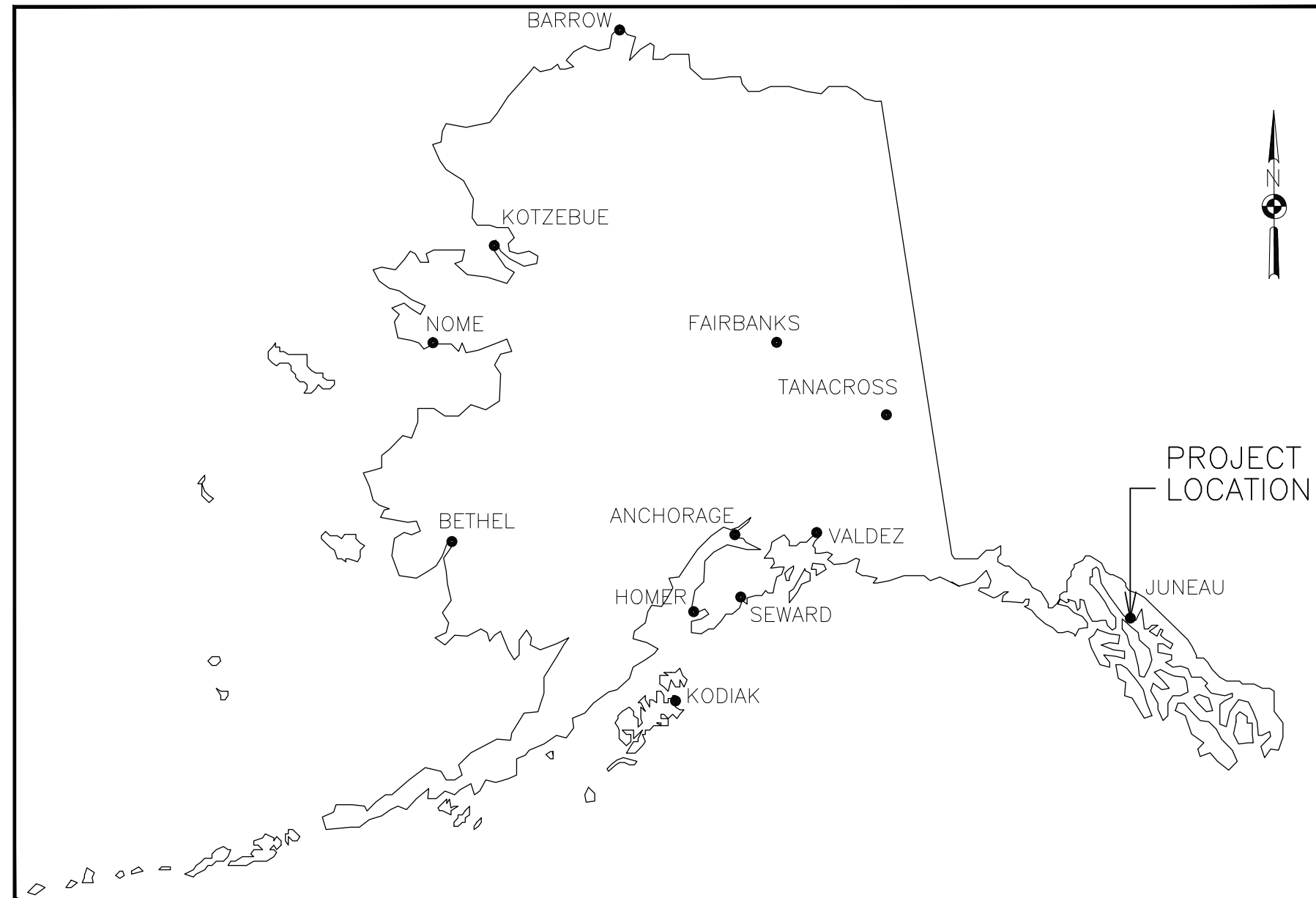
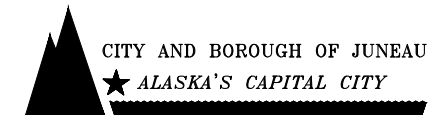


CITY AND BOROUGH OF JUNEAU

MARINE PARKING GARAGE - SPRINKLER SYSTEM REPLACEMENT

PHASE 1 - FALL 2014
CBJ CONTRACT No. E14-251

290 MARINE WAY
JUNEAU, ALASKA 99801
CONSTRUCTION DOCUMENTS
21 APRIL 2014


























PREPARED BY:



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ANCHORAGE, ALASKA 99503
PHONE: (907) 562-3252
FAX: (907) 561-2273

File: \\jbstuff\jobsdata\20701.01 Cbj Marine Parking Garage Sprinklers\00 CADD\01 Working Set\06 Mechanical\Phase 1\20701.01_FP-1_ABBR-LEG-NOTES-SPECS Phase 1.dwg PLOT DATE: 4/23/2014 8:15 AM

PIPING LEGEND				PIPING SYMBOL LEGEND(CONTINUED)	
EXISTING	DEMO	PROPOSED			CAP
			COLD WATER		FLOOR DRAIN
			FIRE SPRINKLER PIPING		PUMP
					FIRE SPRINKLER HEAD
					STRAINER WITH BLOWDOWN

PIPING SYMBOL LEGEND		LOGIC LEGEND	
	PIPE UP		CONNECTION POINT
	PIPE DOWN		SHEET NOTE
	TEE DOWN		
	TEE UP		
	UNION		
	BALL VALVE		
	GATE VALVE		
	GATE VALVE (INDICATOR TYPE)		
	CHECK VALVE		
	HOSE BIBB		

ABBREVIATIONS							
AIR	COMPRESSED AIR	DN	DOWN	HB-X	HOSE BIBB DESIGNATOR	PRESS	PRESSURE
AAV	AUTOMATIC AIR VENT	DWG	DRAWING	HD	HEAD	PSI	POUNDS PER SQUARE INCH
BLDG	BUILDING	EXIST / (E)	EXISTING	HP	HORSEPOWER	PSIG	POUNDS PER SQUARE INCH GAUGE
CAP	CAPACITY	FDC	FIRE DEPARTMENT CONNECTION	HPS	HIGH PRESSURE STEAM	RPM	REVOLUTIONS PER MINUTE
CFM	CUBIC FEET PER MINUTE	FD	FIRE DAMPER	HR	HOSE	TEMP	TEMPERATURE
CLG	CEILING	FIN	FINISHED	IN	INCHES	TOD	TOP OF DUCT
CONT	CONTINUED	FLR	FLOOR	LF	LINEAL FEET	TSP	TOTAL STATIC PRESSURE
CO/C.O.	CLEANOUT	FPM	FEET PER MINUTE	MAX	MAXIMUM	TTL	TOTAL
CONN	CONNECTION	FS	FIRE SPRINKLER WATER	MFGR	MANUFACTURER	TYP	TYPICAL
CU	COPPER	FT	FEET	MIN	MINIMUM	UPC	UNIFORM PLUMBING CODE
CW	COLD WATER	GA	GAUGE	N/A	NOT APPLICABLE	W/	WITH
DEG	DEGREE	GAL	GALLONS	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	W/O	WITHOUT
DIA / Ø	DIAMETER	GALV	GALVANIZED	NIC	NOT IN CONTRACT		
DIM	DIMENSION						

SCOPE OF WORK:

GENERAL:

THE SCOPE OF WORK INCLUDES REPLACING EXISTING BLACK STEEL PIPE AND FITTINGS THROUGH OUT THE EXISTING DRY PIPE SPRINKLER SYSTEM WITH GALVANIZED PIPE AND FITTINGS SUITABLE FOR MARINE ENVIRONMENT AND IN COMPLIANCE WITH THE NFPA.

