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NEW DISCOUNT TIRE STORE 4350 13TH AVENUE S, FARGO, ND 58103

GENERAL FIRE PROTECTION NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE REFERENCED CODE EDITIONS. INCLUDING ALL ASSOCIATED APPENDICES. INSTALLATION SHALL ALSO CONFORM TO ALL AUTHORITIES HAVING JURISDICTION (AHJ's) INCLUDING LOCAL AND STATE FIRE MARSHAL REQUIREMENTS.

2. THE ELECTRONIC AUTOCAD AND PDF FORMAT FILES OF THE CONSTRUCTION DOCUMENTS ARE AVAILABLE TO THE INSTALLING FIRE PROTECTION CONTRACTOR AT NO COST. THE AUTOSPRINK FORMAT FILES ARE ALSO AVAILABLE AT A FIXED FEE. THIS SET IS MADE SOLELY AVAILABLE FOR THE FABRICATION PORTION OF THE PROJECT. CONTACT EJ ENGINEERING GROUP, INC. IN WRITING TO REQUEST. FP CONTRACTOR SHALL PROVIDE PROOF THAT PROJECT IS UNDER CONTRACT FOR INSTALLATION. THE DETAILS, DRAWINGS AND OTHER DATA INCLUDED IN THE CONSTRUCTION SET OF DOCUMENTS ARE FOR INFORMATION PURPOSES ONLY AND ARE SPECIFIC TO THIS PROJECT. ALL DRAWINGS, CONCEPTS, DETAIL INFORMATION AND DATA CONTAINED HEREIN SHALL REMAIN THE SOLE PROPERTY OF EJ ENGINEERING GROUP, INC. AND SHALL NOT BE UTILIZED FOR ANY OTHER PROJECT OR PURPOSE WITHOUT THE EXPRESSED WRITTEN CONSENT OF EJ ENGINEERING GROUP. INC.

3. THE INTENT OF THIS SET OF ENGINEERED CONSTRUCTION DOCUMENTS IS TO MEET THE LOCAL AUTHORITY HAVING JURISDICTION REQUIREMENTS FOR A PROFESSIONALLY DESIGNED AUTOMATIC FIRE SPRINKLER SYSTEM. THE INSTALLING CONTRACTOR SHALL SUBMIT 'PRODUCT DATA' SUBMITTALS AS REQUIRED IN THE PROJECT MANUAL FOR THE INSTALLATION RECORD. THE INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND/OR OBTAINING ALL PERMITS ASSOCIATED WITH THIS SET OF DOCUMENTS.

4. ALL WIRING OF ELECTRIC INITIATION DEVICES (HORN-STROBES, WATER SUPERVISORY AND TAMPER DEVICES) SHALL BE BY THE ELECTRICAL AND/OR ALARM

5. THE PIPING HEREIN HAS BEEN DESIGNED TO MEET UNDERWRITERS LABORATORIES (U.L.) CORROSION RESISTANCE RATIO (CRR) MINIMUM OF 1.00. REFER TO PIPING PLANS, HYDRAULIC CALCULATIONS AND SPECIFICATIONS FOR SPECIFIC PIPE WEIGHTS AND WALL THICKNESS ASSOCIATED WITH THIS SPECIFIC PROJECT. THE UTILIZATION OF A CRR LESS THAN 1.00 IS NOT ACCEPTABLE UNDER ANY CIRCUMSTANCES. THE USE OF SUCH PIPING SUBJECTS THE CONTRACTOR TO POTENTIAL REMOVAL AND REPLACEMENT OF ALL PIPING AT HIS/HER COST.

6. A MINIMUM SAFETY FACTOR HAS BEEN INCLUDED IN THE WATER SUPPLY FOR THIS PROJECT. ADDITIONAL SAFETY FACTORS, AS REQUIRED BY LOCAL AHJ HAVE ALSO BEEN IMPLEMENTED. EJ ENGINEERING GROUP, INC. IS NOT RESPONSIBLE FOR ADDITIONAL CHANGES IN WATER SUPPLY (GPM OR PRESSURE) THAT MAY ADVERSELY AFFECT THIS AUTOMATIC FIRE SPRINKLER SYSTEM IN THE FUTURE.

7. THE FIRE PROTECTION CONTRACTOR IS FULLY RESPONSIBLE FOR THE FIELD FIT OF ALL SPRINKLERS AND PIPING. THE ACCURACY OF SCALED CONSTRUCTION DOCUMENTS IS NOT ASCERTAINABLE. ALL POSSIBLE ATTEMPTS HAVE BEEN MADE TO INCLUDE SLOPED PIPE LENGTHS AND TO MINIMIZE VARIATIONS. THEREFORE, THE FP CONTRACTOR IS RESPONSIBLE FOR THE ACCURACY OF FIELD CUT AND PRE-FABRICATED PIPING.

