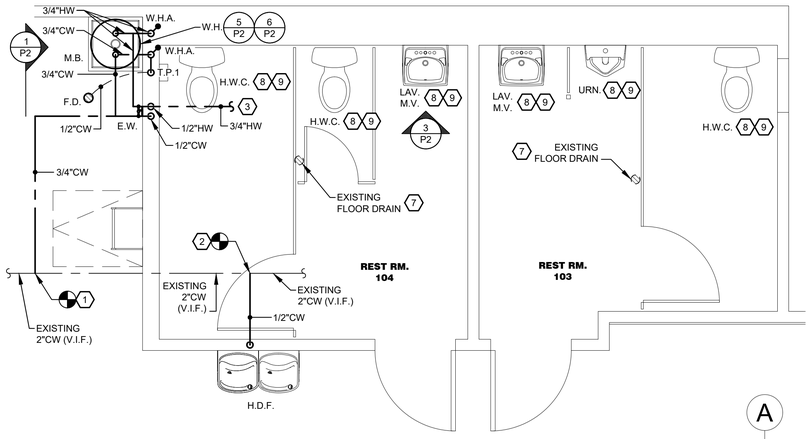
SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

EMS SHEETS

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

DRAWN BY: BJG
CHECKED BY: DAT
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: VS2



ENLARGED SUPPLY PIPING PLAN

SCALE: 3/8" = 1'-0"

PIPING LEGEND

- HW — HOT WATER
- CW — COLD WATER
- S — WASTE
- S — WASTE (BELOW GRADE)
- V — VENT
- G — GAS
- GS — GAS SERVICE (BELOW GRADE)
- WATER HAMMER ARRESTER, SEE SCHEDULE
- FLOOR DRAIN, SEE SCHEDULE
- CLEANOUT (INTERIOR), SEE SCHEDULE
- CLEANOUT (EXTERIOR), SEE SCHEDULE
- BALL VALVE
- CONNECT TO EXISTING

PLUMBING DEMO NOTE

REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.

GAS PIPING: CONTRACTOR SHALL RE-USE EXISTING GAS PIPING WHERE POSSIBLE. CONNECT NEW HVAC UNITS TO EXISTING GAS PIPING. FIELD VERIFY SIZE AND EXACT LOCATION. PROVIDE DRIP LEG AND GAS COCK AS REQUIRED.

EXISTING PLUMBING FIXTURES: CONTRACTOR SHALL REMOVE EXISTING PLUMBING FIXTURES UNLESS NOTED OTHERWISE. CAP WASTE BELOW FLOOR AND REPAIR FLOOR AS REQUIRED. REMOVE SUPPLY BRANCHES BACK TO MAIN SUPPLY.

PLUMBING SCOPE OF WORK

GAS METER/PIPING: CONTRACTOR SHALL RE-USE EXISTING GAS METER AND PIPING WHERE POSSIBLE. CONNECT NEW HVAC UNITS TO EXISTING GAS METER. FIELD VERIFY SIZE AND EXACT LOCATION. PROVIDE DRIP LEG AND GAS COCK AS REQUIRED.

PLUMBING FIXTURES: INSTALL NEW PLUMBING FIXTURES AS SHOWN ON PLUMBING PLANS.

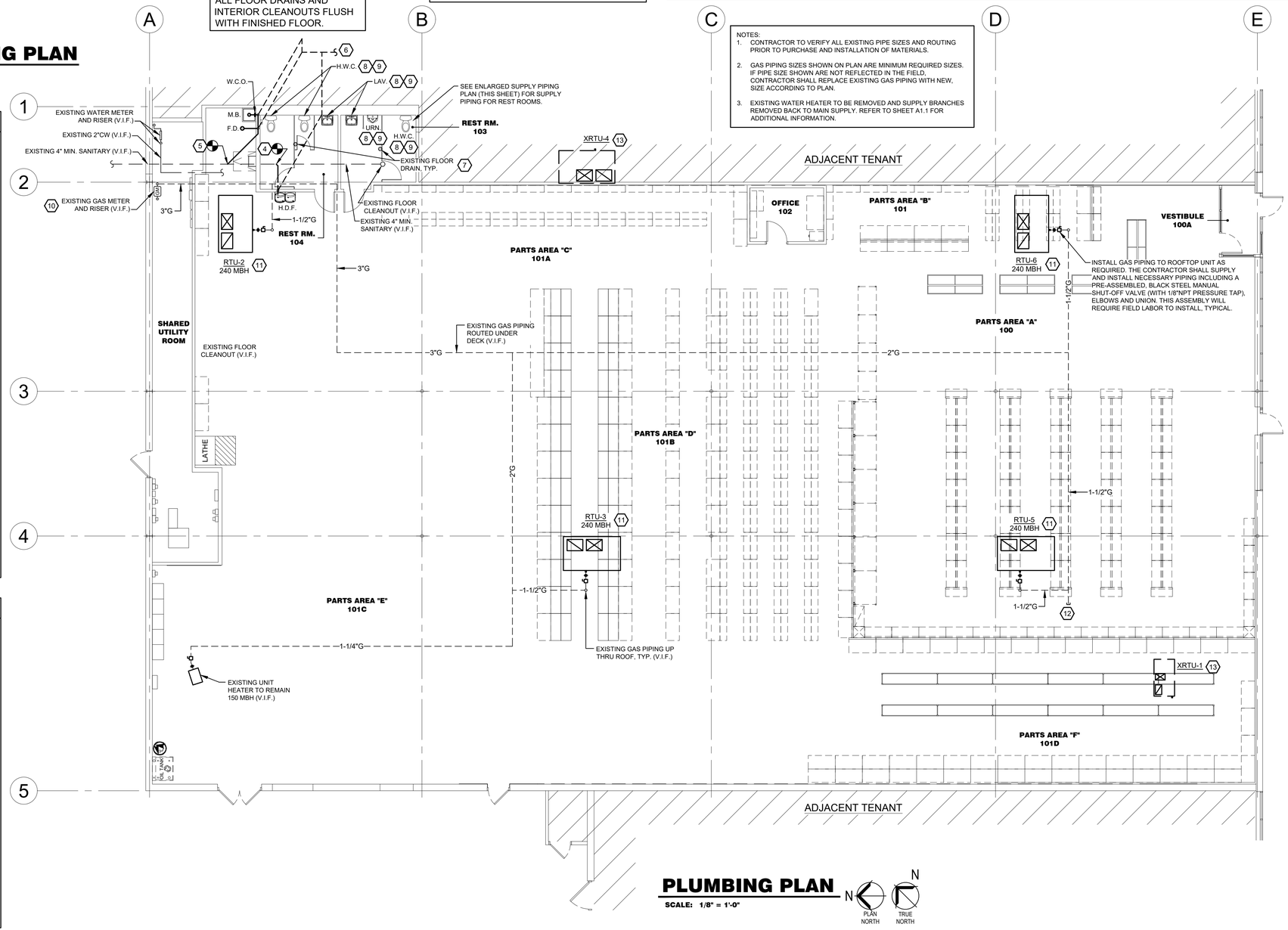
PIPING: INSTALL NEW SUPPLY, WASTE, AND VENT PIPING LINES AS SHOWN AS SHOWN ON PLUMBING PLANS.

PLUMBING - KEYNOTES

1. EXTEND AND CONNECT NEW 3/4" COLD WATER LINE TO EXISTING 2" COLD WATER SERVICE.
2. EXTEND AND CONNECT NEW 1/2" COLD WATER LINE TO EXISTING 2" COLD WATER SERVICE.
3. EXTEND AND CONNECT NEW 3/4" HOT WATER LINE TO EXISTING 3/4" MIN. HOT WATER SERVICE.
4. EXTEND AND CONNECT NEW 2" SANITARY PIPING TO NEAREST EXISTING 3" MINIMUM SANITARY LINE. FIELD VERIFY EXACT LOCATION, INVERT, FLOW, ETC. PRIOR TO ROUGHING IN OR INSTALLING NEW SANITARY PIPING.
5. EXTEND AND CONNECT NEW 3" SANITARY PIPING TO NEAREST EXISTING 3" MINIMUM SANITARY LINE. FIELD VERIFY EXACT LOCATION, INVERT, FLOW, ETC. PRIOR TO ROUGHING IN OR INSTALLING NEW SANITARY PIPING.
6. EXTEND AND CONNECT NEW 2" SANITARY VENT PIPING TO NEAREST EXISTING 2" MINIMUM VENT PIPE. FIELD VERIFY EXACT LOCATION, INVERT, FLOW, ETC. PRIOR TO ROUGHING IN OR INSTALLING NEW SANITARY PIPING.
7. EXISTING PLUMBING FIXTURE TO REMAIN AND BE CLEANED, LEAVING FIXTURE IN "LIKE NEW" CONDITION. SHOULD ANY FIXTURES REQUIRE REPLACEMENT, CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE AND SUBMIT A WRITTEN COST PROPOSAL TO REPLACE INCLUDING A TIME ESTIMATE TO COMPLETE REPAIRS.
8. NEW PLUMBING FIXTURE TO BE INSTALLED IN LOCATION SHOWN. EXISTING PLUMBING FIXTURE TO BE REMOVED AND PROPERLY DISPOSED OF PRIOR TO INSTALLATION OF NEW FIXTURE (SEE ARCHITECTURAL DEMO PLAN FOR ADDITIONAL INFORMATION). CONTRACTOR SHALL ADJUST EXISTING WATER, SANITARY, AND VENT PIPING FROM EXISTING FIXTURE AS NECESSARY TO ACCOMMODATE NEW FIXTURE CONNECTIONS. SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
9. NEW PLUMBING FIXTURE TO BE INSTALLED ON EXISTING WALL-MOUNTED FIXTURE CARRIER. CONTRACTOR TO ADJUST HEIGHT OF EXISTING FIXTURE CARRIER IF NECESSARY TO ENSURE THAT THE INSTALLATION OF THE NEW FIXTURE MEETS ALL ADA HEIGHT REQUIREMENTS. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
10. EXISTING GAS METER TO REMAIN. CONTRACTOR TO VERIFY IF EXISTING GAS METER IS PROPERLY SIZED FOR NEW CONNECTED LOAD.
11. CONNECT EXISTING GAS LINE TO NEW RTU, INCLUDING GAS COCK, DIRT LEG, AND GROMMET. CONTRACTOR SHALL TEST PIPING FOR LEAKAGE/DEFECTS PRIOR TO CONNECTION TO NEW ROOFTOP UNITS. CONTRACTOR SHALL VERIFY IF EXISTING PIPING IS PROPERLY SIZED FOR NEW ROOFTOP UNITS. SHOULD ANY REPAIRS BE REQUIRED, CONTACT OWNER'S REPRESENTATIVE AND SUBMIT A WRITTEN COST PROPOSAL INCLUDING COMPLETE COST TO REPAIR IN "LIKE NEW" CONDITION AND TIME ESTIMATE TO COMPLETE REPAIRS.
12. DISCONNECT AND CAP EXISTING GAS LINE WATER AND WEATHER TIGHT. REMOVE AND PROPERLY DISPOSE OF ALL UNUSED PIPING, FITTING, SUPPORT, ETC.
13. EXISTING ROOFTOP UNIT TO BE ABANDONED IN PLACE. CONTRACTOR SHALL REMOVE ALL ASSOCIATED DUCTWORK AND CONTROLS. DISCONNECT POWER, CAP CONNECTED GAS PIPING, ETC. TO MAKE EQUIPMENT NON-OPERATIONAL. SEAL ALL DAMPERS AND OPENINGS WATER AND WEATHER TIGHT.

NOTE:
CONTRACTOR SHALL INSTALL ALL FLOOR DRAINS AND INTERIOR CLEANOUTS FLUSH WITH FINISHED FLOOR.

NOTES:
1. CONTRACTOR TO VERIFY ALL EXISTING PIPE SIZES AND ROUTING PRIOR TO PURCHASE AND INSTALLATION OF MATERIALS.
2. GAS PIPING SIZES SHOWN ON PLAN ARE MINIMUM REQUIRED SIZES. IF PIPE SIZE SHOWN ARE NOT REFLECTED IN THE FIELD, CONTRACTOR SHALL REPLACE EXISTING GAS PIPING WITH NEW, SIZE ACCORDING TO PLAN.
3. EXISTING WATER HEATER TO BE REMOVED AND SUPPLY BRANCHES REMOVED BACK TO MAIN SUPPLY. REFER TO SHEET A1.1 FOR ADDITIONAL INFORMATION.



