



July 28, 2023

City of Lacey Request for Proposals

New Police Station - Commissioning Services

Introduction

The City of Lacey, Washington is pleased to invite written proposals from qualified Commissioning Authorities (CxA) for the City of Lacey's New Police Station Project. Through this Request for Proposals ("RFP"), the City of Lacey is looking to identify, qualify, and partnering with an independent 3rd party Consultant who can provide specialized Building Commissioning Services. This agreement will be for approximately three years (remaining design, construction & post construction phases) in duration with the option for the City of Lacey to extend it for additional time and money if necessary.

Project Description

This project includes the new police station site, which, involves the construction of a 45,000 to 50,000 gsf, 2-story facility in the City of Lacey, Washington. The lower level is +/-22,000 gsf and the upper level is +/-23,000 gsf the facility will be of type II-B construction for Business (B), sprinklered, non-separated uses. Since the facility is non-separated, the design and code will follow the most stringent occupancy type (A-3 assembly). The main building functions include assembly spaces, offices, fitness room & locker room, evidence processing & storage and holding cells (I-3, condition 5) remaining spaces are support spaces for the City of Lacey Police.

Also included in the commissioning services will be assisting the design team with the review and quality controls of the design Bid Alternate for the New Police Station Training Building, which, involves the construction of a +/-10,000-15,000 gsf, 1-story facility in the City of Lacey, Washington. The facility will be of type II-B construction for Business (B), sprinklered, non-separated uses. Since the facility is non-separated, the design and code will follow the most stringent occupancy type (A-3 assembly). The Training Building functions include a firing range, simulator / defensive training room and training classroom. Remaining spaces are support spaces for the training building and City of Lacey Police.

Commissioning Requirements

The City of Lacey will review the SOPs from consultants and evaluate the submitted packages, with one (1) consultant being selected to provide commissioning services for the City of Lacey's New Police Station project. At least two of the selected consultants must have a physical office located in Western Washington. Chosen consultants will be expected to assist in development and coordination of the commissioning specifications and participate in the design review process prior to 100% bid ready. The systems to be commissioned may include, but are not limited to heating, ventilating and air conditioning (HVAC) equipment, HVAC controls, ductwork, electrical, exhaust fans, smoke evacuation system, carbon dioxide detectors,

laboratory equipment, plumbing, fire/life safety, security, low voltage, emergency power, domestic hot water, elevator and the building envelope as required by applicable State-adopted codes.

Consultants must demonstrate competences in enhanced commissioning services requirements. The Building Commissioning Guidelines for the State of Washington, may be used as a guide for typical equipment to be commissioned in Divisions 15 and 16. Chosen consultants may be required to begin at the later design stages of the Project and stay with the Project through construction completion. Chosen consultants may also be required to check the systems periodically for one year after completion.

The City of Lacey accepts electronic copies via email – no printed copies needed. Statements of Proposals, prepared according to the following detailed instructions, must be received at the email address listed below no later than **5:00 p.m. Pacific Standard Time, Friday, August 11th, 2023**. No late submittals will be accepted.

The City of Lacey reserves the right to reject any or all proposals, wholly or in part, received by reason of this request. The City of Lacey assumes no obligations of any kind for expenses incurred by any respondent to this solicitation.

The City of Lacey, in accordance with Section 504 of the Rehabilitation Act (Section 504) and the Americans with Disabilities Act (ADA), commits to nondiscrimination on the basis of disability, in all of its programs and activities. This material can be made available in an alternate format by emailing John Swidecki at jswideck@ci.lacey.wa.us or by calling collect (360) 438.2645.

It is the City of Lacey's policy to assure nondiscrimination in any contract entered into pursuant to this advertisement. Firms will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award as provided by Title VI of the Civil Rights Act of 1964.

SOP FORMAT:

Consultants are asked to express their interest in this project by offering a SOP which demonstrates their ability and capacity to provide the services described.

1. **Number of Copies and Due Date** -- Interested consultants should submit one electronic copy of their SOP via email so that they are **received no later than 5:00 p.m. Pacific Standard Time, Friday, August 11th, 2023** at Lacey City Hall. SOPs received after the deadline will not be reviewed.
2. **Format** -- Each SOP will be limited to no more than 8 pages including the cover. A printed side constitutes one page. Printed means any printing of any kind except for the phrase “this page intentionally left blank.” Pages must be on 8.5” x 11” PDF. Margins will be at least 1” top, bottom, left and right. Body type must be 11 point or larger at standard spacing.
3. **Cover Letter** -- A cover letter, which does not count as part of the 8-page limit, should establish the firm’s interest in this project and may not exceed one page. The letter must be signed by an individual capable of committing the resources of the proposing firm.

SOP CONTENT – Please briefly describe your firm with regards to the following items:

- **Responsiveness and completeness of proposal –**
- **Qualification and experience –**
 - Projects similar to this one
 - O&M experience
 - Project and construction management
 - Troubleshooting
 - Handoff to owners & post-construction services
- **Proposed components/deliverables and timeline/schedule-**
- **Proposed cost of services –**
 - Fundamental commissioning fee
 - Total # professional hours budgeted for fundamental commissioning
 - Enhanced commissioning fee
 - Total # professional hours budgeted for enhanced commissioning
 - Alternative proposal for fire alarm systems
 - Alternative proposal for security systems
 - Provide hourly billing rates that would be applicable for the duration of the project
 - Provide a not-to-exceed estimate of reimbursable expenses excluding out-of-town travel

SELECTION PROCESS

Several Public Works staff members will review all SOPs. Each staff member on the evaluation panel will rate the criteria on a scale from 1 to 5 (Poor, Below Average, Average, Above Average, and Excellent), and scores will be added to help determine the most qualified consultants.

Evaluation Criteria: –

SOPs will be rated based on the following criteria:

- Responsiveness and completeness of proposal – 10%
- Qualification and experience – 30%
- Proposed components/deliverables and timeline/schedule – 30%
- Proposed cost of services – 30%

Points may be deducted for SOPs that do not follow “SOP FORMAT”.

Staff members may choose a short list of qualified consultants who will be invited to make a presentation to the evaluation panel. Presentations, if needed, will be arranged in December 2022. Based on the SOPs and/or interviews/presentations, the selection panel will choose the company which, in its opinion, best meets the requirements set forth in this Request for Qualifications and negotiate a consultant agreement.

INTENDED SELECTION SCHEDULE

SOPs due	5:00 p.m., Monday, August 11, 2023
Interviews (if needed)	Week of August 28, 2023 (2 wks)
Negotiations with Finalist	Week of September 11, 2023 (2 wks)
Final Review of Contract	Week of September 25, 2023 (2wks)
Finalize Contract	Week of October 9, 2023 (2 wks)

Submission Details:

- Proposals must be titled "RFP – Commissioning Services"
- The preferred method of submission is email to: John Swidecki at jswideck@ci.lacey.wa.us
- Alternatively, paper copies will be accepted via mail:

City of Lacey
Attn: John Swidecki
420 College Street SE
Lacey, WA 98503

Note: If submitting by mail, vendors must submit one unbound original and five (5) copies of their RFP. The envelope must be clearly labeled “RFP – Commissioning Services”

Questions:

Please direct any questions for this project to John Swidecki, Capital Project Engineer, via email jswideck@ci.lacey.wa.us; subject line : “RFQ-Commissioning Services Questions”. Questions will be accepted until Tuesday, August 8th, 2023, 3:30 PM.