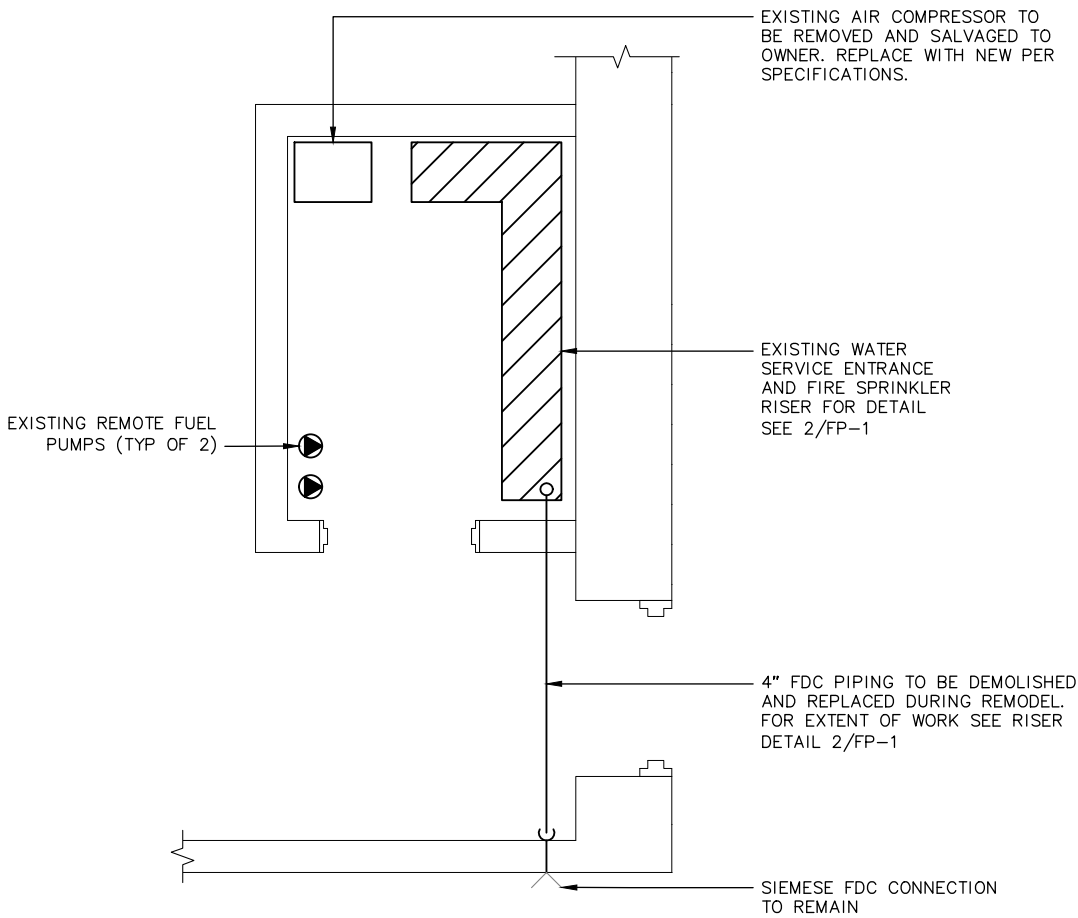
REPLACEMENT OF THE SYSTEM WILL BE COMPLETED IN TWO PHASES. PHASE 1 CONSTRUCTION WILL BE COMPLETED IN THE FALL OF 2014. PHASE 2 CONSTRUCTION WILL BE COMPLETED IN THE FALL OF 2015.

PHASE 1:

DEMOLISH EXISTING BLACK PIPE AND FITTINGS AND INSTALL NEW GALVANIZED PIPE AND FITTINGS FOR FLOOR 1 AND FLOOR 2. EXTEND EXISTING SYSTEM TO PROVIDE COMPLETE COVERAGE TO THE FACILITY IN COMPLIANCE WITH NFPA. ALSO INCLUDED IN THIS WORK WILL BE THE REPLACEMENT OF ALL VERTICAL SPRINKLER RISERS IN THEIR ENTIRETY, SPRINKLER HEADS AND PIPING AT BOTH EXTERIOR STAIRS FROM FLOOR 1 THROUGH FLOOR 4, FDC PIPING AS INDICATED ON PLANS, AND REPLACEMENT OF EXISTING AIR COMPRESSOR.

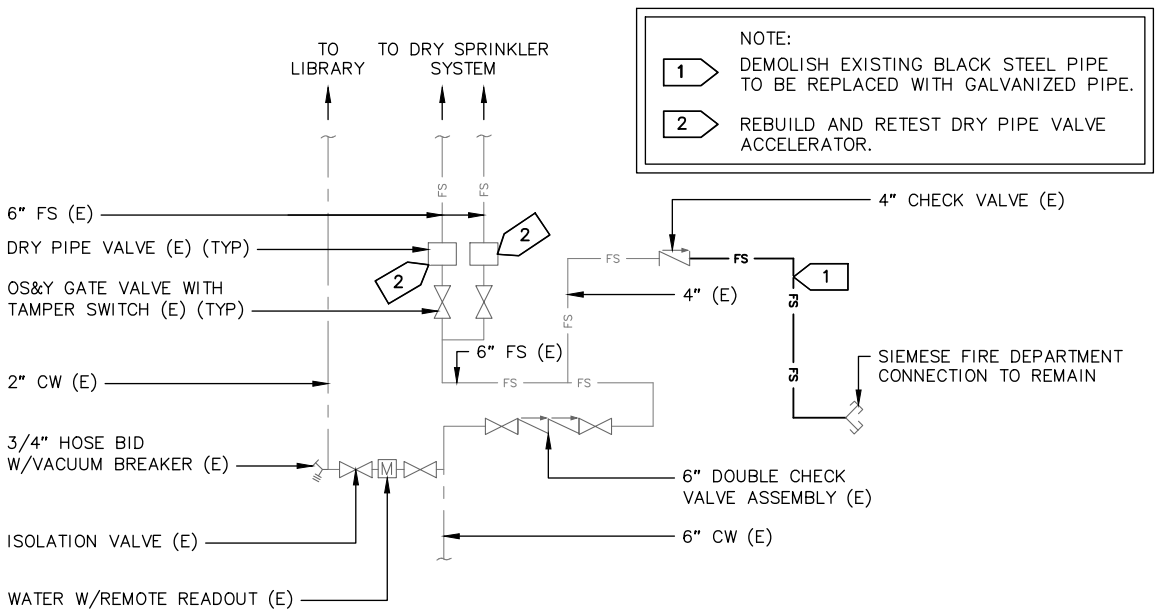
PHASE 2:

DEMOLISH EXISTING BLACK PIPE AND FITTINGS AND INSTALL NEW GALVANIZED PIPE AND FITTINGS FOR FLOOR 3 AND FLOOR 4. WHERE INDICATED PER PLANS AND SPECIFICATIONS.



