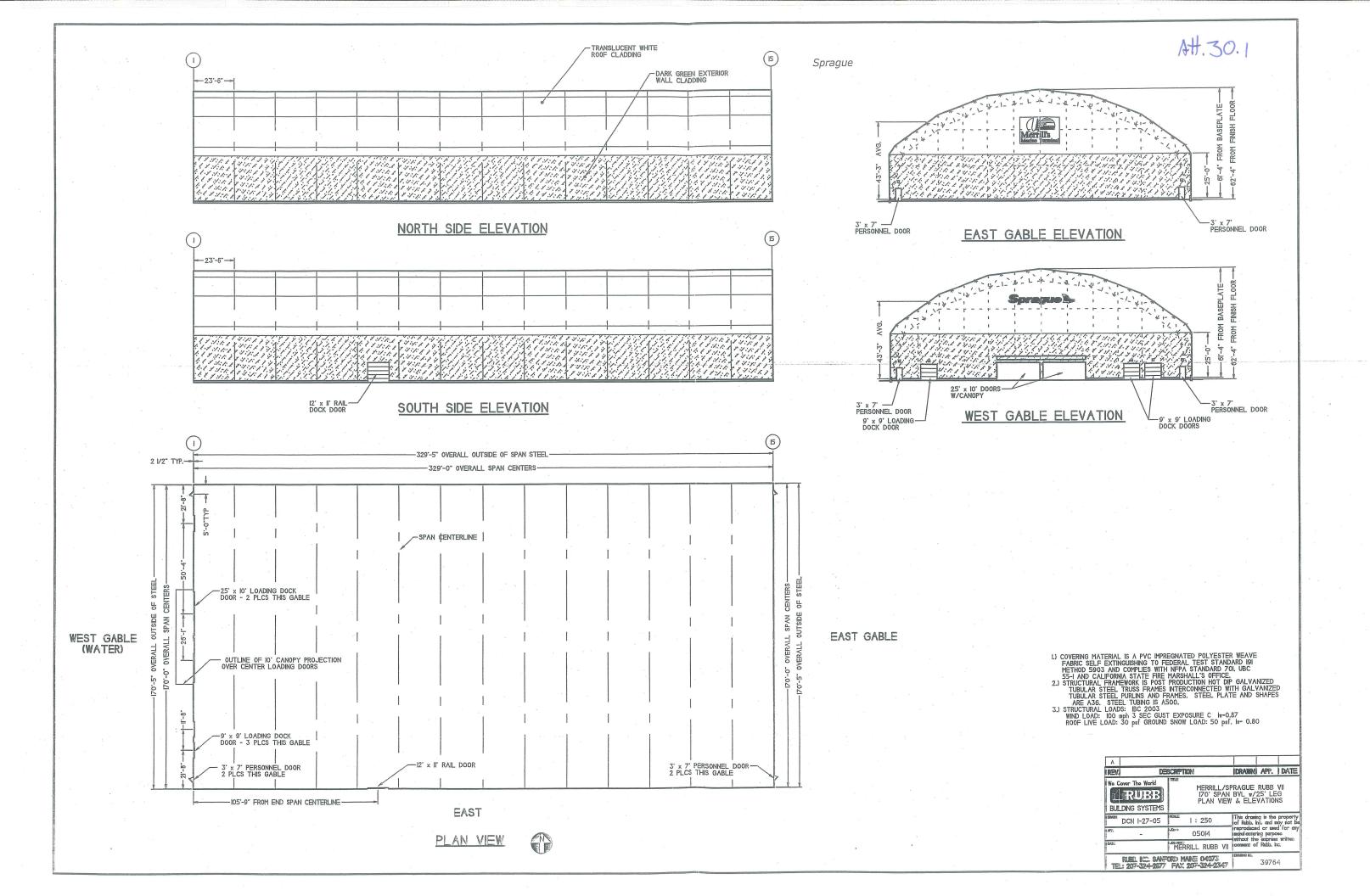