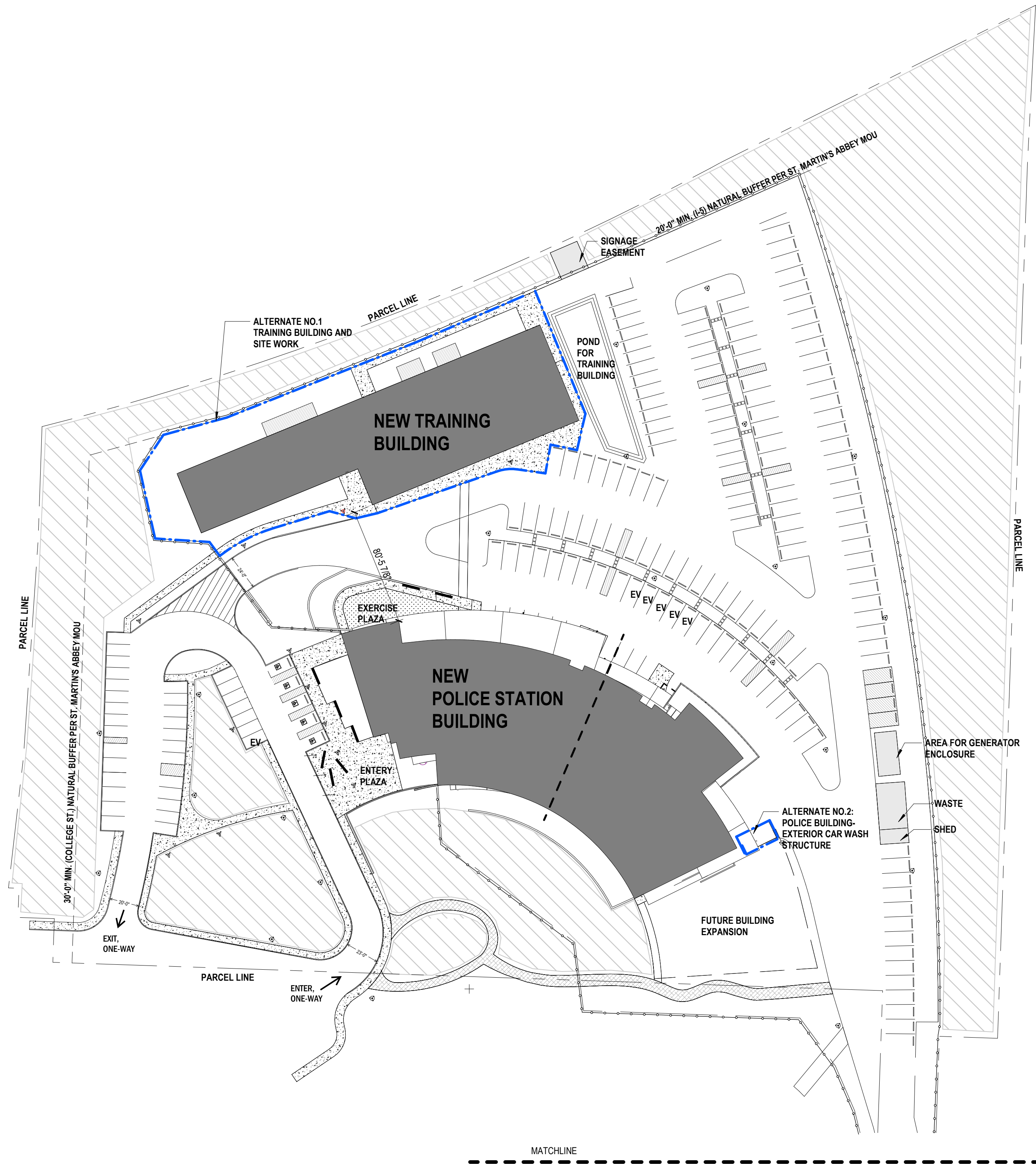
Appendices:

Appendix 1 – Proposed Site Plan

Appendix 2 – Working Building Plan For Main And Training Buildings

Appendix 3 – Working Building Technical Specification Table of Content

PLOT DATE: 4/25/2023 12:21:08 PM



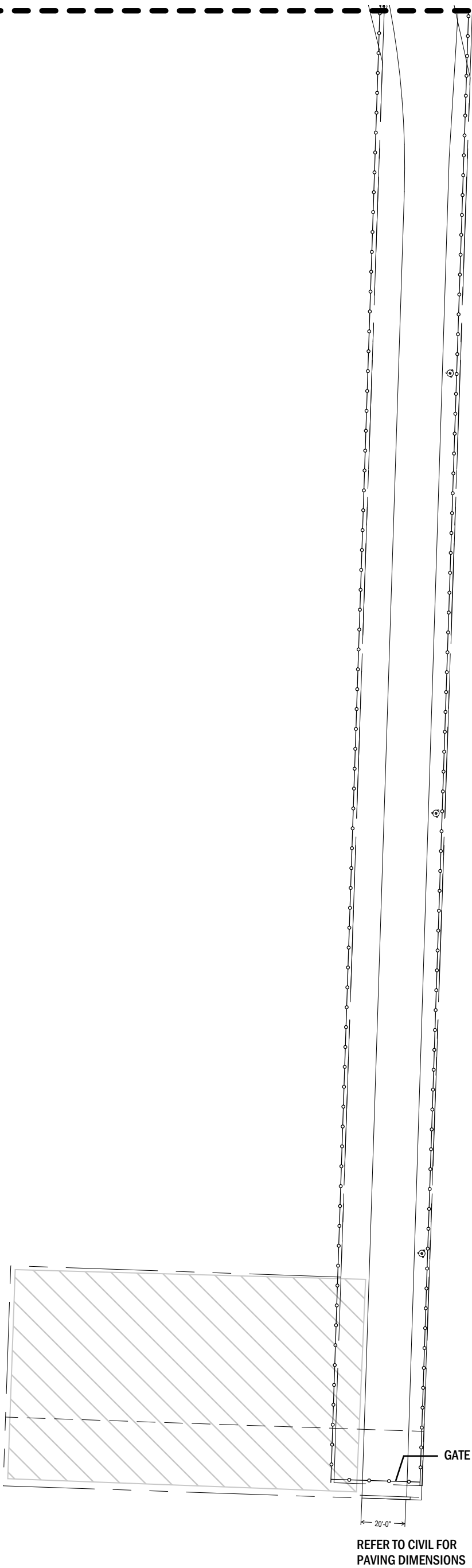
PROJECT NORTH
OVERALL SITE PLAN
SCALE: 1" = 50'-0"

SITE PLAN NOTES

1. SEE CIVIL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
2. SEE LANDSCAPE DRAWINGS FOR ADDITIONAL SITE FEATURES.
3. SEE ELECTRICAL DRAWINGS FOR SITE LIGHTING.
4. CONTRACTOR IS RESPONSIBLE FOR PROVIDING THEIR OWN ELECTRICAL POWER.
5. EXISTING VEHICLE ACCESS AND FIRE LANES ARE TO BE MAINTAINED DURING ENTIRE DURATION OF CONSTRUCTION. OBEY POSTED SPEED LIMIT, REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES.
6. COORDINATE SITE OPERATIONS WITH OWNER INCLUDING STAGING AREAS, MATERIAL STORAGE, ACCESS TO WORK, TIMING OF WORK, NOISY OPERATIONS, INTERRUPTIONS OF UTILITIES, ETC.
7. CONTRACTOR SHALL PROVIDE AND PAY FOR DUMPSTER AND HAUL OFF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SEEDING OF ANY LANDSCAPING OR LAWN AREAS DISTURBED BY THE PROJECT.
8. CONTRACTOR TO PROVIDE TEMPORARY FENCING AS REQUIRED TO PROTECT GENERAL PUBLIC FROM AREAS OF WORK.
9. CONTRACTOR TO KEEP PUBLIC STREETS AND SIDEWALKS FREE OF CONSTRUCTION DEBRIS AT ALL TIMES.
10. CONTRACTOR TO PROVIDE SAFETY MEASURES AS REQUIRED TO PROTECT PEDESTRIAN TRAFFIC FROM CONSTRUCTION.
11. ALL CONSTRUCTION DEBRIS TO BE DISPOSED OF IN AN APPROVED LANDFILL.
12. CONTRACTOR TO PROVIDE RESTROOM FACILITIES DURING CONSTRUCTION.