PLUMBING PLAN

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

N — PLAN NORTH

N — TRUE NORTH

PLUMBING NOTES

1. DRAWING IS DIAGRAMMATIC & IS NOT TO BE SCALED. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS.
2. ALL PLUMBING WORK IS TO BE DONE IN ACCORDANCE WITH THE APPLICABLE CODE(S) NOTED ON THE CODE SUMMARY SHEET.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL FEES & DIRECT EXPENSES INVOLVED IN ANY INSPECTION REQUIRED FOR THE PROJECT.
4. CONTRACTOR SHALL COORDINATE WITH ALL STATE & LOCAL BUILDING REGULATION AGENCIES & UTILITY COMPANY(S) IN THE PROCUREMENT OF & PAYMENT OF ALL PERMITS, LICENSES, FEES & CHARGES REQUIRED FOR THE PERFORMANCE OF THE WORK.
5. THE CONTRACTOR SHALL COOPERATE AND COORDINATE ALL WORK WITH THE WORK OF OTHER CONTRACTORS OF THE PROJECT. COORDINATION DOES NOT MEAN "I WAS HERE FIRST".
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE & FUNCTIONAL SYSTEM IN ACCORDANCE WITH THE INTENT OF THE PLANS, WHETHER OR NOT EVERY ELEMENT THEREOF IS SPECIFICALLY CALLED OUT.
7. CONTRACTOR SHALL PROVIDE ONE YEAR WARRANTY ON ALL WORK PERFORMED.
8. PIPING MATERIAL SHALL BE AS FOLLOWS:
   - HOT & COLD WATER PIPING: TYPE "L" COPPER
   - DRAIN, WASTE & VENT PIPING: SCHEDULE 40 PVC DWV
   - WATER SERVICE: SCHEDULE 40 PVC
   - GAS PIPING: SCHEDULE 40 BLACK STEEL W/ MALLEABLE IRON FITTINGS.
9. VALVES ON WATER LINES SHALL BE BRONZE BALL VALVES. DO NOT SUBSTITUTE GATE OR GLOBE VALVES. VALVES SHALL BE THE SAME SIZE AS THEIR INLET PIPING.
10. ALL PLUMBING FIXTURES ARE TO BE FURNISHED COMPLETE WITH NECESSARY STOPS, TRAPS, TAILPIECES, TRIM, ETC.
11. PIPE INSULATION ON ALL DOMESTIC WATER LINES SHALL BE ABOVE FINISHED FLOOR.
    PIPE INSULATION ON ALL DOMESTIC WATER LINES SHALL BE OF ONLY ONE (1) OF THE FOLLOWING TYPES:
    - (3 lb.) FIBERGLASS INSULATION (W/ A.S. JACKET)
    - OR ARMSTRONG ARMFLEX AP (25/50)
12. PIPE INSULATION THICKNESS SHALL BE:
    - PIPING LESS THAN 1": 1"
    - PIPING 1" OR LARGER: 1-1/2"
13. DO NOT INSTALL CAPPED AIR CHAMBERS AT FIXTURES. INSTALL WATER HAMMER ARRESTERS AS CALLED FOR ON PLAN. ARRESTERS ARE TO BE RATED FOR INSTALLATION IN CONCEALED LOCATIONS.
14. ALL HOT & COLD WATER SUPPLY PIPING CONNECTION TO FIXTURES ARE TO BE 1/2" UNLESS NOTED OTHERWISE.
15. PLUMBING PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS. PROVIDE REQUIRED CLEARANCES PER "N.E.C." COORDINATE ELECTRICAL PANEL LOCATIONS WITH THE ELECTRICAL CONTRACTOR.
16. PROVIDE CHROME ESCUTCHEON COVERPLATES AT ALL PIPE PENETRATIONS OF FINISHED WALL SURFACES.
17. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ROUTE ALL WATER PIPING AROUND SPACES WITH TEMPERATURES BELOW FREEZING (i.e. ATTICS, CHASES, EXTERIOR WALLS, ETC.). IF FREEZING OF ANY WATER PIPING OCCURS IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR THE PIPING THRU A NON-FREEZING SPACE TO THE FIXTURE/APPLIANCE ORIGINALLY SERVED BY THE FROZEN PIPING.
18. ALL CAULKING ON BUILDING PENETRATIONS SHALL BE A 1-COMPONENT NON-SAG URETHANE SEALANT. ANY CONTRACTOR WHO USES SILICONE OR ANY OTHER CAULKING WILL BE REQUIRED TO REMOVE & REPLACE WITH A SPECIFIED SEALANT.
19. PLUMBING CONTRACTOR SHALL INFORM THE ELECTRICAL CONTRACTOR OF THE VOLTAGE & POWER REQUIREMENTS OF ALL PLUMBING EQUIPMENT TO BE INSTALLED.
20. ALL GAS PIPING INSTALLATIONS SHALL COMPLY WITH "NFPA-54" NATURAL GAS OR "NFPA-58" LP GAS (latest edition).
21. ALL WATER HEATERS AND HOT WATER STORAGE TANKS SHALL HAVE A DRAIN VALVE INSTALLED AT THE BOTTOM OF THE TANK AS REQUIRED BY CODE.
22. INSTALL ACCESS PANELS OR DOORS WHERE EQUIPMENT AND/OR VALVES ARE LOCATED IN CONCEALED SPACES.

PLUMBING PIPE MATERIALS

A. THE FOLLOWING APPLICATIONS ARE FOR INSIDE, BELOW & ABOVE THE BUILDING SLAB AND ENDING AT A POINT 5'-0" OUTSIDE THE PERIMETER BUILDING WALLS:
   1. DOMESTIC WATER DISTRIBUTION PIPING BELOW GROUND: ALL INTERIOR DOMESTIC WATER PIPING SHALL BE TYPE "K" HARD DRAWN COPPER TUBING (SIL-FOS 2, FOS-FLO 7 OR OTHER SILVER BRAZING MATERIAL). THIS IS REQUIRED FOR THE WATER SERVICE LINE FROM THE SHUT-OFF VALVE IN THE BUILDING TO A POINT 5 FEET OUTSIDE THE BUILDING.
   2. DOMESTIC WATER DISTRIBUTION PIPING ABOVE GROUND: HARD COPPER TUBE, TYPE L.
   3. SOIL, WASTE, AND VENT PIPING BELOW GROUND: SCHEDULE 40 POLY VINYL CHLORIDE (PVC) PLASTIC DWV PIPE.
   4. SOIL, WASTE, AND VENT PIPING ABOVE GROUND: HUBLESS CAST-IRON SOIL PIPE OR POLY VINYL CHLORIDE (PVC) PLASTIC DWV PIPE.
   5. NOTE: PVC PIPING IS NOT PERMITTED IN AIR-HANDLING CEILING SPACES. USE ONLY CAST-IRON OR DUCTILE IRON PIPE IN THESE LOCATIONS.

B. THE FOLLOWING APPLICATIONS ARE FOR ONLY FROM 5'-0" OUTSIDE THE BUILDING TO THE UTILITY POINT OF CONNECTION (POC).

   UNDERGROUND DOMESTIC WATER SERVICE PIPING FROM A POINT 5 FEET OUTSIDE THE BUILDING TO THE POC:
   (SEE SITE UTILITIES PLAN FOR WHICH PIPING MATERIAL (COPPER OR PVC) IS REQUIRED)
   1. 3/4" - 1-1/4", SCHEDULE 40 PVC PIPE WITH SOLVENT-WELDED JOINTS.
   2. 1-1/2" - 3", SDR-21, PVC PIPE (ASTM D2241) CLASS 200, BELL AND SPIGOT WITH RUBBER GASKETED JOINTS.
   3. 3/4" - 3", TYPE "K" HARD DRAWN COPPER TUBING (SIL-FOS 2, FOS-FLO 7 OR OTHER SILVER BRAZING MATERIAL).
   4. 4" AND LARGER, SDR-18 PVC PIPE (AWWA C-900) CLASS 150 BELL AND SPIGOT WITH RUBBER GASKETED JOINTS.

   UNDERGROUND SANITARY SEWER SERVICE PIPING FROM A POINT 5 FEET OUTSIDE THE BUILDING TO THE POC:
   1. POLYVINYL CHLORIDE (PVC) SEWER PIPE SHALL CONFORM TO ASTM D3034 (SDR-35).
   2. CAST IRON OR DUCTILE IRON PIPE SHALL CONFORM TO USASI #A-21 CLASS 50.

C. GAS PIPE MATERIAL (WHEN REQUIRED):
   LOW PRESSURE GAS SYSTEMS, ABOVE GROUND WITHIN OR OUTSIDE BUILDING:
   1. 2 INCHES AND SMALLER: STEEL PIPE, MALLEABLE IRON, THREADED FITTINGS, AND THREADED JOINTS.
   2. 2-1/2 INCHES AND LARGER: STEEL PIPE, BUTT WELDING FITTINGS, AND WELDED JOINTS.

COMMONWEALTH OF MASSACHUSETTS
MICHAEL C. GRAPPERHAUS
MECHANICAL
NO. 49388
REGISTERED
PROFESSIONAL ENGINEER
08/20/2026
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License #49388
Exp. Date: 06/30/28
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SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

PLUMBING PLAN

PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

DRAWN BY: MEML
CHECKED BY: MCG
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: P1

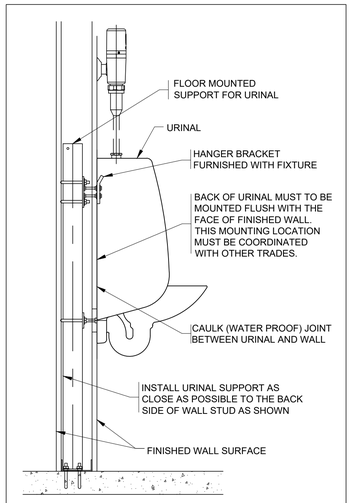
PLUMBING FIXTURE SCHEDULE / ALL FIXTURES & FITTINGS MUST BE "LEAD FREE"

MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	ACCESSORIES	PIPING REQUIREMENTS			REMARKS	APPROVED MANUFACTURERS	CODE APPROVALS
					WASTE	VENT	SUPPLY			
H.W.C.	HANDICAP ACCESSIBLE WALL MOUNTED WATER CLOSET (TANK TYPE)	AMERICAN STANDARD	GLENWELL WALL-HUNG BACK OUTLET GRAVITY FLUSH TOILET	WHITE OPEN FRONT SEAT COMPLETE W/ BOLT CAPS	4"	2"	1/2"	1.28 GPF. PROVIDE WITH TRIP LEVER ON WIDE SIDE OF RESTROOM. ENSURE INSTALLATION MEETS ADA HEIGHT REQUIREMENTS.	ZURN	ANSI A117.1, ADA COMPLIANT
LAV.	HANDICAP ACCESSIBLE LAVATORY (WALL MOUNTED)	AMERICAN STANDARD	LUCERNE 0355.012 4" CENTERS	ZURN #Z8737 FLAT GRID SINK STRAINER, DELTA #501-DST CLASSIC CENTERSET FAUCET, JAY R. SMITH #0700-M31 FLOOR MOUNTED LAVATORY SUPPORTS IN WALL.	2"	2"	1/2"	SEE NOTE 2. 1.5 GPM MAX.	ZURN	ANS A117.1, ASME A1112.18.1, ASME A112.18.2, ADA COMPLIANT
M.V.	THERMOSTATIC MIXING VALVE	WATTS	LFMMV-M1-US-1/2"	THERMOSTATIC MIXING VALVE	-	-	1/2"	SEE DETAIL 4/P2 & NOTE 4. 110°F MAX. WATER TEMP.	WILKINS, POWERS	ASSE 1070, IAPMO, ADA COMPLIANT, CUPC, NSF/ANSI 61
H.D.F.	BARRIER-FREE TWO STATION HI-LO DRINKING FOUNTAIN	ELKAY	EZSTL8LC	ACCESSORY APRON #LKAPREZL	2"	2"	1/2"	REFER TO ARCHITECTURAL SHEETS FOR MOUNTING HEIGHTS	HALSEY TAYLOR	ADA COMPLIANT
F.D.	FLOOR DRAIN	ZURN	ZN415-B-P	1/2" TRAP PRIMER CONNECTION	3"	2"	-	COMBINATION WASTE VENT	WADE & JAY R. SMITH	ASSE 1019-B
W.C.O	WALL CLEANOUT	ZURN	Z1441 STAINLESS STEEL	-	SEE PLAN	-	-	-	-	-
W.H.A.	WATER HAMMER ARRESTER	SIOUX CHIEF	652-A	-	-	-	-	-	WILLIAMS	-
T.P.1	TRAP PRIMER	MIFAB	M2-500-NPB	MI-DU TRAP SEAL PRIMER DISTRIBUTION UNIT & MI-GAP AIR GAP FITTING	-	-	1/2"	PRESSURE DROP ACTIVATED TRAP PRIMER	-	-
M.B.	MOP BASIN	FIAT	FIAT MSB-2424	FIAT #832-AA HOSE & BRACKET, FIAT #889-CC-24" MOP HANGER, ZURN #Z842M4-WHK-5H SERVICE FAUCET	3"	2"	3/4"	W/VACUUM BREAKER ON FAUCET. ALSO ADD HOSE CONNECTION VACUUM BREAKER (WATTS #8) ON FAUCET'S SPOUT.	STERN-WILLIAMS	-
E.W.	EYE WASH	SPEAKMAN	SEF-9200	SPEAKMAN THERMOSTATIC MIXING VALVE (SEF-TW), SEF-9200-ILR	-	-	1/2"	SET MIXING VALVE TO DELIVER 80°F. NOTE: TEPID WATER RANGE IS 60-100°F.	BRADLEY-HAWS	ASME A112.18.1-2000, CSA B125-98, ANSI Z358-1, ASSE 1011
SRBP	SPILL-RESISTANT BACKFLOW PREVENTER	WATTS	LF008PCQT-1/2"	HEALTH HAZARD, ANTI-SIPHON, SPILL-RESISTANT BACKFLOW PREVENTER	-	-	1/2"	MAY BE INSTALLED VERTICALLY. REFER TO DETAIL 2/P2	-	ASSE 1056
URN.	URINAL (WALL MOUNTED)	ZURN	Z5755-U OMNI-FLO	SLOAN ROYAL #186-1 FLUSH VALVE, ZURN #Z1222 FLOOR MOUNTED URINAL SUPPORT	2"	2"	3/4"	1.0 GPF. BACK OF URINAL TO BE MOUNTED FLUSH WITH THE FACE OF FINISHED WALL. SEE DETAIL 9/P2	AMERICAN STANDARD	ASME A1212.19.2, ANSI A117.1, ADA COMPLIANT

NOTES:
1. COORDINATE ROUGH-IN OF ALL PLUMBING FIXTURES W/ ARCHITECTURAL DRAWINGS.
2. SINKS & LAVATORIES FOR HANDICAPPED ACCESS SHALL BE INSTALLED W/ OFFSET TAILPIECES. ALL SINK & LAVATORY DRAIN & WATER LINES SHALL BE INSULATED W/ PROTECTIVE DEVICES EQUAL TO "McGUIRE" #PW2150 WC, WHITE MOLDED CLOSED CELL VINYL, OR "TRUEBRO" #103W, WHITE MOLDED VINYL.
3. FOR HANDICAPPED-ACCESSIBLE WATER CLOSET, FURNISH & INSTALL W/ THE FLUSH HANDLE ON THE WIDE SIDE OF THE RESTROOM.
4. ALL LAVATORIES SHALL BE INSTALLED WITH A THERMOSTATIC MIXING VALVE.
5. ALL WALL MOUNTED WATER CLOSETS, URINALS, AND LAVATORIES ARE TO BE INSTALLED ON EXISTING WALL MOUNTED FIXTURE CARRIERS. FIELD VERIFY THE EXISTING CARRIER DIMENSIONS AND ENSURE NEW FIXTURES PROVIDED ARE COMPATIBLE WITH EXISTING CARRIERS.

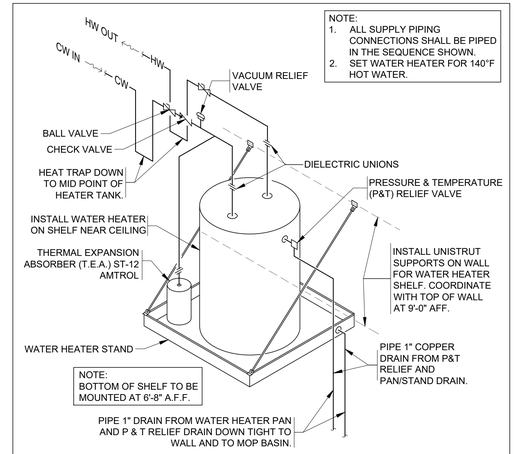
OWNER SUPPLIED, CONTRACTOR INSTALLED

W.H.	WATER HEATER (ELECTRIC)	A.O. SMITH	EJCS-20	(19 GALLONS) 120V 1Ø, 2.5 KW ELEMENT WITH T & P RELIEF VALVE	-	-	3/4"	PIPE DRAIN LINE FROM P & T RELIEF VALVE DOWN IN SHELF PAN. SEE DETAIL 5/P2 & 6/P2	NO SUBSTITUTIONS	CSA, ASME RATED, NAECA
SHELF	WATER HEATER SHELF	HOLDRITE	#40-SWHP-WM	SUPPORTS WATER HEATERS UP TO 20 GALLON OR 300 LBS	-	-	-	SEE DETAIL 5/P2 & 6/P2	NO SUBSTITUTIONS	UPC & IPC
T.E.A.	THERMAL EXPANSION ABSORBER	AMTROL	ST-12	-	-	-	-	-	NO SUBSTITUTIONS	-
NOTE: WATER HEATER, SHELF AND T.E.A. SHALL BE DIRECT ORDERED AND OR RELEASED FROM THE LISTED ELECTRICAL EQUIPMENT DISTRIBUTOR:				SOURCEONE SOLUTIONS 2081 EXCHANGE DRIVE ST. CHARLES, MO 63303				SOURCEONE SOLUTIONS O'REILLY TEAM EMAIL: ncoreilly@sourceonesolutions.com PHONE: 314-499-6400		



URINAL WALL MOUNT DETAIL 9/P2

N.T.S.

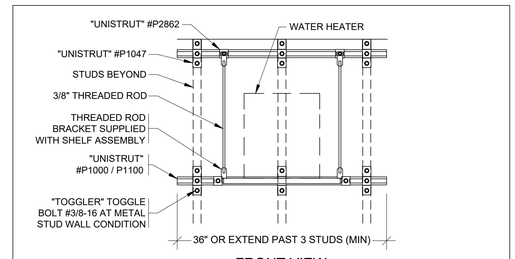


NOTE:
1. ALL SUPPLY PIPING CONNECTIONS SHALL BE PIPED IN THE SEQUENCE SHOWN.
2. SET WATER HEATER FOR 140°F HOT WATER.

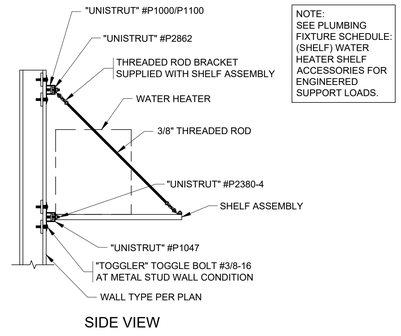
NOTE: BOTTOM OF SHELF TO BE MOUNTED AT 6'-8" A.F.F.

WATER HEATER DETAIL 6/P2

N.T.S.



FRONT VIEW



SIDE VIEW

NOTE: SEE PLUMBING FIXTURE SCHEDULE: (SHELF) WATER HEATER SHELF ACCESSORIES FOR ENGINEERED SUPPORT LOADS.

WATER HEATER SHELF DETAIL 5/P2

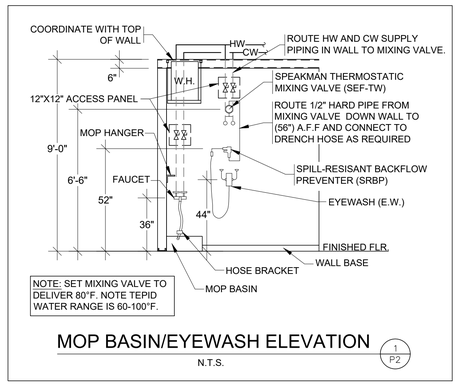
WATER AND WASTE SERVICE CALCULATIONS

DESIGN BASED ON 248 CMR 10.00: UNIFORM STATE PLUMBING CODE

MARK	FIXTURE TYPE	QUANTITY	COLD WATER		HOT WATER		TOTAL FACTOR VALUE	WASTE	
			F.V.	TOTAL	F.V.	TOTAL		F.U.	TOTAL
W.C.	WATER CLOSET (TANK)	3	1	3	-	-	3	4	12
URN.	URINAL	1	6	6	-	-	6	4	4
LAV.	LAVATORY	2	1	2	1	2	4	1	2
M.B.	MOP BASIN	1	2	2	2	2	4	2	2
H.D.F.	DRINKING FOUNTAIN	1	1	1	-	-	1	1	1
F.D.	FLOOR DRAIN	1	-	-	-	-	-	5	5
-	FLOOR DRAIN (EX.)	2	-	-	-	-	-	5	10
		TOTAL		14		4	18		36

DEMAND FACTOR (MERCANTILE, GENERAL)	0.25
CAPACITY VALUE	4.5
REQUIRED "WATER SUPPLY" (INCHES)	0.75
DESIGN "WATER SUPPLY" (INCHES)	2
MINIMUM REQUIRED "WASTE" PIPE SIZE (INCHES)	4

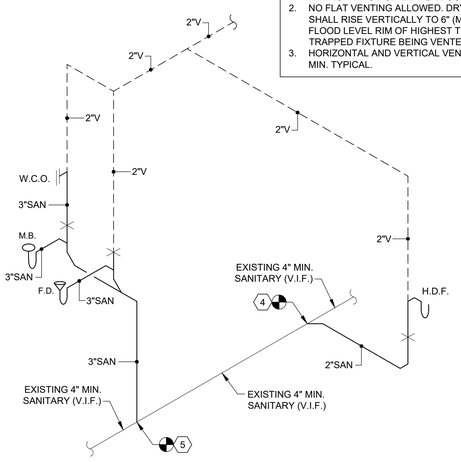
NOTE: SEE THE APPLICABLE PLUMBING CODE FOR MINIMUM WASTE PIPING SLOPE.



NOTE: SET MIXING VALVE TO DELIVER 80°F. NOTE TEPID WATER RANGE IS 60-100°F.

MOP BASIN/EYEWASH ELEVATION 1/P2

N.T.S.



NOTES:
1. ALL INTERIOR WASTE PIPING SHALL HAVE A MINIMUM PITCH OF 1/4" PER FOOT.
2. NO FLAT VENTING ALLOWED. DRY VENTS SHALL RISE VERTICALLY TO 6" (MIN.) ABOVE FLOOD LEVEL RIM OF HIGHEST TRAP OR TRAPPED FIXTURE BEING VENTED.
3. HORIZONTAL AND VERTICAL VENT TO BE 2" MIN. TYPICAL.

WASTE & VENT PIPING RISER DIAGRAM 2/P2

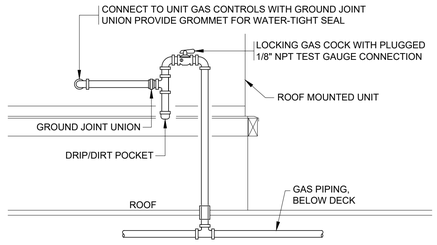
N.T.S.