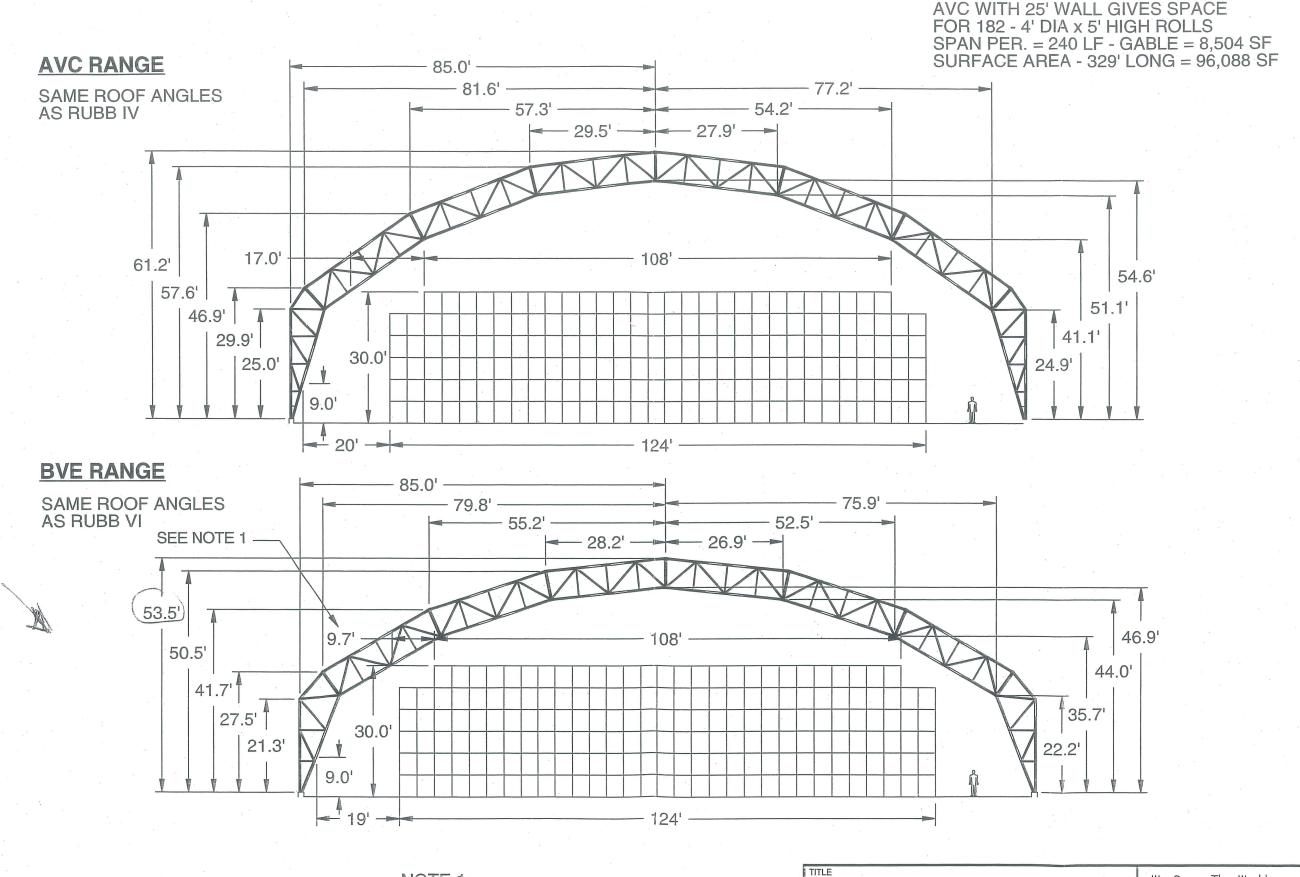
2005-0002