SITE PLAN LEGEND

- PARCEL LINE
- LOCATION OF BID ALTERNATES
- SECURE PERIMETER FENCE
- PLANTING AREAS TO BE PROTECTED AND RESTORED



NEW POLICE STATION - CODE ANALYSIS

2018 IBC & WAC 51-50 4TH PRINTING

PROJECT DESCRIPTION:

THE NEW POLICE STATION BUILDING INVOLVES THE CONSTRUCTION OF A 48,604 GSF, 2-STORY FACILITY IN THE CITY OF LACEY, WASHINGTON. THIS SQUARE FOOTAGE INCLUDES OVERHANGS OVER 4 FT AND PATIOS. THE LOWER LEVEL IS 23,867 SF WITH READY LINE OVERHANG AND THE UPPER LEVEL IS 24,737 SF WITH PATIO AND OVERHANGS. THE FACILITY WILL BE OF TYPE I-B CONSTRUCTION, FULLY SPRINKLERED, (B) BUSINESS OCCUPANCY, WITH A NON-SEPARATED USE. SINCE THE FACILITY IS NON-SEPARATED, THE DESIGN AND CODE WILL FOLLOW THE MOST STRINGENT OCCUPANCY TYPE (A-3 ASSEMBLY). THE MAIN BUILDING FUNCTIONS INCLUDE ASSEMBLY SPACES, OFFICES, FITNESS ROOM & LOCKER ROOM, EVIDENCE PROCESSING & STORAGE AND HOLDING CELLS (I-3 CONDITION 5). REMAINING SPACES ARE SUPPORT SPACES FOR THE CITY OF LACEY POLICE.

NON-SEPARATED USES FOR A-3, B, S-1 & S-2 AND SEPARATED I-3 CONDITION 5.

CODES REFERENCED:

INTERNATIONAL BUILDING CODE (IBC)	2018 EDITION
INTERNATIONAL MECHANICAL CODE (IMC)	2018 EDITION
INTERNATIONAL FIRE CODE (IFC)	2018 EDITION
UNIFORM PLUMBING CODE (UPC)	2018 EDITION
NATIONAL ELECTRICAL CODE (NFPA 70)	2020 EDITION

WASHINGTON STATE BUILDING CODE (IBC):	WAC 51-50
WASHINGTON STATE MECHANICAL CODE (IMC):	WAC 51-52
WASHINGTON STATE FIRE CODE (IFC):	WAC 51-54A
WASHINGTON STATE ENERGY CODE (WSEC):	WAC 51-11C

ACCESSIBLE & USABLE BUILDINGS & FACILITIES (ICC/ANSI A117.1) 2017

CHAPTER 3 OCCUPANCY CLASSIFICATION AND USE

SECTION 400 OCCUPANCY CLASSIFICATION

- A-3 ASSEMBLY
B BUSINESS
I-3 INSTITUTION (CONDITION 5)
S-1 STORAGE
S-2 STORAGE

CHAPTER 4 SPECIAL DETAILED REQUIREMENTS

SECTION 408 GROUP I-3

408.3 MEANS OF EGRESS, EXCEPT AS MODIFIED OR AS PROVIDED FOR IN THIS SECTION, THE MEANS OF EGRESS PROVISIONS OF CHAPTER 10 SHALL APPLY.

408.3.7 SALLYPORTS. A SALLYPORT SHALL BE PERMITTED IN A MEANS OF EGRESS WHERE THERE ARE PROVISIONS FOR CONTINUOUS AND UNOBSTRUCTED PASSAGE THROUGH THE SALLYPORT DURING AN EMERGENCY EGRESS CONDITION.

408.6 SMOKE BARRIER. OCCUPANCIES IN GROUP I-3 SHALL HAVE SMOKE BARRIERS COMPLYING WITH SECTIONS 408.6 AND 709 TO DIVIDE EVERY STORY OCCUPIED BY RESIDENTS FOR SLEEPING, OR ANY OTHER STORY HAVING AN OCCUPANT LOAD OF 50 OR MORE PERSONS, INTO NOT FEWER THAN TWO SMOKE COMPARTMENTS.

EXCEPTION: SPACES HAVING A DIRECT EXIT TO ONE OF THE FOLLOWING, PROVIDED THAT THE LOCKING ARRANGEMENT OF THE DOORS INVOLVED COMPLIES WITH THE REQUIREMENTS FOR DOORS AT THE SMOKE BARRIER FOR THE USE CONDITION INVOLVED:

1. A PUBLIC WAY.
2. A BUILDING SEPARATED FROM THE RESIDENT HOUSING AREA BY A 2-HOUR FIRE-RESISTANCE-RATED ASSEMBLY OR 50 FEET (15 240 MM) OF OPEN SPACE.
3. A SECURED YARD OR COURT HAVING A HOLDING SPACE 50 FEET (15 240 MM) FROM THE HOUSING AREA THAT PROVIDES SQUARE FEET (0.93 M²) OF REFUGE AREA PER OCCUPANT, INCLUDING RESIDENTS, STAFF AND VISITORS.

A SMOKE BARRIER SHALL BE PROVIDED TO SEPARATE I-3 OCCUPANCY FROM REMAINDER OF THE BUILDING.

CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS

(WAC) TABLE 504.3 ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE

OCCUPANCY CLASSIFICATION A = SPRINKLERED, TYPE I-B = 75 FT ALLOWED ABOVE GRADE PLANE
ACTUAL: 37 FEET 9 1/2 INCHES

(WAC) TABLE 504.4 ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE (MOST RESTRICTIVE)

OCCUPANCY CLASSIFICATION A-3 = SPRINKLERED, TYPE I-B = 3 STORIES ALLOWED ABOVE GRADE PLANE
ACTUAL: 2 STORIES

(WAC) TABLE 506.2 ALLOWABLE AREA FACTOR (AT = SM) IN SQUARE FEET (MOST RESTRICTIVE)

OCCUPANCY CLASSIFICATION A-3 = SPRINKLERED, MULTI-STORY, TYPE I-B = 28,500 SF
ALLOWABLE SF PER FLOOR LEVEL WITH FRONTAGE INCREASE: 35,530 SF

ACTUAL: LOWER LEVEL:	21,040 SF BUILDING
	2,892 SF READY LINE OVERHANG
	3,867 SF TOTAL PER LOWER LEVEL
UPPER LEVEL:	23,314 SF BUILDING
	589 SF PATIO
	734 SF OVERHANGS BEYOND PATIO
	24,737 SF TOTAL PER UPPER LEVEL
OVERALL ACTUAL TOTAL SF = 48,604 SF	

FRONTAGE INCREASE CALCULATIONS:

POLICE BUILDING - FRONTAGE INCREASE

Lower Level - North walls and East / West at Sally Port				Upper Level - West, South, East and North			
	WALL LENGTH (F)	FRONTAGE	LxW		WALL LENGTH (F)	FRONTAGE	LxW
L1	82.25	30	2467.5	L6	94.5	30	2835
L2	16	30	480	L7	38	20	760
L3	54.33	30	1629.9	L8	20.83	30	624.9
L4	37	30	1110	L9	165.83	30	4974.9
L5	45	30	1350	L10	79	30	2370
				L11	94.5	30	2835
					492.66		14399.8