GAS LOAD

(PIPE SIZING BASED ON 2012 NATIONAL FUEL GAS CODE, TABLE 6.2(b))

ITEM	MBH/INPUT
ROOFTOP UNIT (RTU-2)	240
ROOFTOP UNIT (RTU-3)	240
ROOFTOP UNIT (RTU-5)	240
ROOFTOP UNIT (RTU-6)	240
EXISTING UNIT HEATER (V.I.F.)	150
TOTAL CONNECTED LOAD	1110

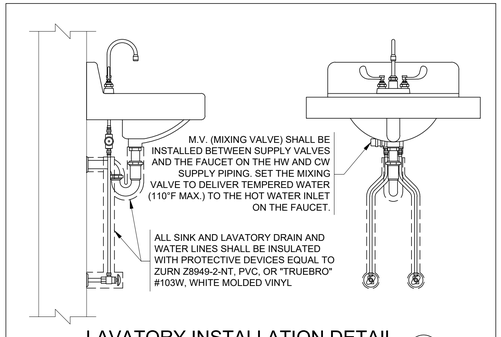
GAS PIPING SIZED USING LONGEST MAXIMUM RUN OF EQUIVALENT LENGTH OF PIPING = 330'
INLET PRESSURE = 7in W.C. OR 1/4 psig
MAXIMUM PRESSURE DROP = .5 INCH W.C. AND .6 SPECIFIC GRAVITY.



NOTES:
1. COORDINATE PIPING PENETRATIONS WITH TENANT'S GENERAL CONTRACTOR.
2. CONTRACTOR SHALL VERIFY ALL MECHANICAL GAS FIRED EQUIPMENT CONNECTION LOCATIONS IN THE FIELD PRIOR TO INSTALLING ANY GAS PIPE MAINS OR BRANCHES.

GAS PIPING DETAIL 3/P1

N.T.S.



LAVATORY INSTALLATION DETAIL 3/P2

N.T.S.

COMMONWEALTH OF MASSACHUSETTS
MICHAEL C. GRAPPERHAUS
MECHANICAL
NO. 49388
REGISTERED PROFESSIONAL ENGINEER
08/20/2026

Michael C. Grapperhaus
License #49388
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SHOPPING CENTER:
RANDOLPH SHOPPING CENTER

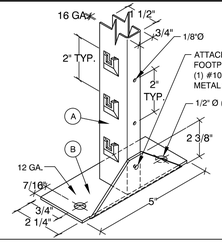
PROJECT:
O'REILLY AUTO PARTS STORE - RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

PLUMBING DETAILS

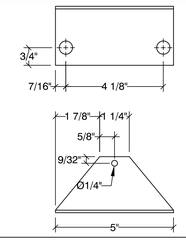
O'Reilly AUTO PARTS

REV.	DESCRIPTION	DATE
	FOR REVIEW	MM/DD/YY

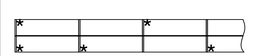
DRAWN BY: MEML
CHECKED BY: MCG
DATE: 08/20/26
PROJECT NUMBER: 2605608
SHEET NUMBER: P2



A COLUMN



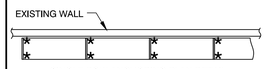
B FOOT PLATE



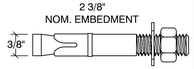
BACK TO BACK ANCHORING PLAN DETAIL



OPTION 1: HILTI KWIK HUS-EZ (KH-EZ)
(ICC #ESR-3027)
(1) REQ'D PER FOOT PLATE

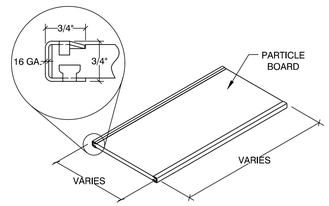


SINGLE ROW ANCHORING PLAN DETAIL
* - DENOTES ANCHOR LOCATION

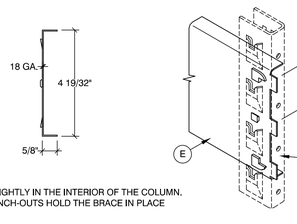


OPTION 2: POWERS STUD SD2
(ICC #ESR-2502)
(1) REQ'D PER FOOT PLATE

C ANCHOR

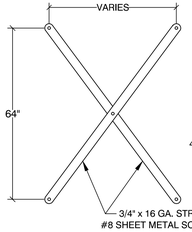


D SHELF



BRACE FITS TIGHTLY IN THE INTERIOR OF THE COLUMN.
THE 3 PUNCH-OUTS HOLD THE BRACE IN PLACE

E HORIZONTAL BRACE

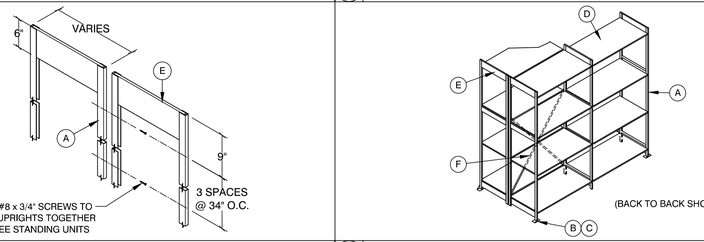


DOUBLE BACK BRACE AT ALL END BAYS
THEN ALTERNATE DOUBLE & SINGLE
BACK BRACES FOR ALL OTHER BAYS
(SEE ELEVATIONS FOR CLARIFICATION)

42" OVERLAP FOR DOUBLE BACK BRACES

3/4" x 16 GA. STRAP ATTACH W/
#8 SHEET METAL SCREWS1 @ EA. END

F REAR X-BRACE



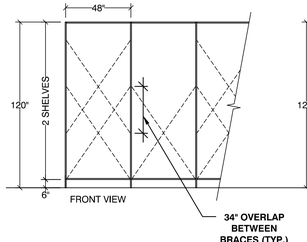
USE (4) #8 x 3/4" SCREWS TO
FASTEN UPRIGHTS TOGETHER
FOR FREE STANDING UNITS

G BACK TO BACK ASSEMBLY

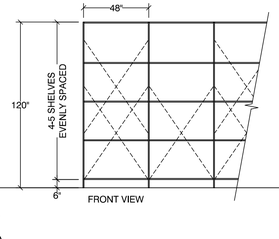
(BACK TO BACK SHOWN)

H GENERAL CONFIGURATION

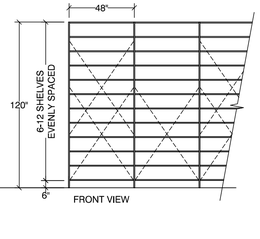
TYPE 2 SHELVES (J1)



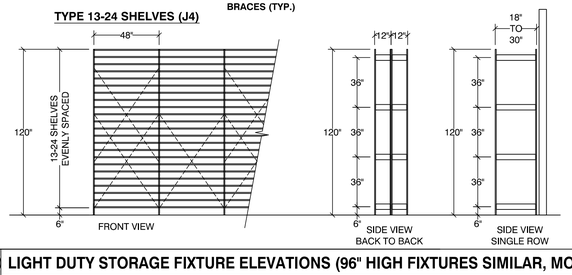
TYPE 4-5 SHELVES (J2)



TYPE 6-12 SHELVES (J3)



TYPE 13-24 SHELVES (J4)



J LIGHT DUTY STORAGE FIXTURE ELEVATIONS (96" HIGH FIXTURES SIMILAR, MOST CRITICAL SHOWN)

LIGHT DUTY SHELVING ANALYSIS

SCOPE:
THE PURPOSE OF THIS ANALYSIS IS TO SHOW THAT THE FOLLOWING LIGHT DUTY STORAGE FIXTURE COMPLIES WITH SECTION 1613 OF THE 10th MABC / 2021 IBC WHERE LATERAL FORCES ARE DETERMINED IN ACCORDANCE WITH SECTION 15.5 OF THE ASCE 7-16.

PARAMETERS:
STABILITY OF THE LIGHT DUTY STORAGE FIXTURE UNITS IS PROVIDED BY METAL SPRINGER BRACES IN THE TRANSVERSE DIRECTION AND X-BRACES IN THE LONGITUDINAL DIRECTION.

STORAGE FIXTURES WILL BE ANALYZED UTILIZING THE FOLLOWING FORMULA:
LATERAL FORCE:

V = Cs * Ws WHERE Cs = S_{DS}/(R/I)
= [(2/3) * Fa * Ss * I/R] * Ws

SPECIFICATIONS:

- MAIN STEEL Fy = 36000 PSI MIN. YIELD STEEL
- ANCHORS 3/8"Ø x 2-1/2" NOM. EMBED. HILTI KH-EZ SCREW ANCHOR (ICC ESR-3027) OR 3/8"Ø x 2-3/8" NOM. EMBED. POWERS POWER STUD SD2 (ICC ESR-2502)
- SLAB 4 IN (minimum required) x 2500 PSI (minimum required)
- SOIL 500 PSF

MAXIMUM PERMISSIBLE STORAGE LOAD:

2300 LB MAX. PER BAY FIXTURES CHECKED WITH ADDITIONAL 360 LB TO ACCOUNT FOR
240 LB MAX. PER SHELF WEIGHT OF SIGNAGES, SUPPORTS, AND HARDWARE

SHELVING PROFILES:

TYPES	LEVELS	MAX. PER BAY	
1. TYPE 2 SHELVES	2	480 LB	
2. TYPE 4-5 SHELVES	4-5	960 LB	
3. TYPE 6-12 SHELVES	6-12	2300 LB	<== SAMPLE CALCULATION
4. TYPE 13-24 SHELVES	13-24	2300 LB	

CRITICAL CONFIGURATIONS:

12" DEEP SINGLE ROW
(2) 12" DEEP BACK-TO-BACK ROWS

1

LOADS & DISTRIBUTION: TYPE 6-12 SHELVES (SINGLE ROW) (SEE DETAIL J SIDE VIEW)

ANALYZE PER SECTION 1613 OF THE 10th MABC / 2021 IBC WHERE LATERAL FORCES ARE DETERMINED IN ACCORDANCE WITH SECTION 15.5 OF THE ASCE 7-16.

SITE CLASS = D
V = Cs * Ws WHERE Cs = S_{DS}/(R/I)
S_{DS} = 2/3*Fa*Ss AND Ws = OPERATING WEIGHT
= 0.245 WHERE Fa = 1.6 & Ss = 0.23
I = 1.00 <== NO PUBLIC ACCESS
R = 4
REDUCTION = 0.7 <== WORKING STRESS
NO. OF LEVELS = 10 LVL <== # OF LEVELS FOR ILLUSTRATION
AVG. PRODUCT LOAD, wPL = 230 LB /LVL (2300 LB MAX. PER BAY)
DEAD LOAD, wDL = 51LB /LVL
DEPTH= 12 IN
HEIGHT= 120 IN

LONGITUDINAL & TRANSVERSE DIRECTION

FULLY LOADED
V = 0.7*[0.245*1*(0.67*2300 LB + 50 LB)/4]
= 68 LB

LATERAL FORCE DISTRIBUTION						
h	LEVEL	WEIGHT	HEIGHT	W x H	Fi	Mot
6.0 IN	1	235 LB	6.0 IN	1410 IN-LB	0.7 LB	4 IN-LB
12.7 IN	2	235 LB	18.7 IN	4387 IN-LB	2.0 LB	38 IN-LB
12.7 IN	3	235 LB	31.3 IN	7363 IN-LB	3.4 LB	106 IN-LB
12.7 IN	4	235 LB	44.0 IN	10340 IN-LB	4.8 LB	210 IN-LB
12.7 IN	5	235 LB	56.7 IN	13317 IN-LB	6.1 LB	348 IN-LB
12.7 IN	6	235 LB	69.3 IN	16293 IN-LB	7.5 LB	521 IN-LB
12.7 IN	7	235 LB	82.0 IN	19270 IN-LB	8.9 LB	729 IN-LB
12.7 IN	8	235 LB	94.7 IN	22247 IN-LB	10.3 LB	972 IN-LB
12.7 IN	9	235 LB	107.3 IN	25223 IN-LB	11.6 LB	1249 IN-LB
12.7 IN	10	235 LB	120.0 IN	28200 IN-LB	13.0 LB	1561 IN-LB
120.0 IN			Σ =	148050 IN-LB	68 LB	5739 IN-LB

TOP SHELF LOADED ONLY
Vtop = 0.7*[0.245*1*(230 LB + 50 LB)/4]
= 12 LB

Mot = 1,443 IN-LB

2

TRANSVERSE SEISMIC LOADS: TYPE 6-12 SHELVES (SINGLE ROW) (SEE DETAIL J SIDE VIEW)

THE FRAME SHALL BE ANALYZED AS A BRACED FRAME IN THE LONGITUDINAL DIRECTION, AND A MOMENT RESISTING FRAME IN THE TRANSVERSE DIRECTION, UTILIZING MOMENT RESISTING SPREADER TO COLUMN CONNECTIONS.