12-A-3 601 Danforth St. Merrill Marine Terminal Merrill Industries





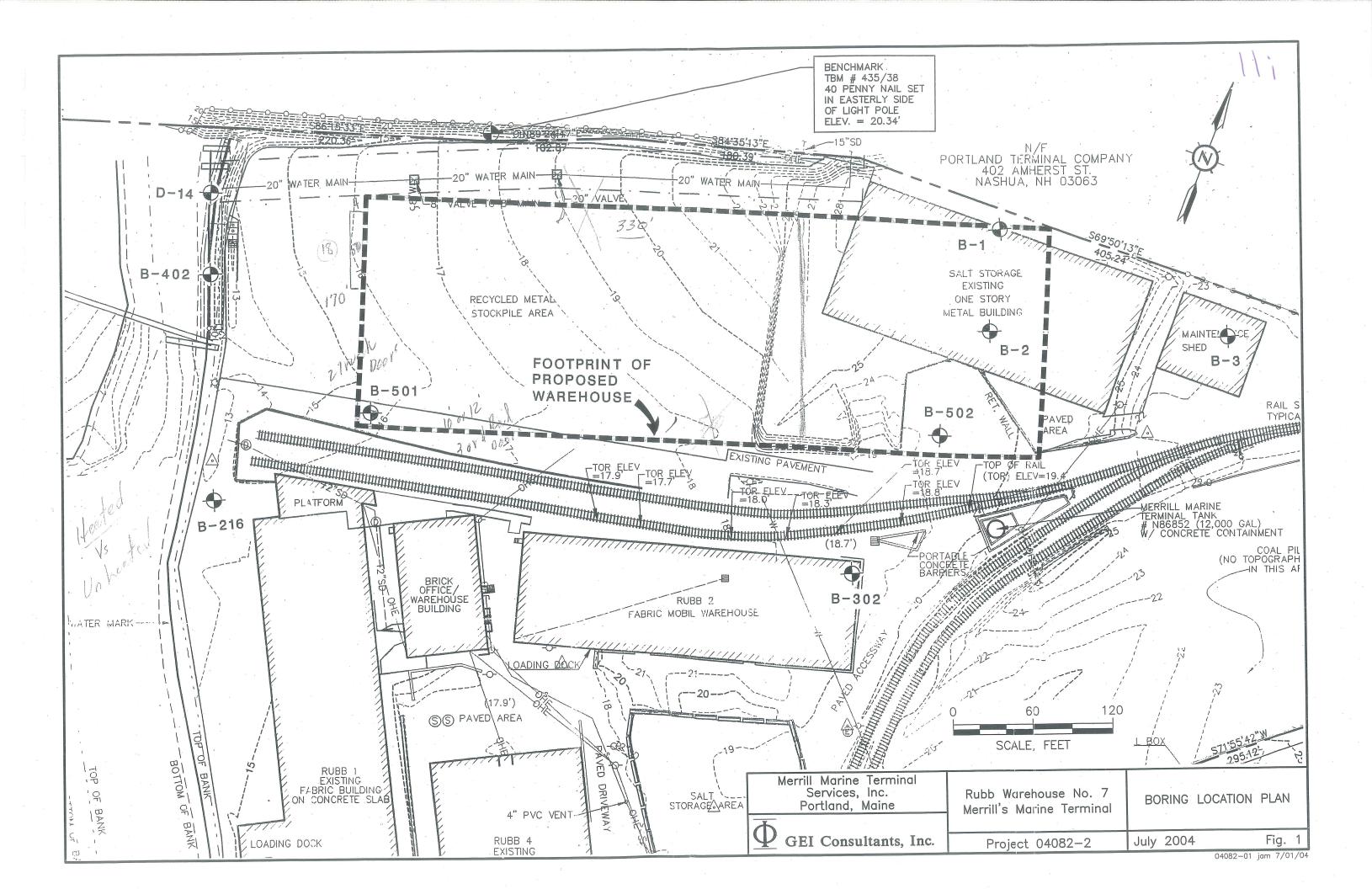
BVE WITH 21' WALL GIVES SPACE FOR 182 - 4' DIA x 5' HIGH ROLLS SPAN PER. = 230 LF - GABLE = 7,428 SF SURFACE AREA - 329' LONG = 90,641 SF NOTE 1:

INCREASING WALL OF BVE TO 25'
BRINGS SURFACE AREA TO 94,337 SF
OR 2% LESS THAN AVC WITH 25' WALL.
THIS ALSO INCREASE 9.7' CLEARANCE TO 16.1 GA

170' AVC AND BVE / 25' LEG SPAN PROFILE COMPARISON We Cover The World

TIRUBB

BUILDING SYSTEMS

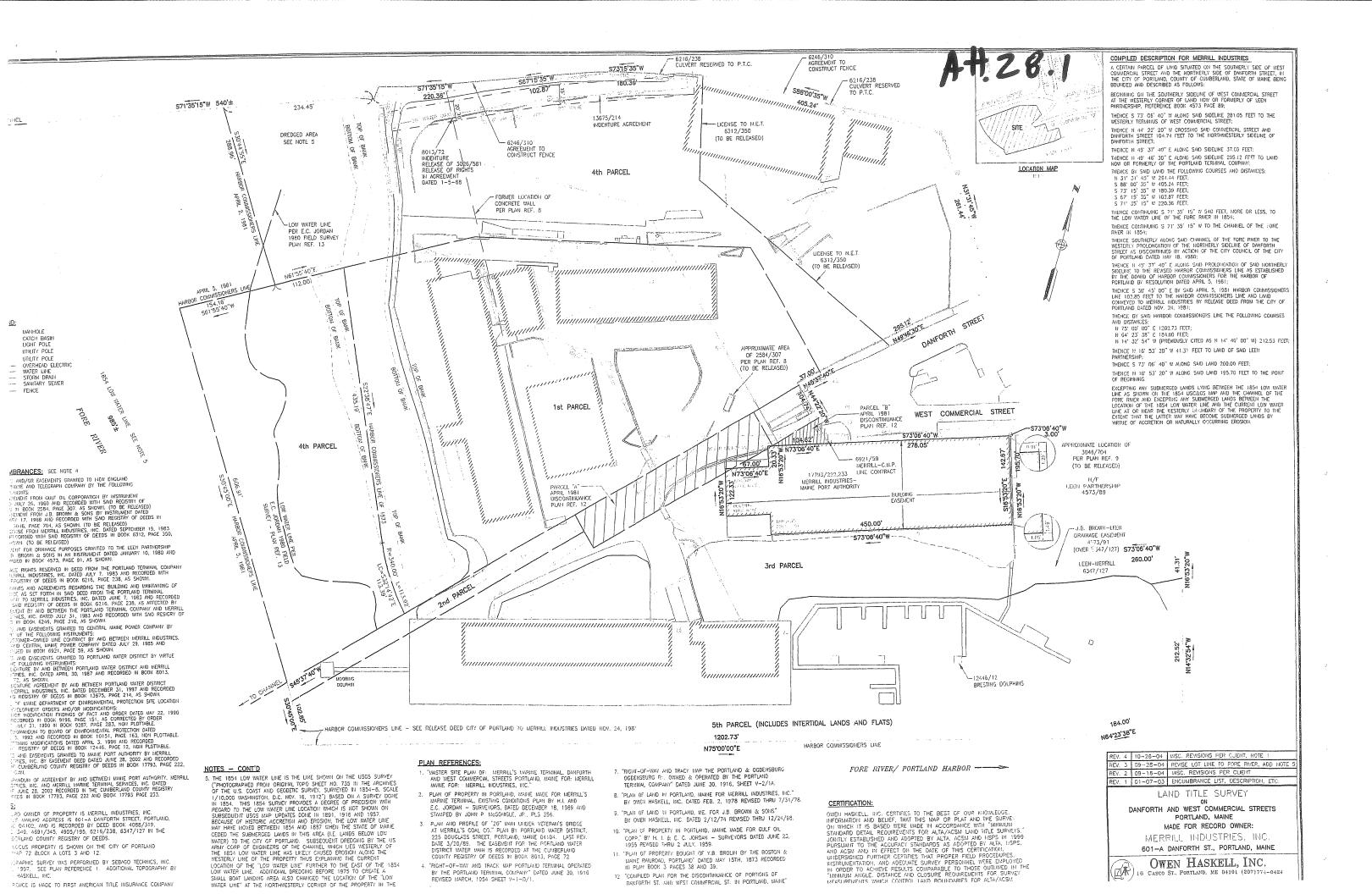




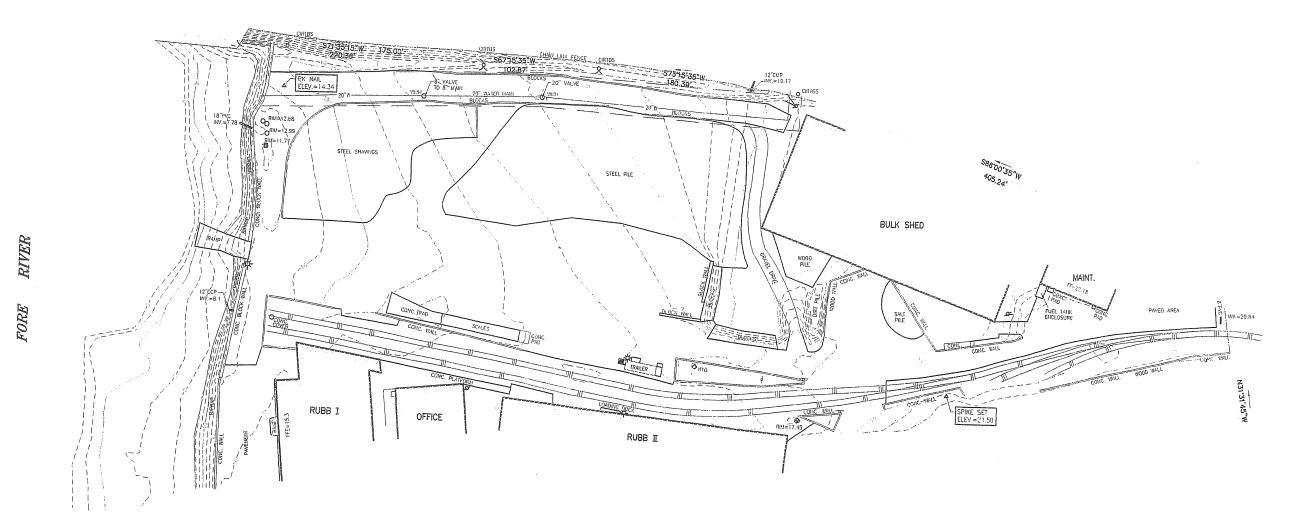


Merrill Marine Terminal Proposed Warehouse

Map prepared for the City of Portland Planning Board by the Portland Planning Division using data from the Portland GIS Work Group January 2005