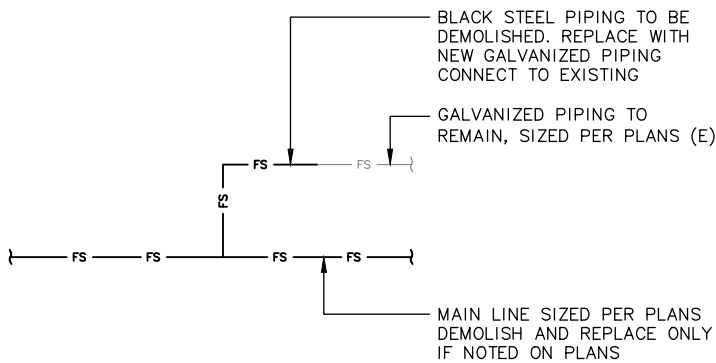
**SPRINKLER CONTROL ROOM
PLAN - FIRST FLOOR**

1/2" = 1'-0"



**RISER DETAIL - SPRINKLER
CONTROL ROOM - FIRST FLOOR**

NOT TO SCALE



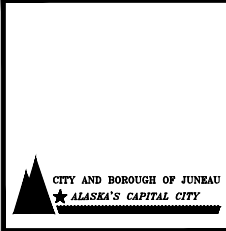
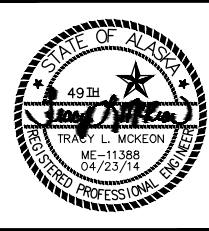
**TYPICAL BRANCH LINE
DETAIL - DEMOLITION**

NOT TO SCALE



REVISION			
REV	DATE	DESCRIPTION	BY

REVISION			
REV	DATE	DESCRIPTION	BY



SCALE	HOR. PER PLANS VER. N/A
DESIGNED BY	TLM
DRAWN BY	WDM
CHECKED BY	TLM
APPROVED BY	

CBJ CONTRACT No. E14-251 MARINE PARKING GARAGE - SPRINKLER SYSTEM REPLACEMENT PHASE 1 - FALL 2014 JUNEAU, ALASKA	
MECHANICAL LEGEND, ABBREVIATIONS, ENLARGED PLANS, AND DETAILS	
STATUS: CONSTRUCTION DOCUMENTS	DATE: 04/2014

PROJECT NO. 20701.01
CITY GRID
WATER GRID
SEWER GRID
SHEET FP-1
OF FP-4

File: \\jbstuff\jbstdata\20701.01_Cbj_Marine_Parking_Garage_Sprinklers\00_CADD\01_Working_S&I\06_Mechanical\Phase 1\20701.01_FP-1_LABBR-LEC-NOTES-SPECS_Phase 1.dwg PLOT DATE: 4/23/2014 8:15 AM

FRONT END

THE INFORMATION SHOWN ON THIS DRAWING IS TAKEN FROM AS–BUILT DRAWINGS AND A NON–DESTRUCTIVE WALK THROUGH OF THE FACILITY. THE CONTRACTOR SHALL FIELD VERIFY ALL ITEMS SCHEDULED FOR DEMOLITION PRIOR TO START OF WORK.

PLANS – THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM. THE DRAWINGS ARE PARTLY DIAGRAMMATIC, NOT NECESSARILY SHOWING ALL OFFSETS OR EXACT LOCATIONS OF PIPING AND DUCTS, UNLESS SPECIFICALLY DIMENSIONED.

COMPLETE PROJECT – THE INTENT OF THIS PROJECT IS TO LET ONE CONTRACT WHICH INCLUDES ALL WORK NECESSARY FOR A COMPLETE PROJECT. THIS INCLUDES, BUT IS NOT LIMITED TO, ELECTRICAL, PLUMBING, FIRE PROTECTION, PAINTING, CARPENTRY, AND CLEAN UP, ETC. AS REQUIRED.

PERMITS – THE CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS AND FEES.

CODE – ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL MECHANICAL (IMC), UNIFORM PLUMBING CODE (UPC) AND THE NATIONAL ELECTRICAL CODE (NEC) AS AMENDED BY THE STATE OF ALASKA AND CITY AND BOROUGH OF JUNEAU. SHEET METAL WORK SHALL BE DONE IN ACCORDANCE WITH SMACNA STANDARDS.

INSURANCE – WORKER’S COMPENSATION INSURANCE, AND GENERAL LIABILITY INSURANCE AT ALL TIMES WHILE WORKING ON THIS PROJECT.

EQUIPMENT SUBSTITUTIONS – ALL EQUIPMENT LISTED IS REPRESENTATIVE OF THE STANDARD OF QUALITY AND PERFORMANCE REQUIRED. “OR EQUAL” SUBSTITUTIONS WILL BE CONSIDERED IF THE SUBSTITUTE CATALOG CUTS ARE SUBMITTED AND ARE SHOWN TO BE EQUAL OR BETTER QUALITY, INCLUDING EFFICIENCY OF PERFORMANCE, SIZE AND WEIGHT.

WARRANTY – ALL WORK PERFORMED UNDER THIS CONTRACT TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM ACCEPTANCE. ANY FAULTY MATERIALS OR WORKMANSHIP SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER DURING THE GUARANTEE PERIOD.

ELECTRICAL WORK – ALL ELECTRICAL WORK IS TO BE PERFORMED BY A LICENSED ELECTRICIAN. IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, NEC.

MATERIALS – ALL MATERIALS OTHER THAN OWNER SUPPLIED SHALL BE NEW AND UNUSED, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER’S DIRECTIONS AND IN THE BEST PRACTICE OF THE CRAFT. OBTAIN OWNER’S APPROVAL OF ALL PRODUCTS PRIOR TO ORDERING OR INSTALLING ANY PART OF ANY SYSTEM.

OPERATION AND MAINTENANCE MANUAL – PROVIDE THE OWNER WITH AN OPERATING AND MAINTENANCE MANUAL, TO INCLUDE MANUFACTURER’S SPECIFICATIONS, OPERATING AND MAINTENANCE INSTRUCTIONS, WARRANTY INFORMATION ON EACH PIECE OF EQUIPMENT, AND SCHEMATIC DIAGRAMS OF CONTROL SYSTEMS AS–BUILT, AS WELL AS A SOURCE OF SUPPLY FOR SPARE PARTS AND SERVICE.

ACCESS – PROVIDE WORKABLE ACCESS TO ALL SERVICEABLE AND/OR OPERABLE EQUIPMENT.

TEST AND START–UP – TEST PIPING SYSTEMS IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE UPC AND NFPA.

EQUIPMENT INSTALLATION – INSTALL ALL EQUIPMENT WHERE NOTED ON THE DRAWINGS IN ACCORDANCE WITH THE MANUFACTURER’S INSTRUCTIONS. PROVIDE MISCELLANEOUS APPURTENANCES, ACCESSORIES, SUPPORTS AND CONTROL CONNECTIONS REQUIRED FOR COMPLETE AND OPERATING SYSTEMS. MAINTAIN MANUFACTURER’S RECOMMENDED CLEARANCES.

TRAINING – INSTRUCT THE OWNER’S PERSONNEL IN THE OPERATION, CARE AND MAINTENANCE OF ALL SYSTEMS AND EQUIPMENT PROVIDED. PROVIDE A MINIMUM OF ONE (1) HOUR OF ON SITE INSTRUCTION TO THE OWNER DESIGNATED PERSONNEL.