Vtransv= 68 LB
Vcols= 34 LB

TRANSVERSE SEISMIC

F1 @ 6" = **31 LB**

F2 @ 42" = **8 LB**

F3 @ 78" = **14 LB**

F4 @ 114" = **19 LB**

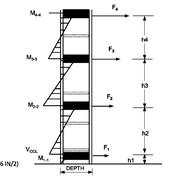
F5 @ 138" = **25 LB**

M_{1-2}= Vcol * h1
= 34.2 LB * 6 IN
= 205 IN-LB

M_{2-3}= [Vcol-(F1/2) * h2/2
= [34.2 LB - (2.7 LB/2) - (8.2 LB/2)]*(36 IN)/2
= 591 IN-LB

M_{3-4}= [Vcol-(F2/2)-(F1/2)] * h3/2
= [34.2 LB - (2.7 LB/2) - (8.2 LB/2)]*(36 IN/2)
= 517 IN-LB

M_{4-5}= [Vcol-(F3/2)-(F2/2)-(F1/2)] * h4/2
= [34.2 LB - (2.7 LB/2) - (8.2 LB/2) - (13.7 LB/2)]*(36 IN/2)
= 394 IN-LB



h1= 6.0 IN
h2= 36.0 IN
h3= 36.0 IN
h4= 36.0 IN

depth= 12.0 IN

CONNECTION MOMENT
M_{CONN-T} = [(M_{1-2})+(M_{2-3})]
= 796 IN-LB

M_{CONN-B} = [(M_{3-4})+(M_{4-5})]
= 1,108 IN-LB

VERIFY ADEQUACY OF CONNECTION
Mconn= 1,108 IN-LB

VERIFY ADEQUACY OF COLUMN
Mcols 591 IN-LB

3

LONGITUDINAL BRACING ANALYSIS: REAR X-BRACE (BACK-TO-BACK ROWS) (SEE DETAIL F & J)

BRACING CAPACITY IS GOVERNED BY TENSION CAPACITY OF CROSS BRACING, AND SHEAR CAPACITY OF CONNECTION SCREW.

0.75 *Vlong= 0.75 * Vcongh *2 BAYS/1 X-BRACE
= 51 LB * 2 BAYS/1 X-BRACE SETS
= **102 LB** <== 2 BAY TRIBUTARY TO X-BRACES.

Vdiag= Vtot(Ldiag/Lhoriz)
= **171 LB** <== SEISMIC LOAD IN TENSION

TENSION CAPACITY OF STRAP
Tallow= 0.6 * Fy * ARE(gross)
= **972 LB** **> Vdiag OK IN TENSION**
OR
Tallow= 0.5 * Fu * ARE(net)
= **1018 LB** **> Vdiag OK IN TENSION**

SHEAR CAPACITY OF #8 SHEET METAL SCREW TAKEN AS LEAST OF Pns:

Pns= 4.2*(t2*3*Φ)*0.5*Fu2
= 4.2 * [(0.06 IN)^3 * 0.165 IN]*0.5 * 58000 PSI
= 1,454 LB
Pns= 2.7*t1*Φ*Fu1
= 2.7 * 0.06 IN * 0.165 IN * 58000 PSI
= 1,550 LB
Pns= 2.7*t2*Φ*Fu2
= 2.7 * 0.06 IN * 0.165 IN * 58000 PSI
= 1,550 LB

Pns-eff/Ω= (1454 LB/3)
= **485 LB** **> 171 LB Vdiag OK IN SHEAR**

(3/4"x16 GA. STRAP)
AREA(gross)= 0.0450 IN^2
AREA(net)= 0.0351 IN^2
Lhoriz= 48.0 IN
Lvert= 64.0 IN
Udiag= 80.0 IN
Fy= 36,000 PSI
Fu= 58,000 PSI

ASD safety factor for screw, Ω= 3

4

COLUMN ANALYSIS: TYPE 6-12 SHELVES (SINGLE ROW) (SEE DETAIL A)

TRANSVERSE DIRECTION
ANALYZED PER AISI COLD FORM STEEL MANUAL:
(1.0-1.15Ω_0) Pstatic + 0.75 Pseismic= 1,924 LB
0.75 Mcol= 443 IN-LB

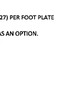
KxLx/rx = 1.2*31.5 IN/0.4756 IN
= 79.5 <== (KL*)/rmax
KyLy/ry = 1*12.7 IN/0.3272 IN
= 38.7

AXIAL
Fe= π^2E/(KL*/rmax)^2
= 46.1 KSI
Fy/2= 18.0 KSI
SINCE, Fe > Fy/2
THEN, Fn= Fy(1-Fy/4Fe)
= 36 KSI*[1-36 KSI/(4*46.1 KSI)]
= 29.0 KSI
Pn= Ae*Fn
= 5,497 LB
Ωc= 1.92

Pa= Pn/Ωc
= 5497 LB/1.92
= 2,863 LB
P/Pa= 0.46 > 0.15

FLEXURE
CHECK: P/Pa + (Cmx*Mx)/(Max*αx) ≤ 1.0
P/Pa + My/Ma ≤ 1.0
Pno= Ae*Fy
= 0.19 IN^2 *36000 PSI
= 6,831 LB
Pao= Pno/Ωc
= 6831 LB/1.92
= 3,558 LB
Myleld=My= Se*Fy
= 0.0531 IN^3 * 36000 PSI
= 1,910 IN-LB
Mao= My/Ωf
= 1910 IN-LB/1.67
= 1,144 IN-LB
Pcr= π^2E/(KL)^2
= π^2*29500 KSI * 0.043 IN^4 /(1.2*31.5 IN)^2
= 8,766 LB
αx= [1/[1-(Oc*P/Pe)]]^-1
= [1/[1-(1.92*1324 LB/8746 LB)]]^-1
= 0.71

Pstatic= # OF LEVELS*(wPL + wDL)
= 8 LEVELS * (230 LB + 5 LB)/2
= 940 LB
Pseismic= Σ (I*Fm)/depth=(Movt/d)
= 478 LB



SECTION PROPERTIES
A= 0.75 IN
b= 1.5 IN
t= 0.060 IN
Aeff= 0.190 IN^2
rx= 0.043 IN^4
Sx= 0.053 IN^3
rx= 0.476 IN
Iy = 0.020 IN^4
Sy = 0.054 IN^3
ry = 0.327 IN
Kx = 1.2
Lx = 31.5 IN
Ky = 1.0
Ly = 12.7 IN
Fy= 36 KSI
E= 29,500 KSI
Ωb= 1.67
Cmx= 0.85
Cb= 1.0

THUS, (1324 LB/2863 LB) + (0.85*443 IN-LB)/(1144 IN-LB*0.71) = **0.93** **< 1.0 OK**
(1324 LB/3558 LB) + (443 IN-LB/1144 IN-LB) = **0.76** **< 1.0 OK**

5

TRANSVERSE MOMENT CONNECTION ANALYSIS: TYPE 6-12 SHELVES (SINGLE ROW) (SEE DETAIL E)

Mconn, max= 0.75 Mconn
= 831 IN-LB

(A) MOMENT CAPACITY OF METAL STRINGER:
fb = Mconn,max / Sx
= 831 IN-LB / 0.265 IN^3
= 3,135 PSI

fb/Fb = fb/(0.6*Fy)
= 3135 PSI/21600 PSI
= **0.15** **< 1.0 OK**

Sx = 0.265 IN^3
Fy= 36,000 PSI

MAXIMUM LOADS ON TABS:
Pmax = Mconn, max/Tab Distance
= 208 LB

(B) SHEAR CAPACITY OF CONNECTOR TABS:

Area = 2 * t1 * d
= 0.1 IN * 0.285 IN
= 0.028 IN^2

Pallow = Area * (0.4Fy)
= 410 LB **> Pmax, OK**

TAB PROPERTIES
Height, h = 0.281 IN
Depth, d = 0.285 IN
Thickness, t1 = 0.05 IN
Tab Distance = 4.0 IN

(C) BEARING ON COLUMN:
Fun= 58,000 PSI
16ga column, t = 0.06 IN

Abrg.= 2 * t1 * t
= 0.1 IN * 0.06 IN
= .006 IN^2

Pallow = Area * Fbearing
= 348 LB **> Pmax, OK**

6

SLAB & SOIL ANALYSIS: TYPE 6-12 SHELVES (SINGLE ROW)

(1.2+0.2S_{DS})DL+(0.85+0.2S_{DS})*PL+1.5*EL= 1,782 LB

(A) PUNCTURE
Pmax = 1782 LB

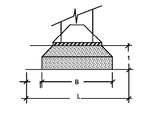
Fpunct = 2.66*sqrt(f'c)
= 133 PSI

Apunct = (W+8+t)*2*t
= 90. IN^2

fv/Fv = Pmax/(Apunct * Fpunct)
= **0.15** **< 1.0 OK**

BASE PLATE WIDTH (W)= 5.00 IN
BASE PLATE DEPTH (B)= 2.25 IN

(B) SLAB TENSION
Asoil = Pmax * 144/fsoil
= 513.4 IN^2
L = (Asoil)^.5
= 22.7 IN
B = sqrt(B*W) + t
= 7.4 IN
l = (L-B)/2
= 7.7 IN



Mconc = wl^2/8 = (fsoil*l^2) / (144^2)
= 101.6 IN-LB

Sconc = 1 in * t^2 / 6
= 2.67 IN^3

fconc = 5Φ* sqrt(f'c) WHERE Φ=0.55
= 138 PSI

fb/Fb = Mconc/(Sconc*fconc)
= **0.28** **< 1.0 OK**

SLAB:
t = 4.0 IN
f'c = 2,500 PSI

Φ = 0.55

SOIL:
fs = 500 PSF

7

OVERTURNING ANALYSIS: TYPE 6-12 SHELVES (SINGLE ROW) (SEE DETAIL C)

DEPTH OF SINGLE UNIT = 12 IN
TOP SHELF HEIGHT = 120 IN
LEVELS= 10 LVL

(A) FULLY LOADED:
Vtotal = 68 LB

Mot = Σ(Fp*h)*0.75
= 4,304 IN-LB

Mst = Σ[(0.6-0.115Ω_0)wDL +0.75*[(0.6-0.145Ω_0)*0.67wPL] x Depth / 2
= 4,094 IN-LB

PupLift = (Mot - Mst)/D
= 17 LB <= UPLIFT

(B) TOP SHELF LOADED

Vtop = 12 LB

Mot = Σ(Fp*h)*0.75
= 1,082 IN-LB

Mst = Σ[(0.6-0.115Ω_0)wDL + 0.75*(0.6-0.145Ω_0wPL] x Depth / 2
= 757 IN-LB

PupLift = (Mot - Mst)/D
= 27 LB <= UPLIFT

ANCHOR:
QUANTITY= 1 PULLOUT = 750 LB SHEAR = 800 LB
OCCURRENCE = 1

P_a/Pt + V_a/Vt ≤ 1.2
COMBINED STRESS(A) = (17 LB/(1*750 LB)) + (34 LB/(1*800 LB))
= **0.07** **< 1.2 OK**

COMBINED STRESS(B) = (27 LB/(1*750 LB)) + (6 LB/(1*800 LB))
= **0.04** **< 1.2 OK**

USE (1) 3/8"Ø x 2-1/2" NOM. EMBED. HILTI KH-EZ SCREW ANCHOR (ICC ESR-3027) PER FOOT PLATE
ANCHORAGE REQUIRED AT EVERY BAY
USE 3/8"Ø x 2-3/8" NOM. EMBED. POWERS POWER STUD SD2 (ICC ESR-2502) AS AN OPTION.
(PULLOUT CAPACITY=750 LB, SHEAR CAPACITY=900 LB, OK BY SIMPLE REVIEW)

8

OVERTURNING ANALYSIS: TYPE 6-12 SHELVES (BACK-TO-BACK ROWS) (SEE DETAIL C)