LOCATION MAP



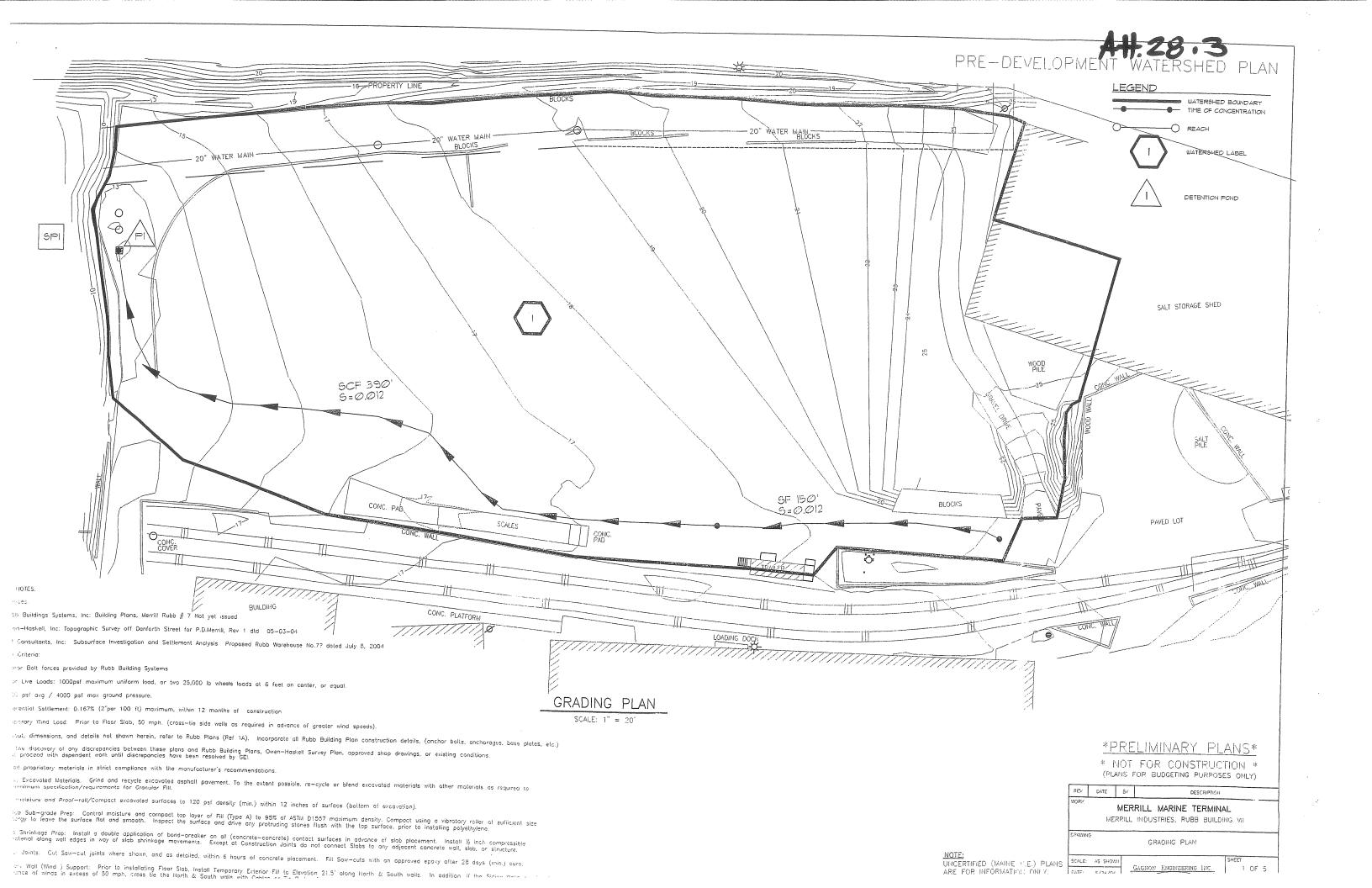
CAPPED IRON ROD TO BE SET WATER VALVE HYDRANT UTILITY POLE LIGHT POLE MANHOLE CATCH BASIN BOLLARD