Sum of wall Length

(F) 727.24

W = [(L1 X W1)+ (L2 X W2), ETC.] / F

L X W = 21437.2
MINIMUM FRONTAGE DISTANCE (EQUATION 5-4)

W = 21437.2 / 727.24

W = 29.48

If = [F/P-0.25] W/30

AMOUNT OF INCREASE (EQUATION 5-5)

If = [(727.24/29.48) - 0.25] 29.48/30

If = (.75)29.48/30

If = 22.11/30

F = 0.74

Aa = [At+(NS X If)] X Sa

TOTAL ALLOWABLE AREA (EQUATION 5-2)

Typ II-B Aa = [28,500 + (9,500 x 0.74)] X 2

Aa = [28,500 + 7,030] X 2

Aa = 35,530 X 2

Aa = 71,060 SF

*allowed per story is a value of

Sa = 1

PER FLOOR = 35,530 GSF ALLOWED

SECTION 905 MEZZANINES AND EQUIPMENT PLATFORMS

905.3 EQUIPMENT PLATFORMS. EQUIPMENT PLATFORMS IN BUILDINGS SHALL NOT BE CONSIDERED AS A PORTION OF THE FLOOR BELOW. SUCH EQUIPMENT PLATFORMS SHALL NOT CONTRIBUTE TO EITHER THE BUILDING AREA OR THE NUMBER OF STORES AS REGULATED BY SECTION 503.1. THE AREA OF THE EQUIPMENT PLATFORM SHALL NOT BE INCLUDED IN DETERMINING THE FIRE AREA IN ACCORDANCE WITH SECTION 903. EQUIPMENT PLATFORMS SHALL NOT BE A PART OF ANY MEZZANINE AND SUCH PLATFORMS AND THE WALKWAYS, STAIRWAYS, ALTERNATING TREAD DEVICES AND LADDERS PROVIDING ACCESS TO AN EQUIPMENT PLATFORM SHALL NOT SERVE AS A PART OF THE MEANS OF EGRESS FROM THE BUILDING.

905.3.1 AREA LIMITATION. THE AGGREGATE AREA OF ALL EQUIPMENT PLATFORMS WITHIN A ROOM SHALL BE NOT GREATER THAN TWO-THIRDS OF THE AREA OF THE ROOM IN WHICH THEY ARE LOCATED.

905.3.2 AUTOMATIC SPRINKLER SYSTEM. WHERE LOCATED IN A BUILDING THAT IS REQUIRED TO BE PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM, EQUIPMENT PLATFORMS SHALL BE FULLY PROTECTED BY SPRINKLERS ABOVE AND BELOW THE PLATFORM, WHERE REQUIRED BY THE STANDARDS REFERENCED IN SECTION 903.3.

905.3.3 GUARDS. EQUIPMENT PLATFORMS SHALL HAVE GUARDS WHERE REQUIRED BY SECTION 1015.2.

SECTION 508 MIXED USE AND OCCUPANCY

508.3 NONSEPARATED OCCUPANCIES. BUILDINGS OR PORTIONS OF BUILDINGS THAT COMPLY WITH THE PROVISIONS OF THIS SECTION SHALL BE CONSIDERED AS NONSEPARATED OCCUPANCIES.

508.3.1 OCCUPANCY CLASSIFICATION. NONSEPARATED OCCUPANCIES SHALL BE INDIVIDUALLY CLASSIFIED IN ACCORDANCE WITH SECTION 302.1. THE REQUIREMENTS OF THIS CODE SHALL APPLY TO EACH PORTION OF THE BUILDING BASED ON THE OCCUPANCY CLASSIFICATION OF THAT SPACE. IN ADDITION, THE MOST RESTRICTIVE PROVISIONS OF CHAPTER 9 THAT APPLY TO THE NONSEPARATED OCCUPANCIES SHALL APPLY TO THE TOTAL NONSEPARATED OCCUPANCY AREA.

TABLE 509 INCIDENTAL USES

THERE IS NO ELECTRICAL EQUIPMENT IN ELECTRICAL ROOM 049 OR IN ELECTRICAL ROOM 191 THAT REQUIRES 1-HOUR FIRE-RATED PROTECTION BASED ON IBC 2018 TABLE 509 INCIDENTAL USES.

THERE IS NO MECHANICAL OR ELECTRICAL EQUIPMENT LOCATED IN THE MECHANICAL ROOM THAT REQUIRES 1-HOUR FIRE RATED PROTECTION BASED ON THE IBC 2018 TABLE 509 INCIDENTAL USES.

PER NEC 450.21 DRY-TYPE TRANSFORMERS INSTALLED INDOORS

(B) EXCEPTION NO. 2 - TRANSFORMERS OVER 112.5 KVA DO NOT NEED TO BE WITHIN 1-HOUR FIRE-RESISTANT RATED CONSTRUCTION IF THE TRANSFORMER HAS CLASS 15 OR HIGHER INSULATION SYSTEMS, COMPLETELY ENCLOSED, EXCEPT FOR VENTILATED OPENINGS. ALL INSULATION MATERIALS USED ARE TO BE FLAME-RETARDANT AND DO NOT SUPPORT COMBUSTION, AS DEFINED IN ASTM STANDARD TEST METHOD D635.

CHAPTER 6 TYPES OF CONSTRUCTION

(WAC) TABLE 601 FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS: TYPE I-B

STRUCTURAL FRAME	0 HOURS
BEARING WALL, INTERIOR & EXTERIOR	0 HOURS
NON BEARING WALLS (EXTERIOR)	TABLE 602
1 HOUR, X-9FT, 5 FT x 10 FT	0 HOURS
0 HOUR, 10 FT x 4 x < 50, X-3 30 FT	0 HOURS
NON-BEARING WALLS (INTERIOR)	0 HOURS
FLOOR CONSTRUCTION	0 HOURS
ROOF CONSTRUCTION	0 HOURS
*IN ALL OCCUPANCIES, HEAVY TIMBER COMPLYING WITH SECTION 2304.111 SHALL BE ALLOWED WHERE A 1-HOUR OR LESS FIRE-RESISTANCE RATING IS REQUIRED.	

SECTION 603 COMBUSTIBLE MATERIAL IN TYPES I AND II CONSTRUCTION

603.1 ALLOWABLE MATERIALS. COMBUSTIBLE MATERIALS SHALL BE PERMITTED IN BUILDINGS OF TYPE I OR II CONSTRUCTION IN THE FOLLOWING APPLICATIONS AND IN ACCORDANCE WITH SECTION 603.1.1 THROUGH 603.1.3.

1. FIRE-RETARDANT-TREATED WOOD SHALL BE PERMITTED IN:
 - 1.1. NONBEARING PARTITIONS WHERE THE REQUIRED FIRE-RESISTANCE RATING IS 2 HOURS OR LESS.
 - 1.2. NONBEARING EXTERIOR WALLS WHERE FIRE-RESISTANCE-RATED CONSTRUCTION IS NOT REQUIRED.
2. ROOF CONSTRUCTION, INCLUDING GIRDERS, TRUSSES, FRAMING AND DECKING.
3. BALCONIES, PORCHES, DECKS AND EXTERIOR STAIRWAYS NOT USED AS REQUIRED EXITS ON BUILDINGS THREE STORIES OR LESS ABOVE GRADE PLANE.
4. COMBUSTIBLE EXTERIOR WALL COVERINGS, BALCONIES AND SIMILAR PROJECTIONS AND BAY OR ORIEL WINDOWS IN ACCORDANCE WITH CHAPTER 14 AND 705.2.3.1.
5. BLOCKING SUCH AS FOR HANDRAILS, MILLWORK, CABINETS AND WINDOW AND DOOR FRAMES.
6. NAILING OR FURRING STRIPS AS PERMITTED BY SECTION 803.15.
7. HEAVY TIMBER AS PERMITTED BY NOTE C TO TABLE 601 AND SECTIONS 602.4.3 AND 705.2.3.1.