DEPTH OF BACK-TO-BACK UNIT = 24 IN
TOP SHELF HEIGHT = 120 IN
LEVELS= 10 LVL

(A) FULLY LOADED:
Vtotal = 137 LB

Mot = Σ(Fp*h*2 UNITS)*0.75
= 8,608 IN-LB

Mst = Σ[(0.6-0.115Ω_0)wDL +0.75*[(0.6-0.145Ω_0)*0.67wPL] x Depth / 2
= 16,378 IN-LB

PupLift = (Mot - Mst)/D
= 0 LB <= NO UPLIFT

(B) TOP SHELF LOADED

Vtop = 24 LB

Mot = Σ(Fp*h*2 UNITS)*0.75
= 2,164 IN-LB

Mst = Σ[(0.6-0.115Ω_0)wDL + 0.75*[(0.6-0.145Ω_0)wPL] x Depth / 2
= 3,029 IN-LB

PupLift = (Mot - Mst)/D
= 0 LB <= NO UPLIFT

ANCHOR:
QUANTITY= 1 PULLOUT = 750 LB SHEAR = 800 LB
OCCURRENCE = 2

P_a/Pt + V_a/Vt ≤ 1.2
COMBINED STRESS(A) = (0 LB/(1*750 LB)) + (136 LB/(1*800 LB))
= **0.17** **< 1.2 OK**

COMBINED STRESS(B) = (0 LB/(1*750 LB)) + (24 LB/(1*800 LB))
= **0.03** **< 1.2 OK**

USE (1) 3/8"Ø x 2-1/2" NOM. EMBED. HILTI KH-EZ SCREW ANCHOR (ICC ESR-3027) PER FOOT PLATE
ANCHORAGE REQUIRED AT EVERY OTHER BAY AND AT ENDS, PERIMETER POST ONLY
USE 3/8"Ø x 2-3/8" NOM. EMBED. POWERS POWER STUD SD2 (ICC ESR-2502) AS AN OPTION.
(PULLOUT CAPACITY=750 LB, SHEAR CAPACITY=900 LB, OK BY SIMPLE REVIEW)

9

ADDRESS:
OREILLY AUTO (RANDOLPH, MA) RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

REV.	DATE	BY	DESCRIPTION
◁			
◁			
◁			
◁			

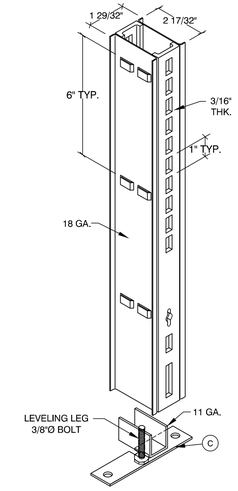
SEIZMIC
EST. 1985
SEIZMIC ENGINEERING, INC.
1130 E. Cypress St.
Covina, California
91724
Tel.(909)869-0989

DRAWN BY:	N.T. / A.N.
DATE:	07/22/26
LAST REV. BY:	
REV. DATE:	
TYPE:	LOZ
SCALE:	N.T.S.
APRV'D BY:	SAL E. FATEEN

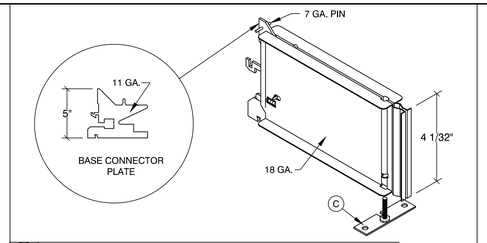
COMMONWEALTH OF MASSACHUSETTS
SAL E. FATEEN
STRUCTURAL
NO. 39968
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES
06-30-2028

DESCRIPTION:
LIGHT DUTY STORAGE (FIXTURE #1A)

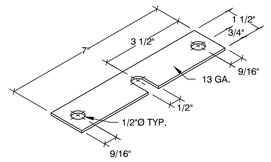
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26-2121-A



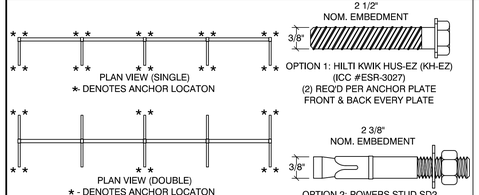
A UPRIGHT



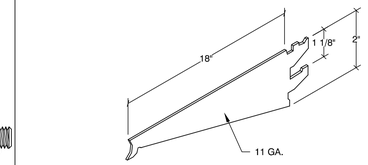
B BASE BRACKET



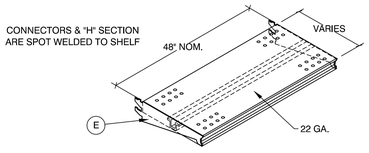
C ANCHOR PLATE



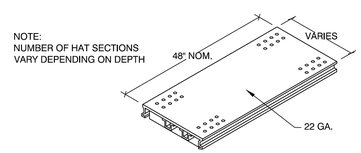
D ANCHOR



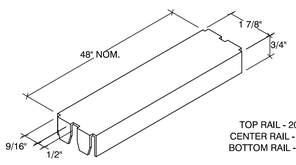
E ARM



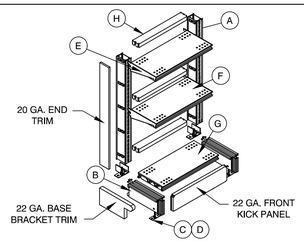
F SHELF



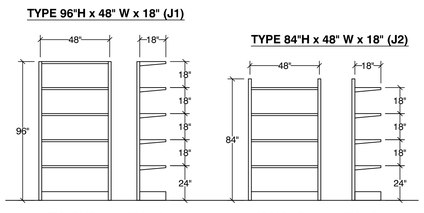
G BASE DECK



H HORIZONTAL BRACE



I GENERAL CONFIGURATION



J LIGHT DUTY STORAGE GONDOLA ELEVATIONS

LIGHT DUTY GONDOLA ANALYSIS

SCOPE:
THE PURPOSE OF THIS ANALYSIS IS TO SHOW THAT THE FOLLOWING LIGHT DUTY STORAGE FIXTURE IS IN COMPLIANCE WITH SECTION 1613 OF THE 10th MABC / 2021 IBC AND THE ASCE 7-16.

PARAMETERS:
THE STORAGE FIXTURE UNIT USED IN THIS PROJECT CONSISTS OF LOZIER GONDOLA TYPE COMPONENTS. FIXTURE UNITS WILL BE ANALYZED UTILIZING THE FOLLOWING LATERAL FORCE FORMULA:

LATERAL FORCE:

V = Cs * Ws WHERE Cs = S_{DS}/(R/I)
= ((2/3) * Fa * Ss * (R) * Ws

SPECIFICATIONS:
- MAIN STEEL — Fy = 36000 PSI MIN. YIELD STEEL
- ANCHORS — 3/8"Ø x 2-1/2" NOM. EMBED. HILTI KH-EZ SCREW ANCHOR (ICC ESR-3027) OR 3/8"Ø x 2-3/8" NOM. EMBED. POWERS POWER STUD SD2 (CC ESR-2502)
- SLAB — 4 IN (minimum required) x 2500 PSI (minimum required)
- SOIL — 500 PSF

CONFIGURATIONS:

TYPE 96"Hx48"Wx18"D	SINGLE SIDED
TYPE 84"Hx48"Wx18"D	SINGLE SIDED
TYPE 78"Hx48"Wx18"D	DOUBLE SIDED

STORAGE LOAD:

PRODUCT LOAD = **70 LB** PER SHELF

1

COLUMN ANALYSIS: TYPE 96"Hx48"Wx18"D (SEE DETAIL A)

Pmax = [1+(0.115$_{Sds}$)Pcol
= 385 LB

Mmax = Mcol
= 4,558 IN-LB

Kdx/rx = 2.1*96 IN/1.057 IN
= 190.7

Kdy/ry = 1*24 IN/0.484 IN
= 49.6 → 190.7 (GOVERNS)

Cc = (2π^2E/Fy)^.5
= 126.1

SINCE KL/r > Cc USE Fa = [12π^2E]/[23(KL/r)^2]

Fa = [12π^2E]/[23(KL/r)^2]
= 4,105 PSI

fa = Pcol / Area
= 500 PSI

fb = M/Sx
= 4558 IN-LB/0.676 IN^3
= 6,743 PSI

fa/Fa = 0.12 < 0.15 USE fa/Fa + fb/Fb

Fb = .6*Fy
= 21,600 PSI

F'e = 12π^2E/23(KL/r)^2
= N/A

fb/Fb = 0.31

COMBINED STRESS = **0.43** **< 1.0 O.K.**

COLUMN SECTION PROPERTIES
t = 18 GA.
Fy= 36,000 PSI
AREA = 0.77 IN^2
Ix = .867 IN^4
Sx = .676 IN^3
rx = 1.057 IN
Iy = 0.1820 IN^4
Sy = 0.2700 IN^3
ry = 0.4840 IN
Ix = 96 IN
Iy = 24 IN

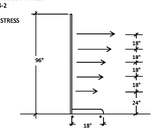
2

LOADS & DISTRIBUTION: TYPE 96"Hx48"Wx18"D (SEE DETAIL J)
ANALYSIS BASED ON SECTION 1613 OF THE 10th MABC / 2021 IBC AND THE ASCE 7-16.

SITE CLASS = D
V = Cs * Ws WHERE Cs = S_{DS}/(R/I)
AND Ws = OPERATING WEIGHT
S_{DS} = 2/3*Fa*Ss WHERE Fa = 1.6, Ss = 0.23
= 0.245
I = 1.50 <=== IN AREA OF PUBLIC ACCESS
R = 3 <=== TABLE 15.4-2

REDUCTION = 0.7 <=== WORKING STRESS

NO. OF LEVELS = 5 LVL
PRODUCT LOAD, wPL = 70 LB/LVL
DEAD LOAD, wDL = 5 LB/LVL



LONGITUDINAL & TRANSVERSE DIRECTION

V = 0.7*[0.245*1.5*(0.67*350 LB + 25 LB)/3]
= 22 LB

LATERAL FORCE DISTRIBUTION

h	LEVEL	WEIGHT	HEIGHT	W X H	Fi	Mot
24 IN	1	75 LB	24 IN	1,800 IN-LB	2 LB	43 IN-LB
18 IN	2	75 LB	42 IN	3,150 IN-LB	3 LB	133 IN-LB
18 IN	3	75 LB	60 IN	4,500 IN-LB	4 LB	267 IN-LB
18 IN	4	75 LB	78 IN	5,850 IN-LB	6 LB	452 IN-LB
18 IN	5	75 LB	96 IN	7,200 IN-LB	7 LB	685 IN-LB
96 IN		375 LB		Σ = 22,500 IN-LB	22 LB	1,578 IN-LB

Mcol(seismic)= Σ(V * Hi)
= 1,578 IN-LB

Mcol(static) = (wPL+wDL) x Depth x # of levels /2
= 75 LB x 18 IN x 5 / 2
= 3,375 IN-LB

Mcol(total) = Mcol(static) + 0.75*Mcol(seismic)
= 4,558 IN-LB

3

ARM ANALYSIS: TYPE 96"Hx48"Wx18"D (SEE DETAIL E)

ARM
A = 0.090 IN^2
Fy = 36,000.0 PSI
d = 1.125 IN

(A) CHECK TENSION CAPACITY:
ARM SPAN = 18.0 IN
LOAD = 75 LB/LEVEL

M = LOAD x (ARM SPAN/2)
= 75 LB/LEVEL x 18 IN/2
= 675 IN-LB

ASSUME ONLY THE TOP CLIP IN TENSION

TENSION CAPACITY = T= 0.6Fy x A
= 0.6 x 36000 PSI x 0.09 IN^2
= 1,944 LB

MOMENT CAPACITY = T x d
= 1944 LB x 1.125 IN
= **2,187 IN-LB** **> 675 IN-LB OK**

(B) CHECK FOR SHEAR CAPACITY:

Varm = LOAD/2
= (70 LB + 5 LB) / 2
= 38 LB/LEVEL

SHEAR CAPACITY = 0.4Fy * A
= 0.4 x 36000 PSI x 0.09 IN^2
= **1,296 LB** **> 38 LB OK**

BASE BRACKET ANALYSIS: TYPE 96"Hx48"Wx18"D (SEE DETAIL B)