SEISMIC RESTRAINT – ALL PIPING, DUCTWORK AND EQUIPMENT INSTALLED UNDER THIS PROJECT SHALL BE SEISMICALLY RATED AND RESTRAINED FOR A SEISMIC EVENT IN ACCORDANCE WITH THE 2009 EDITION OF THE INTERNATIONAL BUILDING CODE, NFPA, AND ASCE 7. SEISMIC CATEGORY D, COMPONENT IMPORTANCE FACTOR 1.0.

PENETRATIONS OF FIRE BARRIERS – PENETRATIONS SHALL BE PROTECTED BY AN APPROVED FIRESTOP SYSTEM INSTALLED AND TESTED IN ACCORDANCE WITH ASTM E199 OR ASTM E814. SYSTEMS SHALL HAVE AN F RATING NOT LESS THAN THE REQUIRED FIRE–RESISTANCE RATING OF THE ASSEMBLY BEING PENETRATED.

INSTALL FIRESTOPPING IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

SECTION 211316 – DRY PIPE SPRINKLER SYSTEMS

PART 1 – GENERAL

- 1.1 SECTION INCLUDES:
- A. DRY PIPE SPRINKLER SYSTEMS.
 - B. SYSTEM SUPERVISION ALARMS.
- 1.2 SCOPE OF WORK
- A. INCLUDES REPLACEMENT OF BLACK STEEL PIPING AND FITTINGS CURRENTLY INSTALLED IN THE DRY SPRINKLER SYSTEM WITH GALVANIZED PIPE AND FITTINGS AND EXTENSION OF THE EXISTING SYSTEM TO PROVIDE COMPLETE COVERAGE TO THE FACILITY. THIS FIRE PROTECTION SYSTEM SHALL BE IN COMPLIANCE WITH NFPA 13, FM GLOBAL, APPLICABLE CODES AND STANDARDS; AS WELL AS THE AUTHORITY HAVING JURISDICTION.
- 1.3 CODES AND STANDARDS
- ALL WORK AND DESIGN SHALL BE IN COMPLIANCE WITH THE LATEST ADOPTED EDITIONS OF THE FOLLOWING:
- A. INTERNATIONAL BUILDING CODE (IBC).
 - B. INTERNATIONAL MECHANICAL CODE (IMC).
 - C. INTERNATIONAL FIRE CODE (IFC).
 - D. UNIFORM PLUMBING CODE (UPC).
 - E. NATIONAL ELECTRICAL CODE (NEC)
 - F. FM GLOBAL STANDARDS.
 - G. NATIONAL FIRE PROTECTION ASSOCIATION 13 AND 25 (NFPA).
- 1.4 QUALITY ASSURANCE
- A. UNLESS OTHERWISE NOTED THIS IS SUBSTANTIALLY A “PERFORMANCE” SPECIFICATION.
 - B. MINIMUM QUALIFICATIONS OF THE CONTRACTOR/SUBCONTRACTOR PERFORMING ALL ASPECTS OF THE WORK SHALL BE AS FOLLOWS:
 - 1. SPECIALIST FIRM: COMPANY SPECIALIZING IN PERFORMING AUTOMATIC FIRE PROTECTION AND SPRINKLER SYSTEMS WORK WITH MINIMUM THREE YEARS DOCUMENTED EXPERIENCE APPROVED BY MANUFACTURER.
 - 2. DESIGN CERTIFICATION: SHOP DRAWINGS SHALL BE PREPARED BY A PERSON WITH A MINIMUM CERTIFICATION OF LEVEL II DESIGNER, SUPERVISED BY A LICENSED PROFESSIONAL ENGINEER OR A LEVEL III OR IV FIRE SPRINKLER DESIGNER, CERTIFIED BY THE NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET), IN FIRE PROTECTION ENGINEERING TECHNOLOGY AUTOMATIC FIRE SPRINKLER SYSTEM LAYOUT.
 - 3. EQUIPMENT AND COMPONENTS: MUST BE MARKED WITH THE “FM” APPROVAL MARKING.
 - 4. MUST MAINTAIN A COMPLETE STOCK OF ALL REPLACEMENT PARTS.
 - 5. REMAIN ON CALL FOR 24 HOUR SERVICE.
 - 6. MAINTAIN AN OFFICE AND TELEPHONE WITH AUTHORIZED REPRESENTATIVES OF THE FIRE PROTECTION CONTRACTOR’S FIRM WITH A PHYSICAL PRESENCE AND ADDRESS IN ALASKA.
 - 7. BIDS FROM WHOLESALERS, CONTRACTORS OR ANY FIRM WHOSE PRINCIPAL BUSINESS IS NO THAT OF MANUFACTURING OR INSTALLING FIRE PROTECTION SYSTEMS IS NOT ACCEPTABLE.
- 1.5 SUBMITTALS
- A. SUBMIT CONTRACTORS QUALIFICATIONS, PROOF OF 3 YEARS EXPERIENCE, UNDER THIS CONTRACTOR’S FIRM NAME, AND REFERENCES FOR AT LEAST 5 SIMILAR PROJECTS IN ALASKA OF SIMILAR TYPE, SIZE, AND COMPLEXITY.
 - B. SHOP DRAWINGS, HYDRAULIC CALCULATIONS, AND SEISMIC CALCULATIONS SHALL BE SUBMITTED TO THE FIRE MARSHAL AND ENGINEER FOR THEIR CONCURRENT REVIEW. ADDITIONALLY, SUBMIT A COPY OF THE FIRE MARSHALL STAMPED APPROVED DRAWINGS TO THE ENGINEER WHEN THEY ARE AVAILABLE. FIRE MARSHALL APPROVED DRAWINGS MUST BEAR THE DESIGNER’S NICET CERTIFICATION AND/OR BE STAMPED BY A LICENSED PROFESSION ENGINEER.
 - C. SHOP DRAWINGS: INDICATE PIPE MATERIALS USED, JOINTING METHODS, SUPPORTS, FLOOR AND WALL PENETRATION SEALS. INDICATE INSTALLATION, LAYOUT, WEIGHTS, MOUNTING AND SUPPORT DETAILS, AND PIPING CONNECTIONS. SHOP DRAWINGS SHALL BE IN ACCORDANCE WITH NFPA.
 - D. SUBMIT MANUFACTURER’S PRODUCT DATA FOR PIPE, VALVES, FITTINGS, AND ALL OTHER COMPONENTS OF THE FIRE PROTECTION SYSTEM.
 - E. ALL CONTRACTOR RESPONSE TO REVIEW COMMENTS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER.
 - F. SUBMIT COMPLETED AND WITNESSED CONTRACTOR’S MATERIAL AND TEST CERTIFICATE FOR ABOVEGROUND PIPING.
- 1.6 MAINTENANCE INFORMATION AND RECORD DRAWINGS
- A. PROVIDE AN ORIGINAL COPY OF NFPA 25.
 - B. PROVIDE AS–BUILT RECORD DRAWINGS OF THE SYSTEM AS INSTALLED.
 - C. PROVIDE HYDRAULIC CALCULATIONS IN THE OPERATIONS AND MAINTENANCE MANUAL.
- 1.7 PERMITTING, REVIEWS, AND APPROVALS
- A. OBTAIN WRITTEN APPROVAL OF THE ENTIRE FIRE PROTECTION SYSTEM DESIGN AND LAYOUT FROM THE FOLLOWING AUTHORITIES:
 - 1. ENGINEER – APPROVAL
 - 2. CITY AND BOROUGH OF JUNEAU FIRE MARSHALL – APPROVAL.
 - B. COMPLY WITH ALL REVIEW COMMENTS. REVISE THE SYSTEM AS REQUIRED AND RESUBMIT IN A TIMELY MANNER. RE–SUBMITTALS ALLOW

NOT ADVERSELY AFFECT OR HINDER THE CONSTRUCTION SCHEDULE OF THE PROJECT.