8. THE FP CONTRACTOR IS RESPONSIBLE FOR GENERAL WORKMANSHIP, DIMENSIONING, COORDINATION WITH OTHER TRADES AND THE ACCEPTANCE OF THE FIELD INSPECTIONS. THE COORDINATION OF FIELD INSTALLED PIPING AND SPRINKLERS TO STRUCTURAL COMPONENTS, DUCTWORK, EQUIPMENT, CEILING. LIGHTS, ETC., IS THE RESPONSIBILITY OF THIS LICENSED CONTRACTOR.

9. FIELD VERIFY ALL CONDITIONS PRIOR TO THE INSTALLATION OF ANY PIPING. FIELD ADJUSTMENTS MAY BE MADE TO THESE DOCUMENTS AS REQUIRED FOR FIELD ACCEPTANCE BY THE AHJ.

10. THE FIRE PROTECTION CONTRACTOR SHALL VERIFY THE SPRINKLER SPACING TO THE STRUCTURAL MEMBERS, ROOF DECK AND ALL OBSTRUCTIONS. PROVIDE ADDITIONAL, OR RESPACE, SPRINKLERS WHERE REQUIRED TO AVOID SUCH UNFORESEEN OBSTRUCTIONS TO SPRINKLER DISCHARGE PATTERNS.

11. THE FIRE PROTECTION CONTRACTOR SHALL SUBMIT, IN A TIMELY MANNER, REQUEST FOR INFORMATION (RFI) FORMS FOR ALL CHANGES NOT ASSOCIATED WITH MINOR FIELD ADJUSTMENTS, PRIOR TO MAKING THE CHANGE IN THE FIELD. CHANGES MADE TO THE APPROVED CONSTRUCTION DOCUMENTS WITHOUT AN ASSOCIATED RFI ARE NOT ACCEPTABLE AND SHALL BE CONSIDERED TO BE THE SOLE RESPONSIBILITY OF THE FIRE PROTECTION AND GENERAL CONTRACTOR. RFI'S ARE NOT ACCEPTED ONCE THE CHANGE HAS BEEN MADE IN THE FIELD: THIS INCLUDES PRODUCT AND LABOR COSTS. ALL RFI'S ARE TO BE SUBMITTED BY THE GC IN WRITING TO THE ARCHITECT

12. INSTALL PIPING SYSTEM ON APPROVED HANGERS PER AHJ & NFPA. C-CLAMPS WITH RETAINING STRAPS SHALL BE PROVIDED.

13. FUTURE IMPROVEMENTS OR RENOVATIONS TO THIS AUTOMATIC FIRE SPRINKLER SYSTEM SHALL OCCUR UNDER A SEPARATE PERMIT.

14. THE UTILITY CONTRACTOR SHALL FLUSH ALL UNDERGROUND MAINS PRIOR TO CONNECTION TO OVERHEAD SYSTEM PIPING.

15. PROVIDE SLEEVES AT ALL PIPING PENETRATIONS THROUGH MASONRY AND/OR FIRE RATED WALLS, FLOORS OR CEILINGS. PACK WITH SEALANT COMMENSURATE WITH THE WALL CONSTRUCTION AND APPROVAL OF ALL AUTHORITIES HAVING

16. BACKFLOW DEVICES, WHEN UTILIZED FOR THIS PROJECT, SHALL BE INSTALLED PER LOCAL AHJ APPROVAL LIST. PRIOR TO REQUEST FOR FINAL INSPECTION, EACH BACKFLOW ASSEMBLY DEVICE SHALL BE TESTED AND APPROVED BY A CERTIFIED TECHNICIAN LICENSED TO PERFORM SUCH WORK IN THIS PARTICULAR MUNICIPALITY.

17. THIS FP CONTRACTOR SHALL PROVIDE THE OWNER WITH A COPY OF NFPA-25 & NFPA-20 AND A DETAILED DESCRIPTION OF THE MAINTENANCE REQUIRED FOR THIS PROJECT. SUCH A MAINTENANCE SUMMARY SHALL BE PROVIDED, AS IT WOULD APPEAR IN AN INDUSTRY STANDARD MAINTENANCE CONTRACT. IN ADDITION, AS A MINIMUM, TWO (2) SETS OF THE APPROVED 'RECORD DRAWINGS' AND ASSOCIATED EQUIPMENT SUBMITTALS SHALL BE PROVIDED TO THE OWNER.