CHAPTER 7 FIRE AND SMOKE PROTECTION FEATURES

SECTION 707 FIRE BARRIERS

(WAC) 707.5 CONTINUITY. FIRE BARRIERS SHALL EXTEND FROM THE TOP OF THE FOUNDATION OR FLOORCEILING ASSEMBLY BELOW TO THE UNDERSIDE OF THE FLOOR OR ROOF SHEATHING, SLAB OR DECK ABOVE AND SHALL BE SECURELY ATTACHED THERETO. SUCH FIRE BARRIERS SHALL BE CONTINUOUS THROUGH CONCEALED SPACE, SUCH AS THE SPACE ABOVE A SUSPENDED CEILING, JOINTS AND VOIDS AT INTERSECTIONS SHALL COMPLY WITH SECTIONS 707.8 AND 707.9.

EXCEPTIONS:

1. SHAFT ENCLOSURES SHALL BE PERMITTED TO TERMINATE AT A TOP ENCLOSURE COMPLYING WITH SECTION 713.12.
2. INTERIOR EXIT STAIRWAY AND RAMP ENCLOSURES REQUIRED BY SECTION 1023 AND EXIT ACCESS STAIRWAY AND RAMP ENCLOSURES REQUIRED BY SECTION 1019 SHALL BE PERMITTED TO TERMINATE AT A TOP ENCLOSURE COMPLYING WITH SECTION 713.12.
3. AN EXIT PASSAGEWAY ENCLOSURE REQUIRED BY SECTION 1024.3 THAT DOES NOT EXTEND TO THE UNDERSIDE OF THE ROOF SHEATHING, SLAB OR DECK ABOVE SHALL BE ENCLOSED AT THE TOP WITH CONSTRUCTION OF THE SAME FIRE-RESISTANCE RATING AS REQUIRED FOR THE EXIT PASSAGEWAY.

SECTION 709 SMOKE BARRIERS

709.3 FIRE-RESISTANCE RATING. A 1-HOUR FIRE-RESISTANCE RATING IS REQUIRED FOR SMOKE BARRIERS.

SECTION 713 SHAFT ENCLOSURES

713.4 FIRE-RESISTANCE RATING. SHAFT ENCLOSURES SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 2 HOURS WHERE CONNECTING FOUR STORIES OR MORE, AND NOT LESS THAN 1 HOUR WHERE CONNECTING LESS THAN FOUR STORIES. THE NUMBER OF STORIES CONNECTED BY THE SHAFT ENCLOSURE SHALL INCLUDE ANY MEZZANINES BUT NOT ANY MEZZANINES. SHAFT ENCLOSURES SHALL HAVE A FIRE-RESISTANCE RATING NOT LESS THAN THE FLOOR ASSEMBLY PENETRATED, BUT NEED NOT EXCEED 2 HOURS. SHAFT ENCLOSURES SHALL MEET THE REQUIREMENTS OF SECTION 703.2.1.

713.5 CONTINUITY. SHAFT ENCLOSURES SHALL BE CONSTRUCTED AS FIRE BARRIERS IN ACCORDANCE WITH SECTION 707 OR HORIZONTAL ASSEMBLIES CONSTRUCTED IN ACCORDANCE WITH SECTION 711, OR BOTH, AND SHALL HAVE CONTINUITY IN ACCORDANCE WITH SECTION 707.5 FOR FIRE BARRIERS OR SECTION 711.2.2 FOR HORIZONTAL ASSEMBLIES, AS APPLICABLE.

SECTION 714 PENETRATIONS

714.4 FIRE-RESISTANCE-RATED WALLS. PENETRATIONS INTO OR THROUGH FIRE WALLS, FIRE BARRIERS, SMOKE BARRIER WALLS AND FIRE PARTITIONS SHALL COMPLY WITH SECTIONS 714.4.1 THROUGH 714.4.3. PENETRATIONS IN SMOKE BARRIER WALLS SHALL ALSO COMPLY WITH SECTION 714.5.4.

714.4.1 THROUGH PENETRATIONS. THROUGH PENETRATIONS OF FIRE-RESISTANCE-RATED WALLS SHALL COMPLY WITH SECTION 714.4.1.1 OR 714.4.1.2. EXCEPT WHERE THE PENETRATING ITEMS ARE STEEL, FERROUS OR COPPER PIPES, TUBES OR CONDUITS, THE ANNULAR SPACE BETWEEN THE PENETRATING ITEM AND THE FIRE-RESISTANCE-RATED WALL IS PERMITTED TO BE PROTECTED BY EITHER OF THE FOLLOWING MEASURES:

1. IN CONCRETE OR MASONRY WALLS WHERE THE PENETRATING ITEM IS A MAXIMUM 6-INCH (152 MM) NOMINAL DIAMETER AND THE AREA OF THE OPENING THROUGH THE WALL DOES NOT EXCEED 144 SQUARE INCHES (9,290 MM²), CONCRETE, GROUT OR MORTAR IS PERMITTED WHERE INSTALLED THE FULL THICKNESS OF THE WALL OR THE THICKNESS REQUIRED TO MAINTAIN THE FIRE-RESISTANCE RATING.
2. THE MATERIAL USED TO FILL THE ANNULAR SPACE SHALL PREVENT THE PASSAGE OF FLAME AND HOT GASES SUFFICIENT TO IGNITE COTTON WASTE WHEN SUBJECTED TO ASTM E119 OR UL 263 TIME-TEMPERATURE FIRE CONDITIONS UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER AT THE LOCATION OF THE PENETRATION FOR THE TIME PERIOD EQUIVALENT TO THE FIRE-RESISTANCE RATING OF THE CONSTRUCTION PENETRATED.

SECTION 717 DUCTS AND AIR TRANSFER OPENINGS

(WAC) 717.3.2 FIRE BARRIERS. DUCTS AND AIR TRANSFER OPENINGS OF FIRE BARRIERS SHALL BE PROTECTED WITH LISTED FIRE DAMPERS INSTALLED IN ACCORDANCE WITH THEIR LISTING. DUCTS AND AIR TRANSFER OPENINGS SHALL NOT PENETRATE ENCLOSURES FOR INTERIOR EXIT STAIRWAYS AND RAMP AND EXIT PASSAGEWAYS, EXCEPT AS PERMITTED BY SECTIONS 1023.5 AND 1024.6, RESPECTIVELY.

EXCEPTION: FIRE DAMPERS ARE NOT REQUIRED AT PENETRATIONS OF FIRE BARRIERS WHERE ANY OF THE FOLLOWING APPLY:
1. PENETRATIONS ARE TESTED IN ACCORDANCE WITH ASTM E119 OR UL 263 AS PART OF THE FIRE-RESISTANCE-RATED ASSEMBLY.
2. DUCTS ARE USED AS PART OF AN APPROVED SMOKE CONTROL SYSTEM IN ACCORDANCE WITH SECTION 909 AND WHERE THE USE OF A FIRE DAMPER WOULD INTERFERE WITH THE OPERATION OF A SMOKE CONTROL SYSTEM.