1.8 HYDRAULIC CALCULATIONS AND WATER FLOW DATA

- A. OBTAIN AND VERIFY THE WATER SUPPLY STATIC PRESSURE, RESIDUAL PRESSURE, AT FULL FLOW OF THE TEST HYDRANT, AT A TIME OF DAY, DURING THE PEAK DEMAND ON THE SYSTEM, AT THE POINT OF CONNECTION TO THE WATER UTILITY SYSTEM OR AT A NEARBY POINT ACCEPTABLE TO THE APPROVAL AUTHORITY. OBTAIN THIS DATA FROM ACTUAL FLOW TEST. USE THE MORE CONSERVATIVE OF THIS DATA AND INCLUDE IT WITH THE CALCULATIONS SUBMITTAL. IDENTIFY THE TESTING AGENCY AND THE SOURCE OF THE TEST DATA.
 - B. THE CONTRACTOR SHALL CONDUCT THE FLOW TEST IN ACCORDANCE WITH NFPA 291. THE CONTRACTOR SHALL SUBMIT THE RESULTS OF THE FLOW TEST TO INCLUDE THE ACTUAL PITOT READINGS OBTAINED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 7 CALENDAR DAYS BEFORE THE TEST.
 - C. HYDRAULIC CALCULATIONS SHALL BE ACCOMPLISHED IN COMPLIANCE WITH THE PROCEDURES ESTABLISHED IN NFPA 13. IN ADDITION TO MINIMUM NFPA 13 STANDARDS, A MINIMUM 10% PRESSURE BUFFER IS REQUIRED TO BE DESIGNED INTO THE SYSTEM. WHERE LOCAL AUTHORITIES REQUIRE ADDITIONAL BUFFER, THE CONTRACTOR SHALL COMPLY WITH THE MORE DEMANDING REQUIREMENT.
 - D. HYDRAULIC CALCULATIONS ACCOMPLISHED BY COMPUTER PROGRAM FOR SUBMITTAL SHALL BE ACCOMPANIED BY A COMPLETE LEGEND OF THE ABBREVIATIONS, NODES, AND SYMBOLS UTILIZED ON THE COMPUTER READOUT.
 - E. HYDRAULIC CALCULATIONS SHALL CLEARLY IDENTIFY THE FOLLOWING:
 - 1. SYSTEM TYPE, SPRINKLER “K” FACTOR, AND “C” FACTOR.
 - 2. PIPE AND FITTINGS TYPE.
 - 3. FITTING EQUIVALENT LENGTH CHART WHICH COMPLIES WITH THE “C” FACTOR AND PIPE TYPE.
 - 4. NFPA HAZARD DESIGNATION, DESIGN DENSITY AND SIZE OF THE DESIGN REMOTE AREA.
 - 5. THE ELEVATION OF THE “HIGHEST” SPRINKLER.
 - 6. THE AVAILABLE WATER SUPPLY AND SYSTEM DEMAND AT THE POINT OF CONNECTION TO THE WATER SUPPLY, INDICATED ON A LOGARITHMIC GRAPH. INCLUDE HOSE DEMANDS.
- 1.9 DELIVERY, STORAGE, AND HANDLING
- A. DELIVER AND STORE VALVES IN SHIPPING CONTAINERS, WITH LABELING IN PLACE.
 - B. FURNISH CAST IRON AND STEEL VALVES WITH TEMPORARY PROTECTIVE COATING.
 - C. FURNISH TEMPORARY END CAPS AND CLOSURES ON PIPING AND FITTINGS. MAINTAIN IN PLACE UNTIL INSTALLATION.
- 1.10 WARRANTY
- A. FURNISH ONE YEAR MANUFACTURER’S WARRANTY FOR FIRE SUPPRESSION MATERIALS AND METHODS.
 - B. ALL WORK PERFORMED AND MATERIALS AND EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE FREE FROM DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY THE OWNER.
 - C. ALL NEW PIPING AND EQUIPMENT INCORPORATED INTO THE NEW SYSTEM SHALL BE HYDROSTATICALLY TESTED AND WARRANTED AS NEW.

PART 2 – PRODUCTS

- 2.1 GENERAL
- A. PROVIDE ONLY NEW MATERIAL AND EQUIPMENT WHICH ARE STANDARD PRODUCTS OF A MANUFACTURER REGULARLY ENGAGED IN THE MANUFACTURE OF FIRE PROTECTION EQUIPMENT.
 - B. ALL PRODUCTS INSTALLED SHALL BE MARKED AND BEAR THE “FM” LISTING. ALL PRODUCTS SHALL BE SPECIFICALLY APPROVED FOR FIRE PROTECTION APPLICATION WHERE THEY ARE USED.
- 2.2 PIPING AND FITTINGS
- A. DRY PIPE SPRINKLER SYSTEM: ALL PIPE AND FITTINGS SHALL BE GALVANIZED SCHEDULE 40.
 - B. BLACK STEEL PIPE IS NOT ACCEPTABLE.
- 2.3 GROOVED FITTINGS, COUPLINGS, & MECHANICAL TEES
- A. GROOVED FITTINGS:
 - B. SLIP FIT FITTINGS AND COUPLINGS
- 2.4 SPRINKLERS
- A. TYPE: STANDARD UPRIGHT TYPE WITH GUARD.
 - B. FINISH: TEFLON COATED SUITABLE FOR MARINE ENVIRONMENTS.
 - C. FUSIBLE LINK: GLASS BULB TYPE TEMPERATURE RATED FOR SPECIFIC AREA HAZARD.
 - D. NEW SPRINKLERS TO BE INSTALLED ARE TO MATCH EXISTING.
- 2.5 PIPE HANGERS, EARTHQUAKE BRACING, AND SUPPORTS
- A. PIPE HANGERS AND SUPPORTS TO BE SUITABLE FOR INSTALLATION IN

A MARINE ENVIRONMENT AND CORROSION RESISTANT.
B. ALL PIPE HANGERS WILL BE SUPPLIED AND INSTALLED IN COMPLIANCE WITH NFPA.