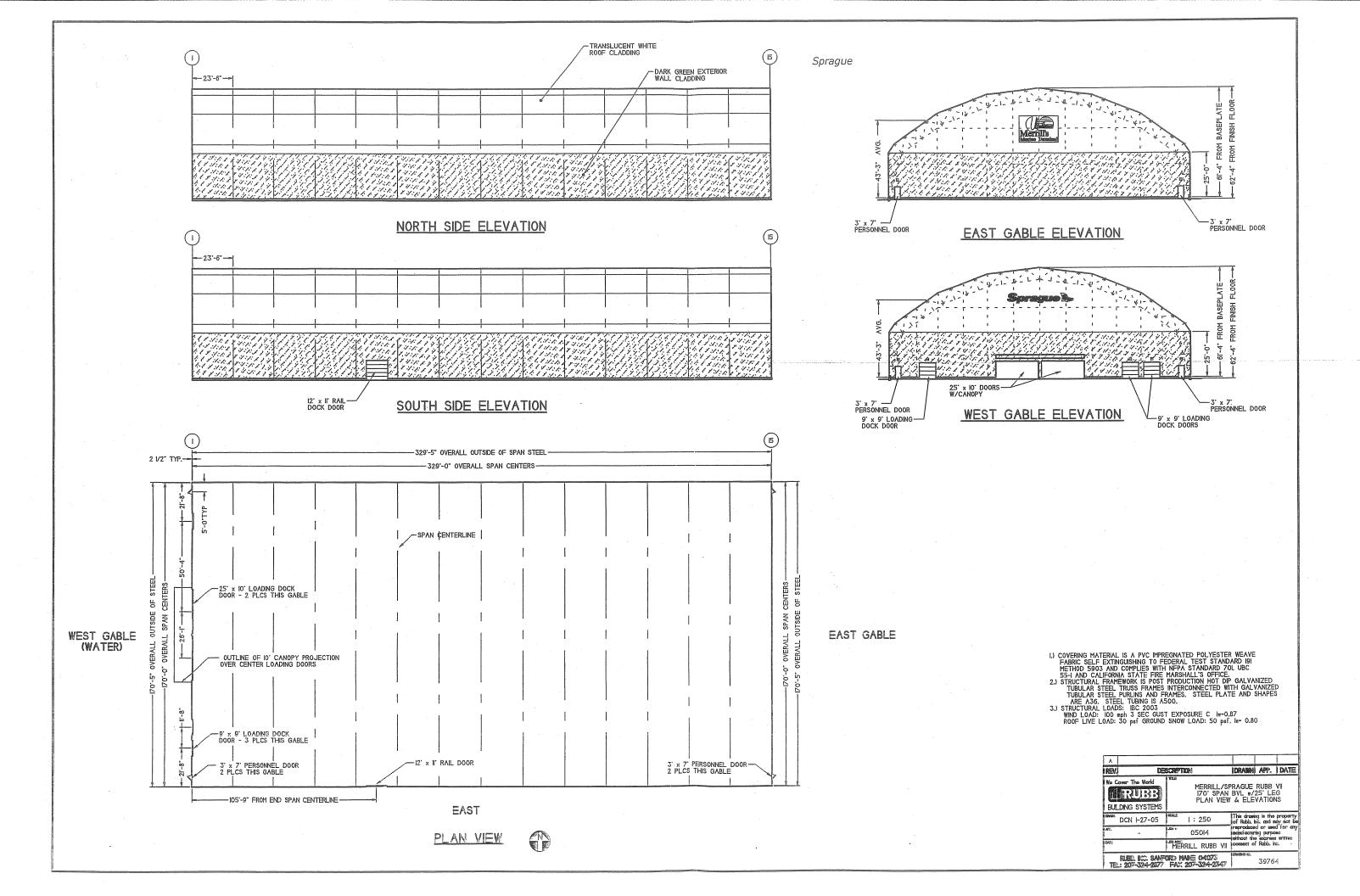
OWEN HASKELL, INC.
16 CASCO ST., PORTLAND, ME 04101 (207) 774-0424