Mcol(MAX) = 4,558 IN-LB

BASE BRACKET
Fy = 36,000PSI
Sx = 1.18 IN^3

fb = Mcol(total)/Sx
= 4558 IN-LB / 1.18 IN^3
= 3,863PSI

Fb = 0.6 x 36000 PSI
= 21,600PSI

fb/Fb = 3863 PSI / 21600 PSI
= **0.18** **< 1.0 OK**

4

OVERTURNING ANALYSIS: TYPE 96"Hx48"Wx18"D (SEE DETAIL D)
DEPTH (D) = 18 IN
TOP SHELF HEIGHT = 96 IN
LEVELS= 5 LVL

(A) FULLY LOADED:
Vtotal = 22 LB

Mot = Σ(Fp*h)*0.75
= 1,183 IN-LB

Mst = Σ[(0.6-0.115$_{Sds}$)wDL +0.75*(0.6-0.14$_{Sds}$)*0.67wPL] x Depth / 2
= 1,024 IN-LB

Pupllft = (Mot - Mst)/D
= 9 LB <= UPLIFT

(B) TOP SHELF LOADED ONLY:
Vtop = [0.7*0.245*1.5*(70 LB + 25 LB)/3]
= 8 LB

Mot = Vtop * h
= 783 IN-LB

Mst = Σ[(0.6-0.115$_{Sds}$)wDL + 0.75*(0.6-0.14$_{Sds}$)wPL] x Depth / 2
= 396 IN-LB

Pupllft = (Mot - Mst)/D
= 21 LB <= UPLIFT

ANCHOR:
QUANTITY= 2 PULLOUT = 750 LB SHEAR = 800 LB
OCCURRENCE = 1

Ps/Pt + Vs/Vt ≤ 1.2
COMBINED STRESS(A) = (9 LB/(2*750 LB)) + (11 LB/(2*800 LB))
= **0.01** **< 1.2 OK**

COMBINED STRESS(B) = (21 LB/(2*750 LB)) + (4 LB/(2*800 LB))
= **0.02** **< 1.2 OK**

(2) 3/8"Ø x 2-1/2" NOM. EMBED. HILTI KH-EZ SCREW ANCHOR (ICC ESR-3027)
PER ANCHOR PLATE; ANCHOR PERIMETER ONLY EVERY BAY.
OR
USE 3/8"Ø x 2-3/8" NOM. EMBED. POWERS POWER STUD SD2 (ICC ESR-2502) AS AN OPTION.
(PULLOUT CAPACITY=750 LB, SHEAR CAPACITY=900 LB, OK BY SIMPLE REVIEW)

5

OVERTURNING ANALYSIS: TYPE 96"Hx48"Wx18"D (SEE DETAIL D)
DEPTH (D) = 18 IN
TOP SHELF HEIGHT = 96 IN
LEVELS= 5 LVL

(A) FULLY LOADED:
Vtotal = 22 LB

Mot = Σ(Fp*h)*0.75
= 1,183 IN-LB

Mst = Σ[(0.6-0.115$_{Sds}$)wDL +0.75*(0.6-0.14$_{Sds}$)*0.67wPL] x Depth / 2
= 1,024 IN-LB

Pupllft = (Mot - Mst)/D
= 9 LB <= UPLIFT

(B) TOP SHELF LOADED ONLY:
Vtop = [0.7*0.245*1.5*(70 LB + 25 LB)/3]
= 8 LB

Mot = Vtop * h
= 783 IN-LB

Mst = Σ[(0.6-0.115$_{Sds}$)wDL + 0.75*(0.6-0.14$_{Sds}$)wPL] x Depth / 2
= 396 IN-LB

Pupllft = (Mot - Mst)/D
= 21 LB <= UPLIFT

ANCHOR:
QUANTITY= 2 PULLOUT = 750 LB SHEAR = 800 LB
OCCURRENCE = 1

Ps/Pt + Vs/Vt ≤ 1.2
COMBINED STRESS(A) = (9 LB/(2*750 LB)) + (11 LB/(2*800 LB))
= **0.01** **< 1.2 OK**

COMBINED STRESS(B) = (21 LB/(2*750 LB)) + (4 LB/(2*800 LB))
= **0.02** **< 1.2 OK**

(2) 3/8"Ø x 2-1/2" NOM. EMBED. HILTI KH-EZ SCREW ANCHOR (ICC ESR-3027)
PER ANCHOR PLATE; ANCHOR PERIMETER ONLY EVERY BAY.
OR
USE 3/8"Ø x 2-3/8" NOM. EMBED. POWERS POWER STUD SD2 (ICC ESR-2502) AS AN OPTION.
(PULLOUT CAPACITY=750 LB, SHEAR CAPACITY=900 LB, OK BY SIMPLE REVIEW)

6

OVERTURNING ANALYSIS: TYPE 78"Hx48"Wx18"D (SEE DETAIL D)
DOUBLE SIDED DEPTH (D) = 36 IN
TOP SHELF HEIGHT = 78 IN
LEVELS= 4 LVL

(A) FULLY LOADED/DOUBLE SIDED LOADED:
Vtotal = 36 LB

Mot = Σ(Fp*h)*0.75
= 1,576 IN-LB

Mst = Σ[(0.6-0.115$_{Sds}$)wDL +0.75*(0.6-0.14$_{Sds}$)*0.67wPL] x Depth / 2
= 3,278 IN-LB

Pupllft = (Mot - Mst)/D
= 0 LB <= NO UPLIFT

(B) TOP SHELF LOADED/DOUBLE SIDED LOADED:
Vtop = [0.7*0.245*1.5*(70 LB + 20 LB) *2/3]
= 15 LB

Mot = Vtop*h*0.75
= 904 IN-LB

Mst = Σ[(0.6-0.115$_{Sds}$)wDL +0.75*(0.6-0.14$_{Sds}$)wPL] x Depth / 2
= 1,482 IN-LB

Pupllft = (Mot - Mst)/D
= 0 LB <= NO UPLIFT

ANCHOR:
QUANTITY= 2 PULLOUT = 750 LB SHEAR = 800 LB
OCCURRENCE = 2

Ps/Pt + Vs/Vt ≤ 1.2
COMBINED STRESS(A) = (0 LB/(2*750 LB)) + (36 LB/(2*800 LB))
= **0.02** **< 1.2 OK**

COMBINED STRESS(B) = (0 LB/(2*750 LB)) + (16 LB/(2*800 LB))
= **0.01** **< 1.2 OK**

USE (2) 3/8"Ø x 2-1/2" NOM. EMBED. HILTI KH-EZ SCREW ANCHOR (ICC ESR-3027)
PER ANCHOR PLATE; ANCHOR PERIMETER ONLY, EVERY OTHER BAY.
OR
USE 3/8"Ø x 2-3/8" NOM. EMBED. POWERS POWER STUD SD2 (ICC ESR-2502) AS AN OPTION.
(PULLOUT CAPACITY=750 LB, SHEAR CAPACITY=900 LB, OK BY SIMPLE REVIEW)

ADDRESS:
OREILLY AUTO (RANDOLPH, MA) RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

REV.	DATE	BY	DESCRIPTION
△			
△			
△			
△			

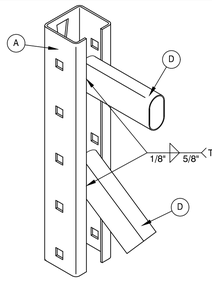
SEISMIC
EST. 1985
SEISMIC ENGINEERING, INC.
1130 E. Cypress St.
Covina, California
91724
Tel.(909)869-0989

DRAWN BY:	N.T. / A.N.
DATE:	07/22/26
LAST REV. BY:	
REV. DATE:	
TYPE:	LOZ
SCALE:	N.T.S.
APRVD BY:	SAL E. FATEEN

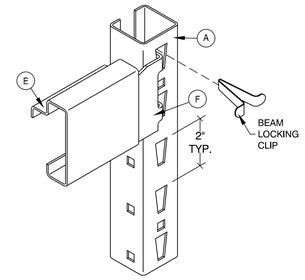
COMMONWEALTH OF MASSACHUSETTS
SAL E. FATEEN
STRUCTURAL
NO. 39968
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES
06-30-2028

DESCRIPTION:
LIGHT DUTY STORAGE (FIXTURE #2A)

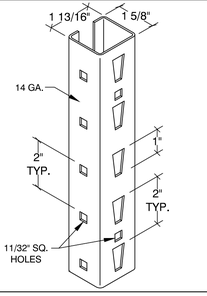
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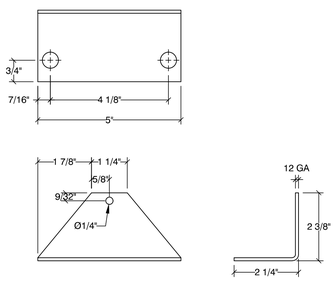
V-A TYPICAL BRACE TO COLUMN CONNECTION



V-B TYPICAL BEAM TO COLUMN CONNECTION



A COLUMN



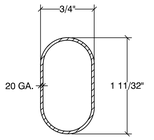
B FOOT PLATE



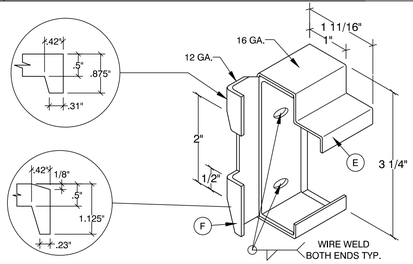
OPTION 1: HILTI KWIK HUS-EZ (KH-EZ)
(ICC #ESR-3027)
(1) REQ'D PER FOOT PLATE

OPTION 2: POWERS STUD SD2
(ICC #ESR-2502)
(1) REQ'D PER FOOT PLATE

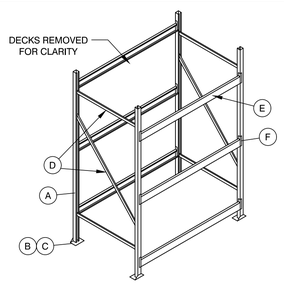
C ANCHOR



D HORIZONTAL & DIAGONAL BRACE



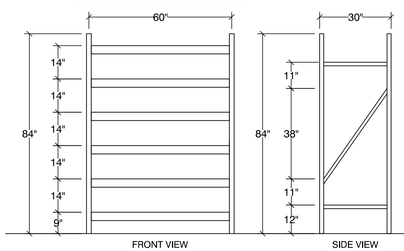
F CONNECTOR



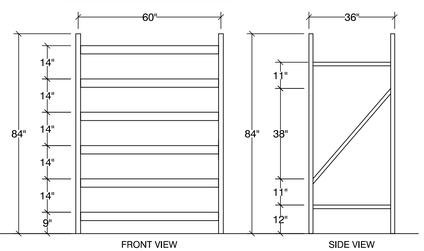
E BEAM

H GENERAL CONFIGURATION

TYPE BATTERY FLOW (J1)



TYPE GRAVITY FLOW (J2)



J GRAVITY RACK FIXTURE ELEVATIONS

GRAVITY RACK ANALYSIS

SCOPE:
THE PURPOSE OF THIS ANALYSIS IS TO SHOW THAT THE FOLLOWING GRAVITY RACK COMPLIES WITH REQUIREMENTS SET FORTH IN SECTION 1613 OF THE 10TH MABC / 2021 IBC WHERE THE LATERAL FORCES ARE DETERMINED IN ACCORDANCE WITH SECTION 15.5 OF THE ASCE 7-16.

PARAMETERS:

LATERAL FORCE:

V = Cs * Wtotal WHERE Cs = S_{DS}/(R/I)
= [(2/3) * Fa * Ss * I/R]*W

NOTE: ANALYSIS WILL CHECK FOR OVERTURNING ONLY SINCE UNITS ARE UNDER 8 FT.