- 2.6 FIRE PROTECTION VALVES AND EQUIPMENT
- A. ALL ELECTRICAL ALARM AND CONTROL WIRING SHALL BE PROVIDED IN ACCORDANCE WITH NEC. CONNECT ANY NEW SWITCHES REQUIRED TO THE EXISTING FIRE ALARM SYSTEM.
- 2.7 AIR COMPRESSOR
- A. PROVIDE A NEW AIR COMPRESSOR SPECIFICALLY APPROVED FOR A DRY SPRINKLER SYSTEM WITH UL LISTED FM APPROVED DRY VALVES. SALVAGE OLD AIR COMPRESSOR TO OWNER.
 - B. COMPRESSOR SHALL MAINTAIN THE REQUIRED OPERATING PRESSURE ON THE DRY SYSTEM AND BE CAPABLE OF FULL RECOVERY WITHIN 30 MINUTES OF AN EMERGENCY. EXISTING AIR COMPRESSOR IS 2HP 208V/3 PHASE.
 - C. A LISTED RELIEF VALVE SHALL BE PROVIDED BETWEEN THE COMPRESSOR AND CONTROLLING VALVE AND SHALL BE SET TO RELIEVE AT A PRESSURE 10 PSI IN EXCESS OF THE OPERATING AIR PRESSURE OF THE SYSTEM.
 - D. AUTOMATIC AIR SUPPLY TO MORE THAN ONE DRY PIPE SYSTEM SHALL BE CONNECTED TO ENABLE INDIVIDUAL MAINTENANCE OF AIR PRESSURE IN EACH SYSTEM.

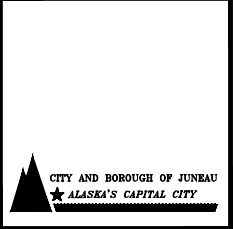
PART 3 – EXECUTION

- 3.1 PIPING INSTALLATION
- A. INSTALL PIPING IN ACCORDANCE WITH NFPA 13 FOR SPRINKLER SYSTEMS.
 - B. PROVIDE SEISMIC PROTECTION FOR PIPING SYSTEMS IN ACCORDANCE WITH NFPA 13 STANDARDS. ATTACH BRACING TO STRUCTURE WITH THROUGH BOLTS, WASHERS, AND NUTS. PROVIDE CLEARANCE AT ALL STRUCTURAL PENETRATIONS.
 - C. THE SPACING BETWEEN HANGERS SHALL NOT EXCEED THE VALUE GIVEN FOR THE TYPE OF PIPE AS INDICATED IN NFPA 13 TABLES.
 - D. SLOPE PIPING AND ARRANGE SYSTEM TO DRAIN AT LOW POINTS. INSTALL ECCENTRIC REDUCES TO MAINTAIN TOP OF PIPE LEVEL.
 - E. DIE CUT THREADED JOINTS WITH FULL CUT STANDARD TAPER PIPE THREADS WITH RED LEAD AND LINSEED OIL OR OTHER NON–TOXIC JOINT COMPOUND APPLIED TO MALE THREADS ONLY.
 - F. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL,NOT INVERTED. REMOVE PROTECTIVE COATINGS AFTER INSTALLATION.
 - G. INSTALL GATE, BALL, OR BUTTERFLY VALVES FOR SHUT–OFF OR ISOLATING SERVICE.
 - H. INSTALLATION OF ALL VALVES AND EQUIPMENT SHALL COMPLY WITH MANUFACTURER’S SUGGESTED INSTALLATION PRACTICES AND DIRECTIONS.
 - I.PROVIDE SERVICE ACCESS AROUND ALL EQUIPMENT. COMPLY WITH CODES AND STANDARDS.
- 3.2 TESTING
- A. ENTIRE SPRINKLER SYSTEM TO BE HYDRAULICALLY TESTED IN ACCORDANCE WITH FM GLOBAL STANDARDS. SUBMIT TEST RESULTS.
 - B. TEST ALL SYSTEM ALARM ACTUATIONS AND ALARMS.
 - C. TRIP TEST DRY PIPE SPRINKLER SYSTEM TO CONFIRM SYSTEM DISCHARGE TIME.
 - D. 72 HOUR ADVANCE NOTICE, AT A MINIMUM, IS REQUIRED FOR ALL TESTS TO ALLOW OWNER’S FIELD REPRESENTATIVE TO WITNESS TESTING.
- 3.3 PROJECT CLOSEOUT
- A. THE FIRE PROTECTION CONTRACTOR SHALL SUBMIT A WRITTEN AFFIDAVIT AT THE COMPLETION OF THE SYSTEM, STATING THAT THE FIRE PROTECTION SYSTEM AS INSTALLED COMPLIES WITH ALL REFERENCED CODES AND STANDARDS, STATE FIRE MARSHAL’S OFFICE, AND THE OWNER’S INSURANCE UNDERWRITERS.
 - B. FURNISH WRITTEN GUARANTEE TO THE OWNER, THAT MATERIALS INSTALLATIONS ARE FREE FROM MECHANICAL DEFECTS AND GUARANTEEING TO REPLACE AND REPAIR ANY AND ALL UNSATISFACTORY AND DEFECTIVE WORK AND ITEMS, TO THE SATISFACTION OF THE OWNER, IN A TIMELY MANOR, FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF THE BUILDING BY THE OWNER, AND TO BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE PREMISES FOR ANY SUCH UNSATISFACTORY WORK.
 - C. THE CONTRACTOR SHALL RESPOND WITH IN REASONABLE TIME, NOT TO EXCEED 15 DAYS TO REPAIR OR REPLACE LATENT OR HIDDEN DEFECTS AT SUCH TIME AS THEY ARE DISCOVERED.
 - D. MINIMUM ONE (1) SET OF “RECORD DRAWINGS” AND MAINTENANCE DATA SHALL BE ISSUED BY THE CONTRACTOR TO THE OWNER’S DESIGNATED FACILITY SITE MAINTENANCE ENGINEER, IN ADDITION TO REQUIRED SUBMITTALS.
 - E. CONTRACTOR SHALL FULLY TRAIN THE OWNER’S DESIGNATED MAINTENANCE ENGINEER IN THE OPERATION AND MAINTENANCE OF THE ENTIRE FIRE PROTECTION SYSTEM.