3. SUCH WALLS SHALL HAVE A REQUIRED FIRE-RESISTANCE RATING OF 1 HOUR OR LESS, PENETRATED BY DUCTED HVAC SYSTEMS, IN AREAS OF OTHER THAN GROUP H AND ARE IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2. FOR THE PURPOSES OF THIS EXCEPTION, A DUCTED HVAC SYSTEM SHALL BE A DUCT SYSTEM FOR CONVEYING SUPPLY, RETURN OR EXHAUST AIR AS PART OF THE STRUCTURE'S HVAC SYSTEM. SUCH A DUCT SYSTEM SHALL BE CONSTRUCTED OF SHEET STEEL NOT LESS THAN NO. 26 GAGE THICKNESS AND SHALL BE CONTINUOUS WITHOUT OPENINGS FROM THE AIR-HANDLING APPLIANCE OR EQUIPMENT TO THE AIR OUTLET AND INLET TERMINALS, LOCATED ON THE OPPOSITE SIDE OF THE WALL ASSEMBLY.

CHAPTER 08 INTERIOR FINISHES

TABLE 803.13 INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY (MOST RESTRICTIVE)

GROUP	CORRIDORS AND ENCLOSURE	FOR EXIT ACCESS STAIRWAYS	ROOMS AND ENCLOSED SPACES
A-3	CLASS B	CLASS B	CLASS C

CHAPTER 09 FIRE PROTECTION AND LIFE SAFETY SYSTEMS

AUTOMATIC SPRINKLER SYSTEM:

YES

SECTION 903 AUTOMATIC SPRINKLER SYSTEMS.

903.3.1.1 NFPA 13 SPRINKLER SYSTEMS. WHERE THE PROVISIONS OF THIS CODE REQUIRE THAT A BUILDING OR PORTION THEREOF BE EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH THIS SECTION, SPRINKLERS SHALL BE INSTALLED THROUGHOUT IN ACCORDANCE WITH NFPA 13 EXCEPT AS PROVIDED IN SECTIONS 903.3.1.1.1 AND 903.3.1.1.2.

SECTION 906 PORTABLE FIRE EXTINGUISHERS

906.2 GENERAL REQUIREMENTS. PORTABLE FIRE EXTINGUISHERS SHALL BE SELECTED AND INSTALLED IN ACCORDANCE WITH THIS SECTION AND NFPA 10.

EXCEPTIONS:

2. IN GROUP I-3, PORTABLE FIRE EXTINGUISHERS SHALL BE PERMITTED TO BE LOCATED AT STAFF LOCATIONS.

PORTABLE FIRE EXTINGUISHERS:

NFPA 10, CURRENT EDITION, 75 TRAVEL DISTANCE TO FIRE EXTINGUISHER

FIRE ALARM AND DETECTION SYSTEM

YES

FIRE EXTINGUISHERS TO BE TYPE 2A10BC, UNLESS OTHERWISE NOTED IN SPECIFICATIONS.

CHAPTER 10 MEANS OF EGRESS

SECTION 1004 OCCUPANT LOAD

1004.4 MULTIPLE OCCUPANCES. WHERE A BUILDING CONTAINS TWO OR MORE OCCUPANCIES, THE MEANS OF EGRESS REQUIREMENTS SHALL APPLY TO EACH PORTION OF THE BUILDING BASED ON THE OCCUPANCY OF THAT SPACE, WHERE TWO OR MORE OCCUPANCIES UTILIZE PORTIONS OF THE SAME MEANS OF EGRESS SYSTEM. THOSE EGRESS COMPONENTS SHALL MEET THE MORE STRINGENT REQUIREMENTS OF ALL OCCUPANCIES THAT ARE SERVED.

TABLE 1004.5 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM ASSEMBLY (UNCONCENTRATED) BUSINESS AREAS	300 GROSS 15 NET 150 GROSS
CONCENTRATED BUSINESS USE AREAS EDUCATIONAL (SHOP AND OTHER VOCATIONAL) EXERCISE ROOMS	SEE SECTION 1004.8 50 NET 50 GROSS
INSTITUTIONAL AREAS	
OUTPATIENT AREAS	100 GROSS
LOCKER ROOMS	50 GROSS

1004.7 OUTDOOR AREAS, YARDS, PATIOS, OCCUPIED ROOFS, COURTS AND SIMILAR OUTDOOR AREAS ACCESSIBLE TO AND USABLE BY THE BUILDING OCCUPANTS SHALL BE PROVIDED WITH MEANS OF EGRESS AS REQUIRED BY THIS CHAPTER. THE OCCUPANT LOAD OF SUCH OUTDOOR AREAS SHALL BE ASSIGNED BY THE BUILDING OFFICIAL IN ACCORDANCE WITH THE ANTICIPATED USE, WHERE OUTDOOR AREAS ARE TO BE USED BY PERSONS IN ADDITION TO THE OCCUPANTS OF THE BUILDING, AND THE PATH OF EGRESS TRAVEL FROM THE OUTDOOR AREAS PASSES THROUGH THE BUILDING, MEANS OF EGRESS REQUIREMENTS FOR THE BUILDING SHALL BE BASED ON THE SUM OF THE OCCUPANT LOADS OF THE BUILDING PLUS THE OUTDOOR AREAS.

OCCUPANTS ON PATIO NOT TO EXCEED 49 OCCUPANTS. MAXIMUM OCCUPANT LOAD WILL BE POSTED.

1004.8 CONCENTRATED BUSINESS USE AREAS. THE OCCUPANT LOAD FACTOR FOR CONCENTRATED BUSINESS USE SHALL BE APPLIED TO TELEPHONE CALL CENTERS, TRADING FLOORS, ELECTRONIC DATA PROCESSING CENTERS AND SIMILAR BUSINESS USE AREAS WITH A HIGHER DENSITY OF OCCUPANTS THAN WOULD NORMALLY BE EXPECTED IN A TYPICAL BUSINESS OCCUPANCY ENVIRONMENT, WHERE APPROVED BY THE BUILDING OFFICIAL. THE OCCUPANT LOAD FOR CONCENTRATED BUSINESS USE AREAS SHALL BE THE ACTUAL OCCUPANT LOAD, BUT NOT LESS THAN ONE OCCUPANT PER 50 SQUARE FEET (4.65 SQ M) OF GROSS OCCUPABLE FLOOR SPACE.

SECTION 1005 MEANS OF EGRESS SIZING

- 0.3 INCH PER OCCUPANT AT STAIRWAYS
- 0.2 INCH PER OCCUPANT AT OTHER EGRESS COMPONENTS

1005.5 DISTRIBUTION OF MINIMUM WIDTH AND REQUIRED CAPACITY. WHERE MORE THAN ONE EXIT, OR ACCESS TO MORE THAN ONE EXIT, IS REQUIRED, THE MEANS OF EGRESS SHALL BE CONFIGURED SUCH THAT THE LOSS OF ANY ONE EXIT, OR ACCESS TO ONE EXIT, SHALL NOT REDUCE THE AVAILABLE CAPACITY OR WIDTH TO LESS THAN 50 PERCENT OF THE REQUIRED CAPACITY OR WIDTH.

1006.2.1 EGRESS BASED ON OCCUPANT LOAD AND COMMON PATH OF EGRESS TRAVEL DISTANCE. TWO EXITS OR EXIT ACCESS DOORWAYS FROM ANY SPACE SHALL BE PROVIDED WHERE THE DESIGN OCCUPANT LOAD OR THE COMMON PATH OF EGRESS TRAVEL DISTANCE EXCEEDS THE VALUES LISTED IN TABLE 1006.2.1. THE CUMULATIVE OCCUPANT LOAD FROM ADJACENT ROOMS, AREAS OR SPACES SHALL BE DETERMINED IN ACCORDANCE WITH SECTION 1004.2.