SPECIFICATIONS:

- MAIN STEEL Fy = 50000 PSI
- ANCHORS 3/8"Ø x 2-1/2" NOM. EMBED. HILTI KH-EZ SCREW ANCHOR (ICC ESR-3027) OR 3/8"Ø x 2-3/8" NOM. EMBED. DEWALT POWER STUD SD2 (ICC ESR-2502)
- SLAB 4 IN (minimum required) x 2500 PSI (minimum required)
- SOIL 500 PSF

1

CONFIGURATIONS:

TYPE GRAVITY FLOW (84"H x 60"W x 30"D)

NUMBER OF LEVELS = 6 LVL

LOAD PER FLOW SHELF = 500 LB

TOTAL LOAD ON BULK RACK SYSTEM = 3000 LB

TYPE GRAVITY FLOW (72"H x 60"W x 30"D)

NUMBER OF LEVELS = 5 LVL

LOAD PER FLOW SHELF = 500 LB

TOTAL LOAD ON BULK RACK SYSTEM = 2500 LB

SIGNAGES

GRAVITY FLOW CHECKED WITH ADDITIONAL 525 LB TO ACCOUNT FOR WEIGHT OF SIGNAGES, SUPPORTS, AND HARDWARE

2

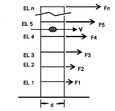
LOADS & DISTRIBUTION: TYPE GRAVITY FLOW (84"H x 60"W x 30"D) (SEE DETAIL J)

ANALYZE PER SECTION 1613 OF THE 10TH MABC / 2021 IBC WHERE LATERAL FORCES ARE DETERMINED IN ACCORDANCE WITH SECTION 15.5 OF THE ASCE 7-16:

SITE CLASS = D
V = Cs * Wtotal WHERE Cs = S_{DS}/(R/I)
AND Wtotal = (0.67wPL + wDL)
S_{DS} = 2/3*Fa*Ss AND Fa = 1.6 & Ss = 0.23
= 0.25

I = 1.50 <== PUBLIC ACCESS
R = 4

PRODUCT LOAD PER LEVEL, wPL= 500 LB
DEAD LOAD PER LEVEL, wDL= 25 LB
NO. OF LEVELS = 6 LVL
DEPTH= 30 IN



LATERAL FORCE

FULLY LOADED
V = [0.245*1.5*(0.67*3000 LB+150 LB)/4]
= 189 LB

LATERAL FORCE DISTRIBUTION						
h	LEVEL	WEIGHT	HEIGHT	W X H	FI	Mot
9 IN	1	525 LB	9 IN	4,725 IN-LB	6.8 LB	61 IN-LB
14 IN	2	525 LB	23 IN	12,075 IN-LB	17.3 LB	398 IN-LB
14 IN	3	525 LB	37 IN	19,425 IN-LB	27.9 LB	1,030 IN-LB
14 IN	4	525 LB	51 IN	26,775 IN-LB	38.4 LB	1,958 IN-LB
14 IN	5	525 LB	65 IN	34,125 IN-LB	48.9 LB	3,180 IN-LB
14 IN	6	525 LB	79 IN	41,475 IN-LB	59.5 LB	4,698 IN-LB
79 IN				Σ WH =	198.7 LB	11,326 IN-LB

TOP SHELF LOADED ONLY
Vtop = [0.245*1.5*(500 LB+150 LB)/4]
= 60 LB

LATERAL FORCE DISTRIBUTION						
h	LEVEL	WEIGHT	HEIGHT	W X H	FI	Mot
9 IN	1	25 LB	9 IN	225 IN-LB	0.3 LB	3 IN-LB
14 IN	2	25 LB	23 IN	575 IN-LB	0.7 LB	17 IN-LB
14 IN	3	25 LB	37 IN	925 IN-LB	1.2 LB	44 IN-LB
14 IN	4	25 LB	51 IN	1,275 IN-LB	1.7 LB	84 IN-LB
14 IN	5	25 LB	65 IN	1,625 IN-LB	2.1 LB	137 IN-LB
14 IN	6	525 LB	79 IN	41,475 IN-LB	53.8 LB	4,250 IN-LB
79 IN				Σ WH =	46,100 IN-LB	59.8 LB	4,536 IN-LB

3

OVERTURNING ANALYSIS: TYPE GRAVITY FLOW (84"H x 60"W x 30"D) (SEE DETAIL B & C)

DEPTH OF UNIT = 30 IN
TOP SHELF HEIGHT = 79 IN

(A) FULLY LOADED:
0.7*V = 139 LB

Mot = Σ(fi * Hi)
= 11,326 IN-LB

Mst = Σ[(0.6-0.145$_{SD}$)wDL +(0.6-0.145$_{SD}$)*0.67wPL] x Depth / 2
= 18,327 IN-LB

Puplift = (0.7*Mot - Mst)/D
= 0 LB <= NO UPLIFT

(B) TOP SHELF LOADED:

0.7*Vtop = 42 LB

Mot = Σ(fi * Hi)
= 4,536 IN-LB

Mst = Σ[(0.6-0.145$_{SD}$)wDL + (0.6-0.145$_{SD}$)wPL] x Depth / 2
= 5,515 IN-LB

Puplift = (0.7*Mot - Mst)/D
= 0 LB <= NO UPLIFT

ANCHOR:
QUANTITY= 1 PULLOUT = 750 LB SHEAR = 800 LB

Pu/Pt + Vu/Vt ≤ 1.2
COMBINED STRESS(A) = (0 LB/(1*750 LB)) + (70 LB/(1*800 LB))
= **0.09** **< 1.2 OK**

COMBINED STRESS(B) = (0 LB/(1*750 LB)) + (21 LB/(1*800 LB))
= **0.03** **< 1.2 OK**

USE (1) 3/8"Ø x 2-1/2" NOM. EMBED. HILTI KH-EZ SCREW ANCHOR (ICC ESR-3027) PER FOOT PLATE
OR
USE 3/8"Ø x 2-3/8" NOM. EMBED. DEWALT POWER STUD SD2 (ICC ESR-2502) AS AN OPTION.
(PULLOUT CAPACITY=750 LB, SHEAR CAPACITY=900 LB, OK BY SIMPLE REVIEW)

4

ADDRESS:
OREILLY AUTO (RANDOLPH, MA) RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

REV.	DATE	BY	DESCRIPTION

SEIZMIC
EST. 1985
SEIZMIC ENGINEERING, INC.
1130 E. Cypress St.
Covina, California 91724
Tel.(909)869-0989

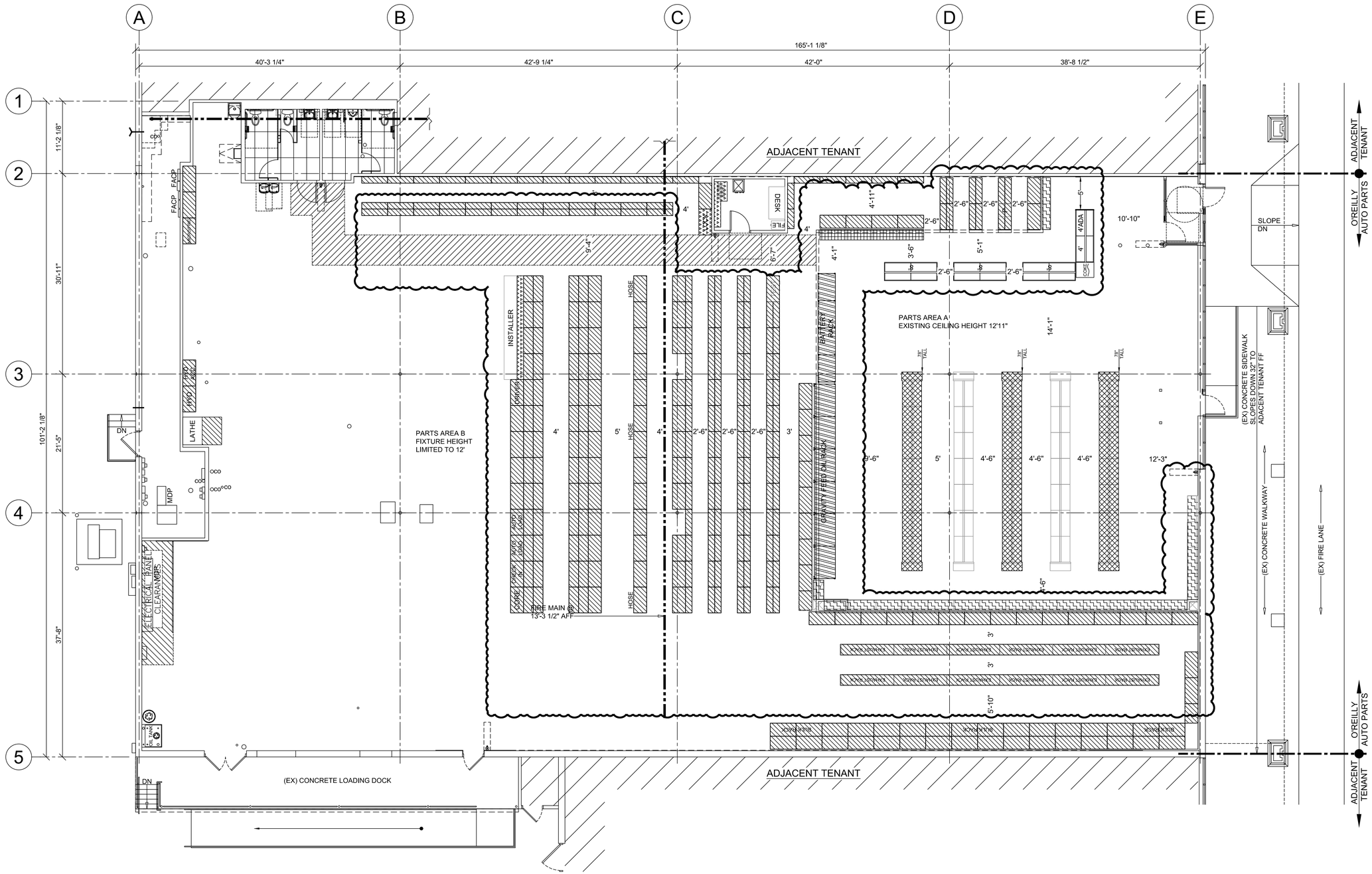
DRAWN BY:	N.T. / A.N.
DATE:	07/22/26
LAST REV. BY:	
REV. DATE:	
TYPE:	LOZ
SCALE:	N.T.S.
APR'VD BY:	SAL E. FATEEN

COMMONWEALTH OF MASSACHUSETTS
SAL E. FATEEN
STRUCTURAL
NO. 39968
REGISTERED PROFESSIONAL ENGINEER

EXPIRES
06-30-2028

DESCRIPTION:
GRAVITY RACK (FIXTURE #3A)

DRAWING NUMBER:
26-2121-C



FIXTURE #1A - L. D. STORAGE	= 96" HIGH SECURED FIXTURES (LOZIER)	FIXTURE #2A - L. D. GONDOLA = 96" HIGH SECURED FIXTURES (LOZIER)
FIXTURE #1A - L. D. STORAGE	= 120" HIGH SECURED FIXTURES (LOZIER)	FIXTURE #3A - GRAVITY FEED = 84" HIGH SECURED FIXTURES (LOZIER)
FIXTURE #2A - L. D. GONDOLA	= 78" HIGH SECURED FIXTURES (LOZIER)	FIXTURE #2A - L. D. GONDOLA ≤60" HIGH UNSECURED (LOZIER)
FIXTURE #2A - L. D. GONDOLA	= 84" HIGH SECURED FIXTURES (LOZIER)	

ADDRESS:
O'REILLY AUTO (RANDOLPH, MA) RL1
47 MEMORIAL PKWY
RANDOLPH, MA 02368

REV.	DATE	BY	DESCRIPTION
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△			
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SEIZMIC
EST. 1985
SEIZMIC ENGINEERING, INC.
1130 E. Cypress St.
Covina, California
91724
Tel.(909)869-0989

DRAWN BY:	N.T. / A.N.
DATE:	07/22/26
LAST REV. BY:	N.T.
REV. DATE:	08/10/26
TYPE:	
SCALE:	N.T.S.
APRVD BY:	SAL E. FATEEN

COMMONWEALTH OF MASSACHUSETTS
SAL E. FATEEN
STRUCTURAL
NO. 39968
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PROFESSIONAL ENGINEER
EXPIRES
06-30-2028

DESCRIPTION:
LAYOUT

DRAWING NUMBER:
26-2121-D