REVISION			
REV	DATE	DESCRIPTION	BY

REVISION			
REV	DATE	DESCRIPTION	BY

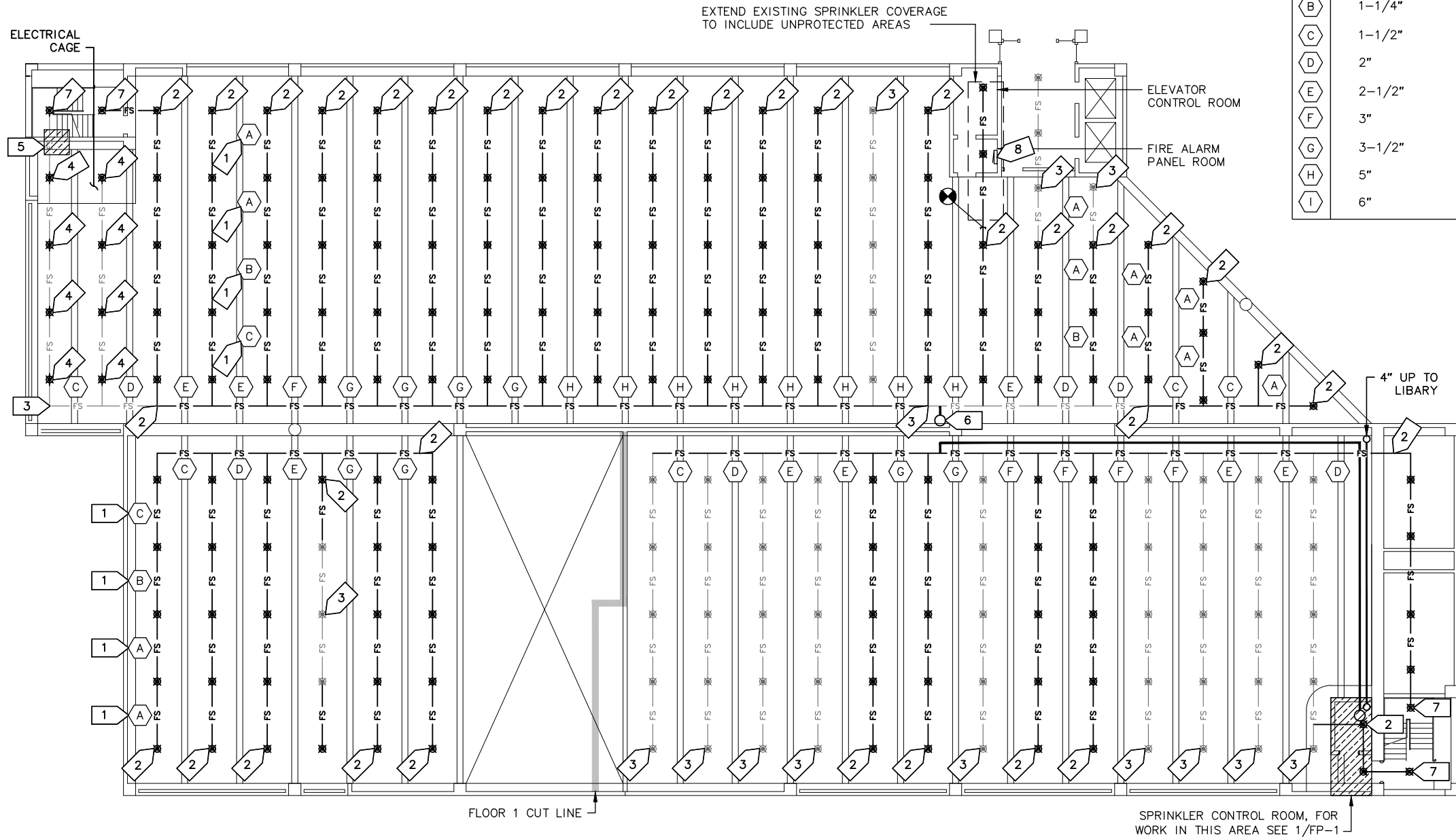


SCALE
HOR. N/A
VER. N/A
DESIGNED BY
TLM
DRAWN BY
WDM
CHECKED BY
TLM
APPROVED BY

CBJ CONTRACT No. E14–251 MARINE PARKING GARAGE – SPRINKLER SYSTEM REPLACEMENT PHASE 1 – FALL 2014 JUNEAU, ALASKA	
MECHANICAL SPECIFICATIONS	
STATUS: CONSTRUCTION DOCUMENTS	DATE: 04/2014

PROJECT NO. 20701.01
CITY GRID
WATER GRID
SEWER GRID
SHEET FP–2
OF FP–4

File: \\jobsturf\jobdata\20701.01 CBJ Marine Parking Garage Sprinklers\00 CAD\01 Working Set\06 Mechanical\Phase 1\20701.01_FP-3-FP-7_FIRE_SPRINKLER_SYSTEM Phase 1.dwg PLOT DATE: 4/23/2014 8:15 AM



TAG	TYPICAL PIPE SIZE
A	1"
B	1-1/4"
C	1-1/2"
D	2"
E	2-1/2"
F	3"
G	3-1/2"
H	5"
I	6"

GENERAL NOTES:

1. THE INFORMATION ON THIS DRAWING WAS DEVELOPED BASED ON A NON-DESTRUCTIVE WALK THROUGH OF THE FACILITY AND AS-BUILT DRAWINGS. PLANS INDICATE APPROXIMATE LOCATIONS OF UTILITIES, MECHANICAL PIPING, EQUIPMENT, AND SYSTEMS. THERE IS NO GUARANTEE AS TO THE ACCURACY OF THE INFORMATION SHOWN. THE LAYOUT OF THE PIPING AND SYSTEMS SHALL BE ADJUSTED AS NECESSARY TO AVOID CONFLICTS WITH EXISTING CONDITIONS. NOT ALL EXISTING PIPING AND EQUIPMENT IS SHOWN ON PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL LOCATIONS AND LAYOUTS PRIOR TO START OF WORK. ANY NOTED CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER PROMPTLY AND IN WRITING.
2. THE OWNER SHALL HAVE THE FIRST RIGHT OF REFUSAL ON ALL SALVAGEABLE MATERIAL. THE CONTRACTOR SHALL DELIVER SALVAGED MATERIAL TO A LOCATION INDICATED BY THE OWNER. COORDINATE DELIVERY AND LOCATION WITH THE OWNER.
3. CONTRACTOR TO ASSUME REPLACEMENT OF UP TO TEN PIPE HANGERS PER FLOOR IN BID (TYP).

SHEET NOTES:

- 1 DISTRIBUTION PIPE DIAMETERS ARE TYPICAL. SOME SUPPLY PIPES HAVE BEEN OMITTED FOR CLARITY. CONTRACTOR TO CONFIRM ALL QUANTITY, SIZES AND CONFIGURATION.
- 2 REMOVE EXISTING PIPE AND PIPE FITTINGS REPLACE WITH NEW GALVANIZED PIPE AND FITTINGS.
- 3 EXISTING GALVANIZED PIPE AND FITTINGS TO REMAIN. DEMOLISH AND REPLACE BLACK STEEL PIPING WHERE BRANCH LINE CONNECTS TO MAIN. SEE 3/FP-1
- 4 EXISTING GALVANIZED PIPE TO REMAIN. REPLACE BLACK STEEL TEE FITTINGS WITH GALVANIZED FITTINGS.
- 5 PROVIDE GALVANIZED DRIP PAN SEALED WATERTIGHT BELOW EXISTING BRANCH LINE ROUTED ABOVE MDP PANEL IN COMPLIANCE WITH NFPA 70, ART 110.26 E (1) (c) AND (b).
- 6 6" SPRINKLER RISER TO BE DEMOLISHED. INSTALL NEW 6" GALVANIZED PIPE RISER. REPLACE VERTICAL RISERS IN THEIR ENTIRETY FROM FLOOR 1 THROUGH FLOOR 4 IN PHASE 1.
- 7 REPLACE ALL SPRINKLER HEADS AND PIPING AT BOTH EXTERIOR STAIRS FROM FLOOR 1 THROUGH FLOOR 4 IN PHASE 1.
- 8 FIRE ALARM PANEL.
9. THIS IS AN ORDINARY HAZARD OCCUPANCY.
10. REUSE EXISTING SPRINKLER HEADS TO FULL EXTENT POSSIBLE.
11. REUSE EXISTING PIPE SUPPORTS TO FULL EXTENT POSSIBLE.
12. INSTALL NEW DRAINS WITH VALVE ASSEMBLY AT ALL LOW POINTS IN HORIZONTAL RUNS ON EACH LEVEL.