- EXCEPTIONS:
1. THE NUMBER OF EXITS FROM FOYERS, LOBBIES, VESTIBULES OR SIMILAR SPACES NEED NOT BE BASED ON CUMULATIVE OCCUPANT LOADS FOR AREAS DISCHARGING THROUGH SUCH SPACES, BUT THE CAPACITY OF THE EXITS FROM SUCH SPACES SHALL BE BASED ON APPLICABLE CUMULATIVE OCCUPANT LOADS.
 3. UNOCCUPIED MECHANICAL ROOMS AND PENTHOUSES ARE NOT REQUIRED TO COMPLY WITH THE COMMON PATH OF EGRESS TRAVEL DISTANCE MEASUREMENT.

DEFINITIONS:

COMMON PATH OF EGRESS TRAVEL.

THAT PORTION OF EXIT ACCESS TRAVEL DISTANCE MEASURED FROM THE MOST REMOTE POINT OF EACH ROOM, AREA OR SPACE TO THAT POINT WHERE THE OCCUPANTS HAVE SEPARATE AND DISTINCT ACCESS TO TWO EXITS OR EXIT ACCESS DOORWAYS.

(WAC) TABLE 1006.2.1 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY

OCCUPANCY	MAXIMUM OCCUPANT	MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (WITH SPRINKLER SYSTEM)
A	49	75 FEET (MOST RESTRICTIVE)
B	49	100 FEET
I-3	10	100 FEET
S	29	100 FEET

TABLE 1006.3.2 MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS PER STORY

OCCUPANT LOAD	MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS FROM STORY
1-50	2

SECTION 1007 EXIT AND EXIT ACCESS DOORWAY CONFIGURATION

1007.1.1 TWO EXITS OR EXIT ACCESS DOORWAYS. WHERE TWO EXITS, EXIT ACCESS DOORWAYS, EXIT ACCESS STAIRWAYS OR RAMPS, OR ANY COMBINATION THEREOF, ARE REQUIRED FROM ANY PORTION OF THE EXIT ACCESS, THEY SHALL BE PLACED A DISTANCE APART EQUAL TO NOT LESS THAN ONE-HALF OF THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE BUILDING OR AREA TO BE SERVED MEASURED IN A STRAIGHT LINE BETWEEN THEM. INTERLOCKING OR SCISSOR STAIRWAYS SHALL BE COUNTED AS ONE EXIT STAIRWAY.

EXCEPTIONS:

2. WHERE A BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2, THE SEPARATION ON DISTANCE SHALL BE NOT LESS THAN ONE-THIRD OF THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE AREA SERVED.

SECTION 1009 ACCESSIBLE MEANS OF EGRESS

1009.1 ACCESSIBLE MEANS OF EGRESS REQUIRED. ACCESSIBLE MEANS OF EGRESS SHALL COMPLY WITH THIS SECTION. ACCESSIBLE SPACES SHALL BE PROVIDED WITH NOT LESS THAN ONE ACCESSIBLE MEANS OF EGRESS, WHERE MORE THAN ONE MEANS OF EGRESS IS REQUIRED BY SECTION 1006.2 OR 1005.3 FROM ANY ACCESSIBLE SPACE, EACH ACCESSIBLE PORTION OF THE SPACE SHALL BE SERVED BY NOT LESS THAN TWO ACCESSIBLE MEANS OF EGRESS.

1009.2 CONTINUITY AND COMPONENTS. EACH REQUIRED ACCESSIBLE MEANS OF EGRESS SHALL BE CONTINUOUS TO A PUBLIC WAY AND SHALL CONSIST OF ONE OR MORE OF THE FOLLOWING COMPONENTS:
1. ACCESSIBLE ROUTES COMPLYING WITH SECTION 1104.

SECTION 1010 DOORS, GATES AND TURNSTILES

1010.1.1 SIZE OF DOORS. THE MINIMUM WIDTH OF EACH DOOR OPENING SHALL BE SUFFICIENT FOR THE OCCUPANT LOAD THEREOF AND SHALL PROVIDE A CLEAR WIDTH OF 32 INCHES. CLEAR OPENINGS OF DOORWAYS WITH SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES.

DEGREES DOOR WIDTH CALCULATIONS:

3'-0" DOOR - 2'

MEANS OF EGRESS

SECTION 101
1010.1.1 SIZE OF DOORS
THE MINIMUM WIDTH OF EACH DOOR OPENING SHALL BE
SUFFICIENT FOR THE OCCUPANT LOAD THEREOF AND SHALL
PROVIDE A CLEAR WIDTH OF 32 INCHES. CLEAR OPENINGS OF
DOORWAYS WITH SWINGING DOORS SHALL BE MEASURED
BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH DOOR
OPEN 90 DEGREES.

DOOR CALCULATIONS
3'-0" DOOR - 2'-10" (STOP + LEAF) = 33.5' / 2 = 167 PEOPLE MAX
6'-0" DOOR - 2'-10" (STOP + LEAF) = 68.5' / 2 = 343 PEOPLE MAX