18. THIS FP CONTRACTOR SHALL INSTALL A SYSTEM DESIGN PLACARD FOR EACH FIRE RISER AND ASSOCIATED REMOTE AREA OF OPERATION AS INDICATED ON THE APPROVED CONSTRUCTION DOCUMENTS. SYSTEM DEMAND AT THE BASE OF THE RISER IN PSI AND GPM SHALL BE PROVIDED WITH THE AREA OF OPERATION SQUARE FOOTAGE AND NUMBER OF OPERATING SPRINKLERS. EACH DESIGN PLACARD SHALL BE PERMANENTLY EMBOSSED SUCH THAT DATA MAY BE AVAILABLE FOR FUTURE USE. THE UTILIZATION OF PERMANENT MARKING PENS IS NOT APPROPRIATE OR ACCEPTABLE.

19. THIS FP CONTRACTOR SHALL PROVIDE A SPARE SPRINKLER CABINET, IN AN APPROVED LOCATION, WITH ASSOCIATED SPARE SPRINKLERS, AS REQUIRED BY NFPA-13. INCLUDE TWO (2) SETS OF SPRINKLER WRENCHES FOR EACH SPRINKLER TYPE AS REQUIRED.

20. THIS FP CONTRACTOR SHALL BE LICENSED TO PERFORM THIS PARTICULAR TYPE OF WORK WITH THE STATE REGISTRAR OF CONTRACTORS AND WITH LOCAL AND STATE AUTHORITIES HAVING JURISDICTION. IN ADDITION, CONTRACTOR SHALL BE REQUIRED TO COMPLY WITH ALL PLAN REVIEW AND AHJ FIELD INSPECTIONS AS NECESSARY FOR A COMPLETELY APPROVED WORKING SYSTEM.

21. WHERE REQUIRED, THIS AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE MONITORED BY A UL OR FM LISTED CENTRAL STATION SYSTEM. ALL SYSTEMS OVER 100 SPRINKLERS SHALL BE MONITORED FOR TAMPER, TROUBLE AND FLOW.

22. ALL CONTROL VALVES SHALL BE CHAIN-LOCKED AND SECURED INCLUDING MAIN DRAIN ANGLE VALVES. ALL EXTERIOR FIRE RISERS SHALL BE LOCATED IN A SECURED AREA TO PREVENT DAMAGE DUE TO VANDALISM.

APPROVAL OF THE AUTHORITIES HAVING JURISDICTION. IN ADDITION. THIS FP CONTRACTOR SHALL ENSURE THAT TEMPORARY INTERIOR FIRE PROTECTION IS IN PLACE PER AUTHORITY HAVING JURISDICTION. THIS INCLUDES PROVISIONS FOR TEMPORARY FIRE DEPARTMENT WATER SUPPLIES, HOSE CONNECTIONS, ETC.

23. COMBUSTIBLE CONTENTS SHALL NOT BE MOVED INTO THE BUILDING WITHOUT THE

24. THE GENERAL CONTRACTOR SHALL PROVIDE A FIRE DEPARTMENT LOCK BOX FOR ALL NEW CONSTRUCTION AS DELINEATED ON THE ARCHITECTURAL DOCUMENTS. DEVICES SHALL BE SIMILAR OR EQUIVALENT TO 'KNOX MANUFACTURING'.

25. THE USE OF MECHANICAL (CUT-IN) TEES OR SIMILAR TYPE OF CONNECTIONS ARE NOT ALLOWED FOR NEW CONSTRUCTION PROJECTS. FP CONTRACTOR SHALL UTILIZE JOINING/CONNECTION METHODS SUCH AS WELDED-OUTLETS.

PROJECT SCOPE CONSISTS OF A NEW WET-AUTOMATIC FIRE SPRINKLER SYSTEM AND ALL ASSOCIATED APPURTENANCES FOR A NEW TIRE STORE WITH SALES, STORAGE, AND INSTALLATION AREAS. NEW UNDERGROUND FIRE LINE TO BE INSTALLED BY OTHERS.

HAZARD: TIRE STORAGE PER NFPA-13 (2019 EDITION) TABLE 23.8 AND 2021 IFC W AMENDMENTS (IF ANY)

SPRINKLERS -

12 ESFR SPRINKLERS OPERATING AREA OF APPLICATION -@ 15 PSI MINIMUM EACH

K-25.2 ESFR SPRINKLERS

BELOW GRATE SPKRs SEE BELOW

COVERAGE PER SPRINKLER -130 SF - (100 SF IN ALL ESFR) AREAS W/ 1-FT MAX. DEVIATIONS

HOSE STREAM ALLOWANCE -HOSE STREAM ALLOWANCE - 250 OUTSIDE

SYSTEM SHALL BE WET PIPE THROUGHOUT. HVAC ENGINEER

AMBIENT TEMPERATURE 24/7. HYDRAULIC REFERENCE POINTS ARE NUMBERED TO CORRESPOND WITH ATTACHED HYDRAULIC CALCULATIONS:

SEE FP1.1 AND FP2.0 FOR HYDRAULIC REFERENCE NODE LOCATIONS.