DRY SYSTEM AUXILIARY DRAIN VALVES

LOCATION	SIZE	VALVE TYPE
UNDER DUCT IN LIBRARY MECHANICAL ROOM	1/2"	BALL VALVE
CLOSET OF MEN'S BATHROOM AT STREET LEVEL	1"	DRUM DRIP ASSEMBLY
BOTTOM OF ELEVATOR PIT	1"	DRUM DRIP ASSEMBLY
FLOOR "1" BY STALL N	1"	DRUM DRIP ASSEMBLY
FLOOR "1" BY STALL R	1"	DRUM DRIP ASSEMBLY
FLOOR "1" EAST STAIRWELL (2)	3/4"	BALL VALVE
FLOOR "2" BY CENTER COLUMN	1"	DRUM DRIP ASSEMBLY
FLOOR "2" EAST STAIRWELL	3/4"	BALL VALVE
FLOOR "3" STALL #107 (INSPECTOR'S TEST VALVE - SYSTEM #2)	1"	BALL VALVE
FLOOR "3" BY CENTER COLUMN	1"	DRUM DRIP ASSEMBLY
FLOOR "3" EAST STAIRWELL	3/4"	BALL VALVE
FLOOR "4" STALL # 184 (INSPECTOR'S TEST VALVE - SYSTEM #1)	1"	BALL VALVE
FLOOR "4" BY ELEVATOR & STALL #225	1/2"	BALL VALVE
FLOOR "4" INSIDE CAGE BY STALL #258	1"	BALL VALVE

FIRST FLOOR - PLAN

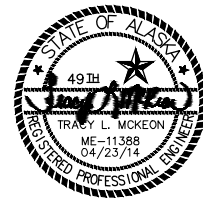
3/32" = 1'-0"



3940 ARCTIC BLVD. SUITE 300
ANCHORAGE, ALASKA 99503
PHONE: (907) 562-3252
FAX: (907) 561-2273

REVISION			
REV	DATE	DESCRIPTION	BY

REVISION			
REV	DATE	DESCRIPTION	BY



CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

SCALE
HOR. PER PLAN
VER. N/A
DESIGNED BY TLM
DRAWN BY WDM
CHECKED BY TLM
APPROVED BY

CBJ CONTRACT No. E14-251
MARINE PARKING GARAGE - SPRINKLER SYSTEM REPLACEMENT
PHASE 1 - FALL 2014
JUNEAU, ALASKA

FIRE SPRINKLER SYSTEM - FIRST FLOOR

STATUS: CONSTRUCTION DOCUMENTS

DATE: 04/2014

PROJECT NO.
20701.01

CITY GRID

WATER GRID

SEWER GRID

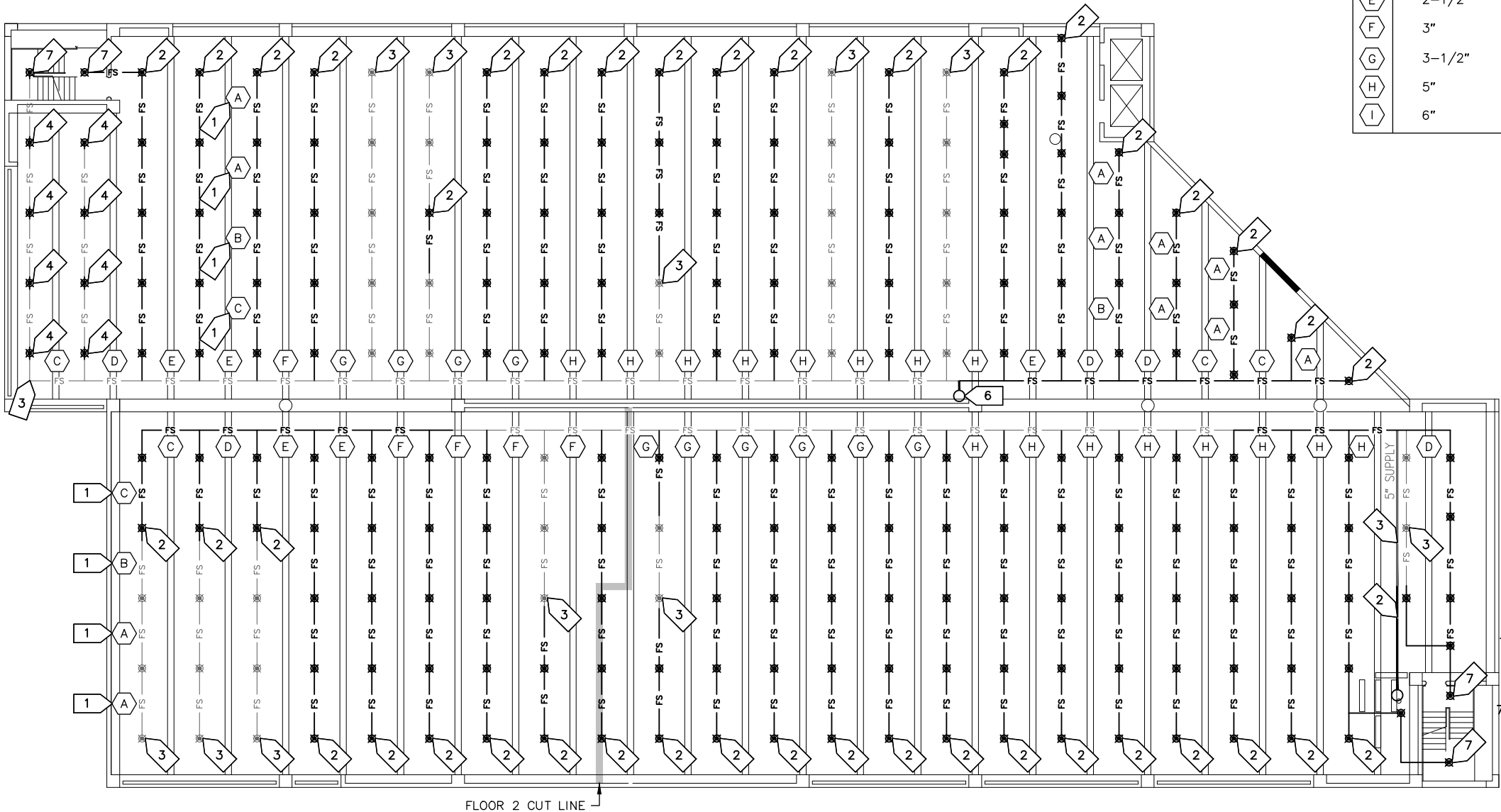
SHEET

FP-3

OF

FP-4

File: \\jobsturf\jobdata\20701.01 CBJ Marine Parking Garage Sprinklers\00 CADD\01 Working Set\06 Mechanical\Phase 1\20701.01_FP-3-FP-7_FIRE_SPRINKLER_SYSTEM_Phase 1.dwg PLOT DATE: 4/23/2014 8:15 AM



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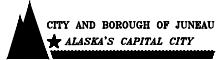
1 SECOND FLOOR - PLAN

3/32" = 1'-0"



REVISION			
REV	DATE	DESCRIPTION	BY

REVISION			
REV	DATE	DESCRIPTION	BY



SCALE	HOR. PER PLAN VER. N/A
DESIGNED BY	TLM
DRAWN BY	WDM
CHECKED BY	TLM
APPROVED BY	

CBJ CONTRACT No. E14-251
MARINE PARKING GARAGE - SPRINKLER SYSTEM REPLACEMENT
PHASE 1 - FALL 2014
JUNEAU, ALASKA
FIRE SPRINKLER SYSTEM - SECOND FLOOR

STATUS: CONSTRUCTION DOCUMENTS

DATE: 04/2014

PROJECT NO.	20701.01
CITY GRID	
WATER GRID	
SEWER GRID	
SHEET	FP-4
OF	FP-4