CODE ROOM TAG LEGEND

ROOM SQUARE FOOTAGE
ROOM
1000 SF
300 | 4
STORAGE
SF PER OCCUPANT
NUMBER OF OCCUPANTS
OCCUPANCY CLASSIFICATION

CODE PLAN LEGEND

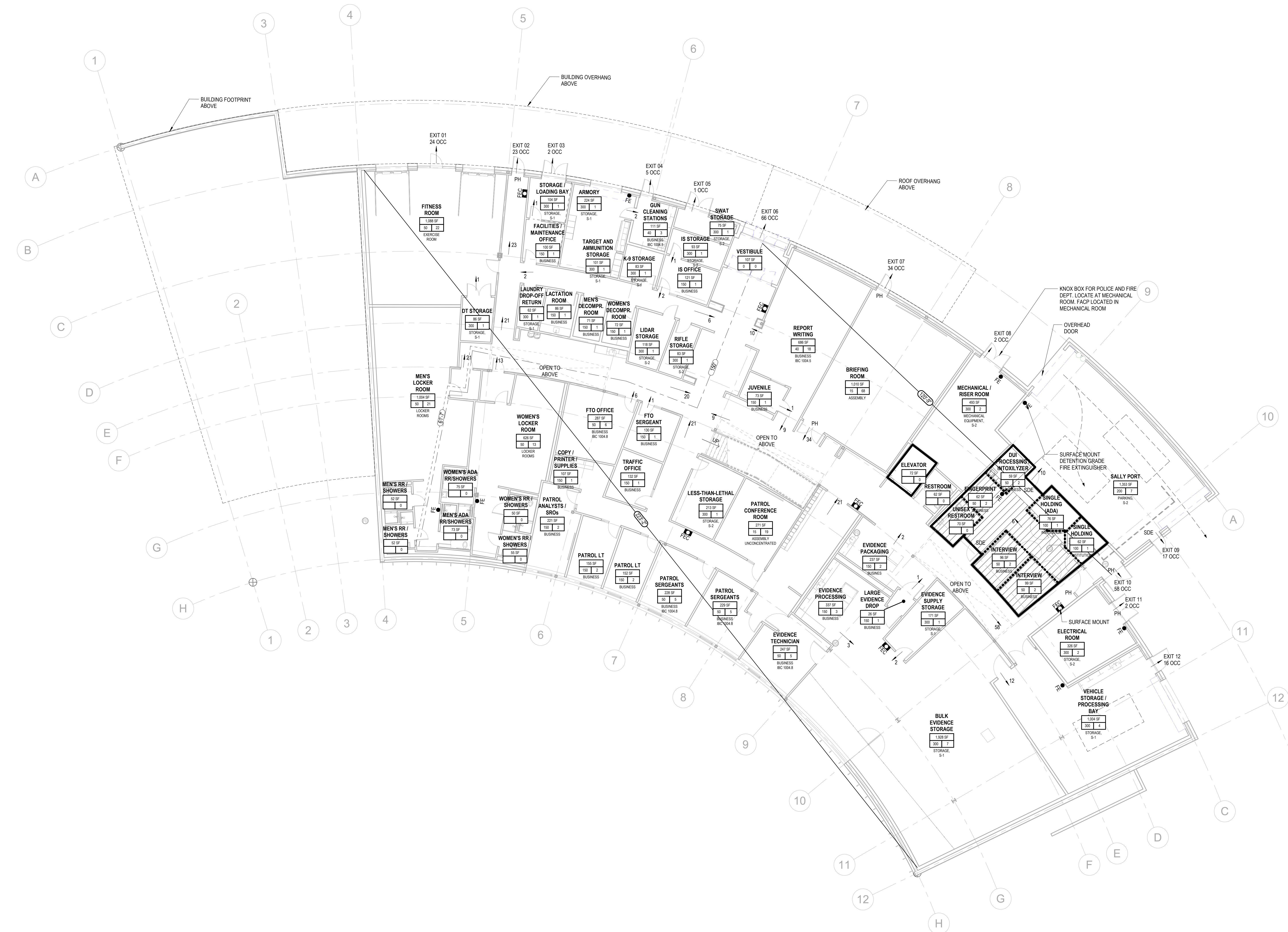
PH PANIC HARDWARE
DE DELAYED EGRESS
AL ALARMED EXIT
SDE SECURE DELAYED EGRESS IN OR
ADJACENT I-3 CONDITION 5
EXIT SIGNAGE, REFER TO ELECTRICAL
FOR LOCATION
FIRE EXTINGUISHER CABINET
FIRE EXTINGUISHER - BRACKET
MOUNTED
EX #
OCC
EXIT NUMBER
OF OCCUPANTS EXITING FROM EXIT
EXIT ACCESS TRAVEL DISTANCE
1-HR FIRE RATED ASSEMBLY
1-HR FIRE RESISTANCE SMOKE
BARRIER
COMMON PATH OF EGRESS TRAVEL
EXTENTS OF UNOCCUPIED EQUIPMENT
PLATFORM
1-HR FIRE BARRIER FLOOR CEILING
ASSEMBLY, ASSEMBLY EXTENDS TO EDGE
OF EXTERIOR WALL ABOVE
1-HR FIRE RATED CEILING ASSEMBLY, GWB
CEILING ASSEMBLY.

OCCUPANT LOADS

LOWER LEVEL
EXIT # OCCUPANT LOAD
EXIT 01 24 OCC
EXIT 02 23 OCC
EXIT 03 2 OCC
EXIT 04 5 OCC
EXIT 05 1 OCC
EXIT 06 66 OCC
EXIT 07 34 OCC
EXIT 08 2 OCC
EXIT 09 17 OCC
EXIT 10 59 OCC
EXIT 11 2 OCC
EXIT 12 18 OCC
TOTAL: 250 OCC

UPPER LEVEL
EXIT # OCCUPANT LOAD
EXIT 13 56 OCC
EXIT 14 208 OCC
EXIT 15 195 OCC
TOTAL: 459 OCC

OVERALL: 709 OCC



OVERALL: 709 OCC

PROJECT NORTH

CODE PLAN - MAIN LEVEL

SCALE: 3/32" = 1'-0"

NEW TRAINING BUILDING - CODE ANALYSIS

2018 IBC & WAC 51-50 4TH PRINTING

PROJECT DESCRIPTION:
THE TRAINING BUILDING INVOLVES THE CONSTRUCTION OF A 14,934 SF, 1-STORY FACILITY IN THE CITY OF LACEY, WASHINGTON. THE FACILITY WILL BE OF TYPE II-B CONSTRUCTION FOR BUSINESS(B), SPRINKLERED, NON-SEPARATED USES. SINCE THE FACILITY IS NON-SEPARATED, THE DESIGN AND CODE WILL FOLLOW THE MOST STRINGENT OCCUPANCY TYPE (A-3 ASSEMBLY). THE TRAINING BUILDING FUNCTIONS INCLUDE A FIRING RANGE, SIMULATOR ROOM, DEFENSIVE TRAINING ROOM AND TRAINING CLASSROOM. REMAINING SPACES ARE SUPPORT SPACES FOR THE TRAINING BUILDING AND CITY OF LACEY, POLICE.

CODES REFERENCED:
INTERNATIONAL BUILDING CODE (IBC) 2018 EDITION
INTERNATIONAL MECHANICAL CODE (IMC) 2018 EDITION
INTERNATIONAL FIRE CODE (IFC) 2018 EDITION
UNIFORM PLUMBING CODE (UPC) 2020 EDITION
NATIONAL ELECTRICAL CODE (NFPA 70) 2020 EDITION

WASHINGTON STATE BUILDING CODE (IBC) WAC 51-50
WASHINGTON STATE MECHANICAL CODE (IMC) WAC 51-52
WASHINGTON STATE FIRE CODE (IFC) WAC 51-54A
WASHINGTON STATE ENERGY CODE (WSEC) WAC 51-11C

ACCESSIBLE & USABLE BUILDINGS & FACILITIES (ICC/ANSIA117.1) 2017

CHAPTER 3 OCCUPANCY CLASSIFICATION AND USE AND OCCUPANCY CLASSIFICATION

A-3 ASSEMBLY
B BUSINESS
S-1 STORAGE
S-2 STORAGE

CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS

TABLE 504.3 ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE
OCCUPANCY CLASSIFICATION A-3 = SPRINKLERED, TYPE II-B = 75 FT ALLOWED ABOVE GRADE PLANE
ACTUAL: 20 FT

TABLE 504.4 ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE
OCCUPANCY CLASSIFICATION A-3 = SPRINKLERED, TYPE II-B = 3 STORIES ALLOWED ABOVE GRADE PLANE
ACTUAL: 1 STORY

TABLE 506.2 ALLOWABLE AREA FACTOR (Sf) IN SQUARE FEET
OCCUPANCY CLASSIFICATION A-3 = SPRINKLERED, SINGLE-STORY, TYPE II-B = 38,000 SF
ALLOWABLE SF PER FLOOR LEVEL WITH FRONTAGE INCREASE: 45,125 SF
ACTUAL: 14,934 SF

FRONTAGE INCREASE CALCULATIONS:

TRAINING BUILDING - FRONTAGE INCREASE

NORTH, EAST, SOUTH AND WEST WALLS

WALL LENGTH (F)	FRONTAGE	LxW
L1 40.5	30	1215
L2 26	30	780
L3 114.5	30	3435
L4 150.67	30	4520.1
L5 68	30	2040
L6 268	30	8040
667.67		20030.1

Sum of wall Length (F) 667.67 L X W = 20030.1
(F) = [(L1 X W1)+(L2 X W2), ETC.] MINIMUM FRONTAGE DISTANCE
L/E (EQUATION 5-4)

W = 20030.1/ 667.67
W = 30

If = [F/P-0.25] W/30
IF = [(667.67/667.67) - 0.25] 30/30

If = .75/30/30
If = 22.5/30
F = 0.75

Aa = [At+(Ns X If)] X Sa

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