THE INTERIOR HOSE RACK REQUIREMENT (NFPA-13) HAS BEEN OMITTED ON THESE DOCUMENTS AS MOP UP OPERATION IS INCIDENTAL TO POTENTIAL NEGATIVE ASPECTS ASSOCIATED WITH EMPLOYEE UTILIZATION OF INTERIOR HOSE INSIDE HOSE MAY BE UTILIZED FOR EMPLOYEE FIRE RESPONSE IN LIEU OF IMMEDIATE EVACUATION AND 911 PHONE CALL INITIATION NEPA REQUIREMENT IS FOR MOP-UP OPERATIONS ONLY. UTILIZATION OF INTERIOR HOSE BY UNQUALIFIED USERS MAY SPREAD CONFLAGRATION.

RETAIL AREA COMP RM & DEAD TIRE STORAGE PIPING AREA OF OPERATION (TIRE STORAGE).

REFER TO ATTACHED 8-1/2" X 11" HYD. CALCULATIONS, OWNER'S CERTIFICATE & FLOW TEST DATA FOR INFO.

RACK STORAGE GRATE IS FOR SAFE TIRE ACCESS & RETRIEVAL ONLY AND CONSISTS OF "NON-FIXED" 86% OPEN STEEL GRATE. REFER TO FP2.0 FOR AREAS WITH OPEN GRATING, NEARLY ALL GRATING IS 4-FT WIDE OR LESS. NO A.S. REQ'D (NFPA-13). SPKRS PROVIDED BELOW GRATING FOR AREAS OVER 4-FT WIDE.

OWNER HAS BEEN ALERTED TO MAX. TIRE STORAGE HEIGHT OF 3-FT BELOW SPKR DEFLECTORS AS DEPICTED ON FP3.1. OWNER SHALL NOT PLACE ANY HORIZONTAL OBSTRUCTIONS TO SPKR, DISCHARGE ON GRATE (E.G. MATS, BOARDS, ETC.). THEREFORE, NFPA-13 SECTION 9.5.5.3.1.1 & USE OF ESFR SPRINKLERS ALLOWING THE OMISSION OF SPRINKLERS WITHIN THE RACKS HAS BEEN PROPERLY ADDRESSED HEREIN.

THE USE OF ESFR FOR THE TIRE INSTALLATION/SERVICE BAY AREA IS ACCEPTABLE PER NFPA-13 SECTION 14.2.7 & 23.1.1. NFPA-13 IS REFERENCED HEREIN: SPECIFICALLY CHAPTER 23 TABLE 23.8 ESFR SPRINKLERS FOR PROTECTION OF RUBBER TIRES ON SIDE OR ON TREAD IN RACKS WITHOUT SOLID SHELVES. (NOTE: RACK STORAGE IS STEEL AND PALLETS ARE NOT USED FOR TIRE STORAGE WHATSOEVER.) PILE HEIGHT 25-FT MAXIMUM IN A 30-FT MAX. BLDG. HEIGHT. ACTUAL PILE HEIGHT IS 17'-8" TO 18'-8". SEE FP3.1.

OUTDOOR DISPLAY OF TIRES SHALL BE IN ACCORDANCE WITH

PER NFPA-13 SECTION 20.15.2.1; PROTECTION OF COLUMNS WITHIN RUBBER TIRE STORAGE ARE NOT REQUIRED. COLUMNS HAVE NOT BEEN PROVIDED WITHIN RACK STORAGE.

PER NFPA-13 AND THE UL LISTING FOR THE ESFR SPRINKLERS UTILIZED HEREIN MANDATE A MAXIMUM ROOF SLOPE OF 2 IN 12 (16.7%). THE ROOF SLOPE FOR THIS PROJECT IS 2'-0" RISE WITH A 60'-0" RUN (ONLY 3.3%).

FP CONTRACTOR SHALL UTILIZE A WALL MOUNTED 4-WAY FDC AS SHOWN ON FP1.1 AND CIVIL UTILITY DRAWINGS. FP CONTRACTOR SHALL COORDINATE FDC HEIGHT & THREADS

8-INCH UNDERGROUND FIRE LINE (BY OTHERS). 6-INCH FDC

SCOPE OF PROJECT

AT THE ROOF DECK. IN-RACK SPKRs NOT REQ'D. FOR

HAS PROVIDED SUFFICIENT HEATING THROUGHOUT ALL INTERIOR

PROJECT AREAS TO MAINTAIN A MINIMUM 40-DEGREES FAHR.

BEEN OVERSIZED BASED ON CALC'D HYDRAULICALLY DEMANDING

PROVIDE CAPPED & THREADED 3/4" OUTLET ON DROPS TO SIDEWALL SPRINKLERS FOR DRAINAGE OF TRAPPED H20.

THE LOCAL FIRE MARSHAL WHERE APPROVED. CLEARANCE FROM SPRINKLER DEFLECTOR TO TOP OF STORAGE

SHALL BE A MINIMUM OF 3-FT PER ESFR SPRINKLER LISTING.

FIRE ALARM SYSTEM IS NOT IN THIS CONTRACT. WIRING TO FLOW & TAMPER SWITCHES & HORN-STROBE ARE N.I.C.

SHALL BE PER LOCAL FIRE DEPT. & AHJ REQUIREMENTS.

SUPPLY LINE. SEE FP SHEETS AND CIVIL DRAWINGS FOR ADD'L INFO. FP CONTRACTOR SHALL PROVIDE A 1/2-INCH CONNECTION FOR

AUTOMATIC AIR RELEASE VALVE LOCATED AT A SYSTEM HIGH POINT.

PROJECT TEAM **AUTHORITY HAVING JURISDICTION (AHJ):**

FARGO FIRE DEPARTMENT 701.241.8139

Elev. Below Top of Steel

Elev. Above Finished Floor

Hydraulic Reference Points

Common Connection Point

Room Hazard Classification

Sprinkler Head Cage

SHEET INDEX

FP1.0 FIRE PROTECTION COVER SHEET

FP3.0 FIRE PROTECTION NOTES & DETAILS

FP3.1 FIRE PROTECTION SECTION & DETAILS

SPRINKLER COUNT

OTAL NUMBER OF SPRINKLERS

SEE FIRE PROTECTION SHEETS

GENERAL IDENTIFICATION NOTE:

SYSTEM EQUIPMENT AND PIPING.

FOR SPECIFIC PER-SHEET TOTALS.

PROVIDE METAL EMBOSSED DESIGN PLACARDS.

IDENTIFICATION SIGNS AND PIPE LABELS ON ALL

WELDED OUTLETS SHALL NOT BE ALLOWED! IF

HIGH VOLUME LOW SPEED (HVLS) FAN NOTES:

USE OF FOREIGN-MADE PIPING, FITTINGS, COUPLINGS OR

DISCOVERED SUCH PRODUCT SHALL BE REMOVED AT

ADDITIONAL WARRANTIES OR CREDITS SHALL NOT BE

CONSIDERED. MUST COMPLY WITH THE BUY AMERICAN

CONTRACTOR'S EXPENSE AND COSTS ASSOCIATED WITH

PROJECT DELAYS SHALL ALSO BE THE RESPONSIBILITY OF

THE FP AND GENERAL CONTRACTORS. NEGOTIATIONS FOR

WHERE HVLS FANS ARE INSTALLED. THEY SHALL INTERCONNECT

TO THE FIRE ALARM SYSTEM FOR WATER FLOW AND ANY

OTHER DETECTION DEVICES IN THE AREA OF COVERAGE.

HVLS FANS SHALL BRAKE TO A STOP UPON ALARM INITIATION.

REFER TO ELECTRICAL AND/OR FIRE ALARM SHOP DRAWINGS

OF THE HVLS, INITIATION DEVICES AND ANNUNCIATION DEVICES.

FOR ADDITIONAL INFORMATION ON INTERLOCKS AND WIRING

HVLS FANS SHALL COMPLY WITH NFPA-13 REQUIREMENTS.

THIS PROJECT: 116 SPRINKLERS.

FP1.1 SITE PLAN AND FLOW TEST

FP2.0 FIRE PROTECTION PLANS

Denotes Hanger Location

Rise up or down

Electrical Light

ARCHITECT: PLUMP ENGINEERING, INC. 914 E. KATELLA AVE. ANAHEIM, CA 92805 714.385.1835

CIVIL ENGINEER: RA SMITH 16745 W. BLUEMOUND ROAD BROOKFIELD, WI 53005

262.781.1000

816.997.9620

480.894.0399

MEP ENGINEER: DIALECTIC 310 WEST 20TH STREET, SUITE 200 KANSAS CITY, M0 64108

STRUCTURAL ENGINEER: **BUILDING DESIGN STUDIO** 2117 SOUTH 48TH STREET, SUITE 103 TEMPE, AZ 85282

ADDRESS: DISCOUNT TIRE

HALLE PROPERTIES, LLC. SCOTTSDALE, ARIZONA 85255

NON-SEPARATED

OCCUPANCY SEPARATION WALL NON-SEPARATED

BUILDING HEIGHT:

SINGLE STORY

(SEE DESIGN BLOCK ON FP2.0)

PROJECT DATA

4350 13TH AVENUE S FARGO, ND 58103 OWNER: 20225 NORTH SCOTTSDALE ROAD RETAIL TIRE STORAGE, SALES, AND

INSTALLATION AREA SEPARATION WALL:

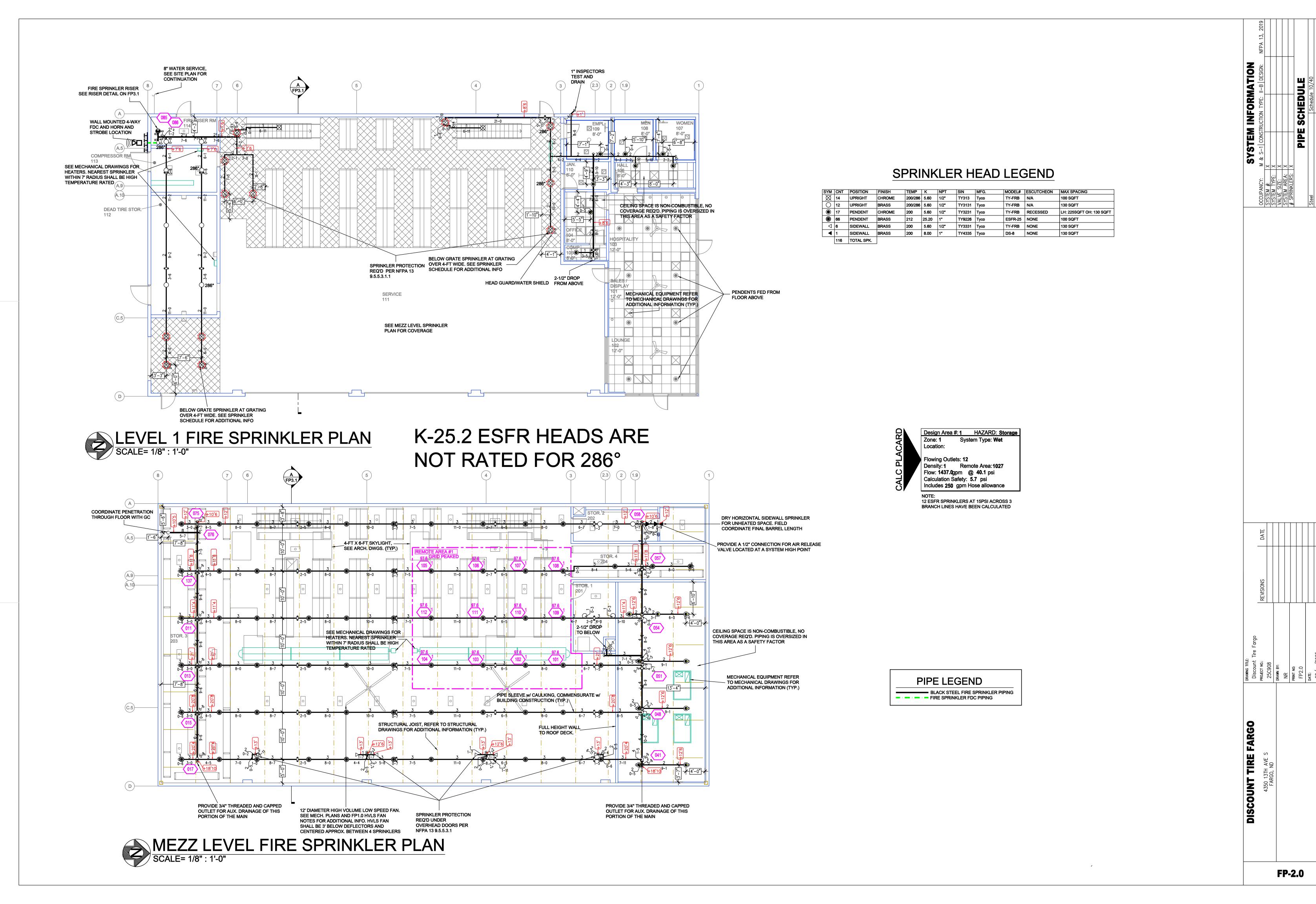
OCCUPANCY: M & S-1

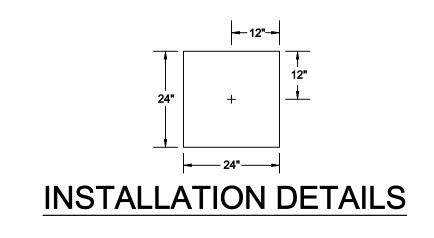
TYPE OF CONSTRUCTION: II-B, FULLY SPRINKLERED

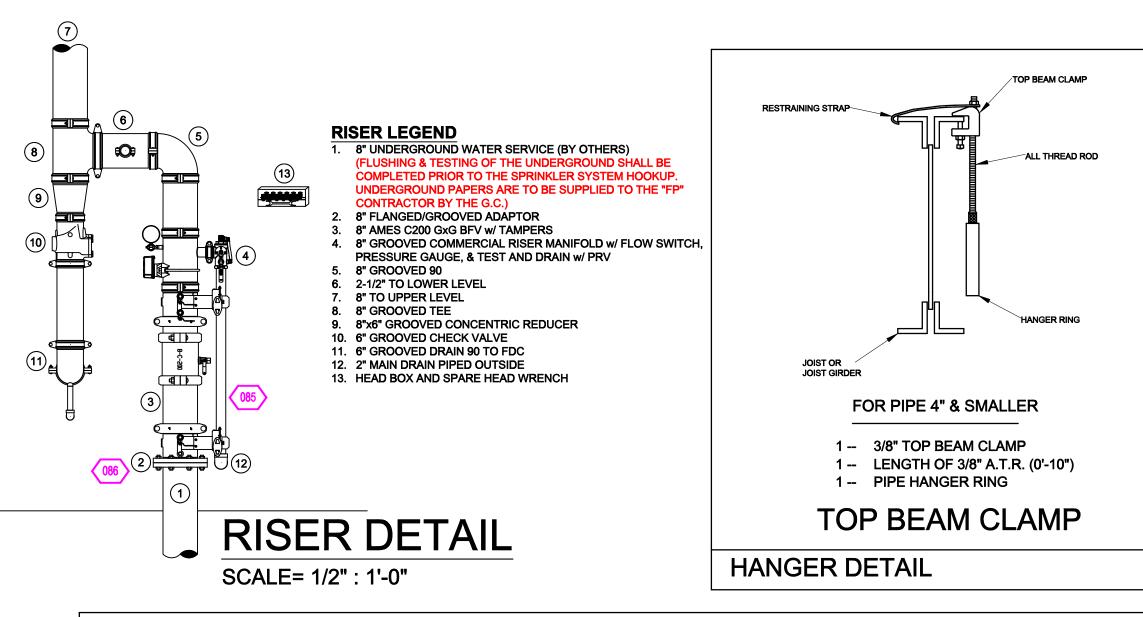
BUILDING AREA:

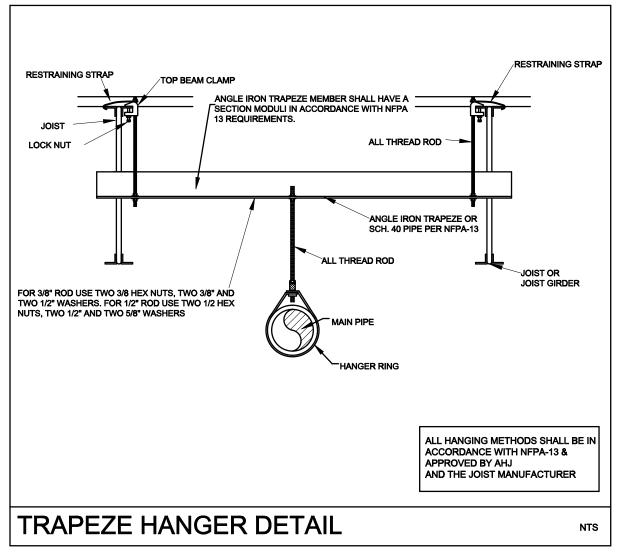
TIRE

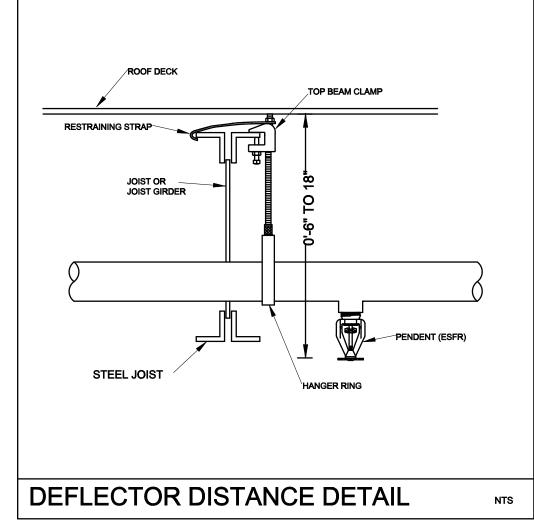
FP-1.0

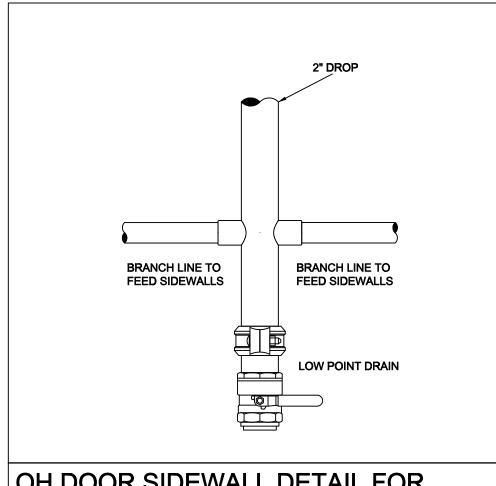




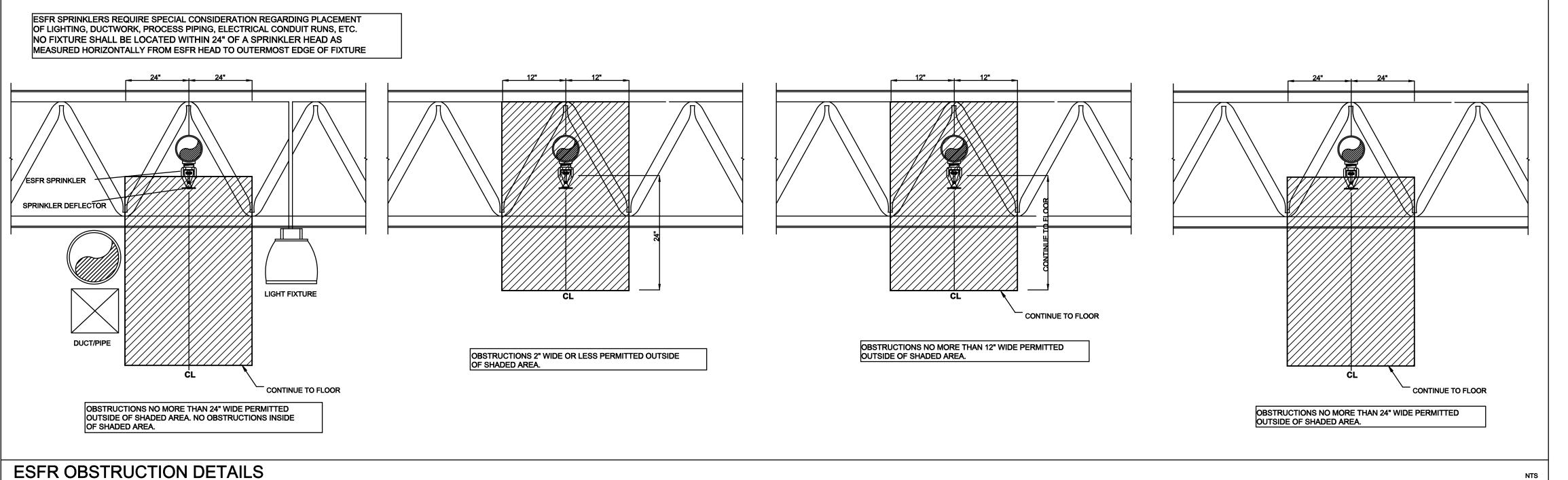




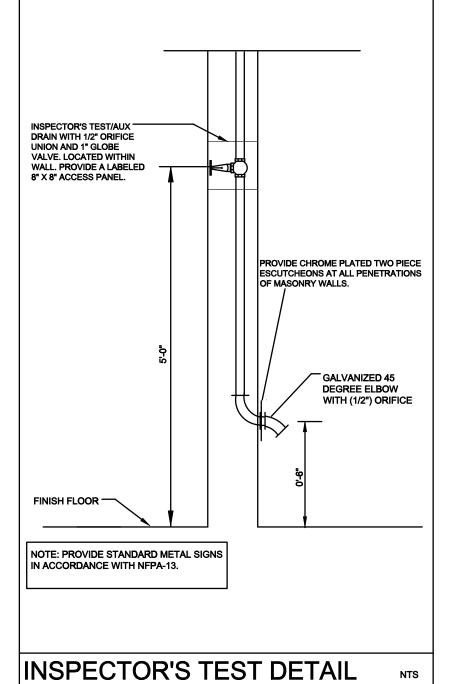




OH DOOR SIDEWALL DETAIL FOR DROPS FEEDING TWO SIDEWALLS



NTS



FP-3.0