TOPOGRAGPHIC SURVEY

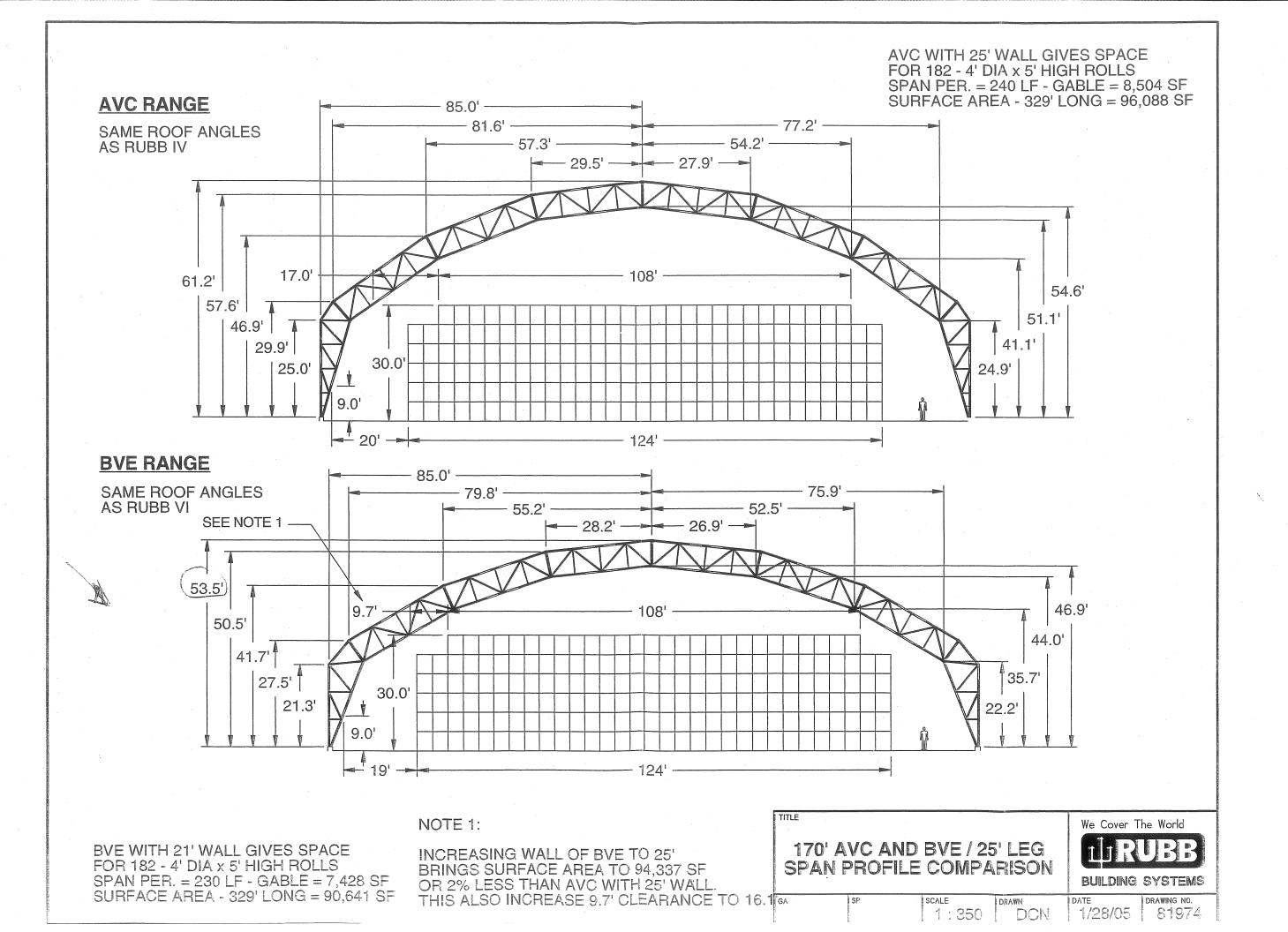
. OFF
DANFORTH STREET, PORTLAND, MAINE MADE FOR

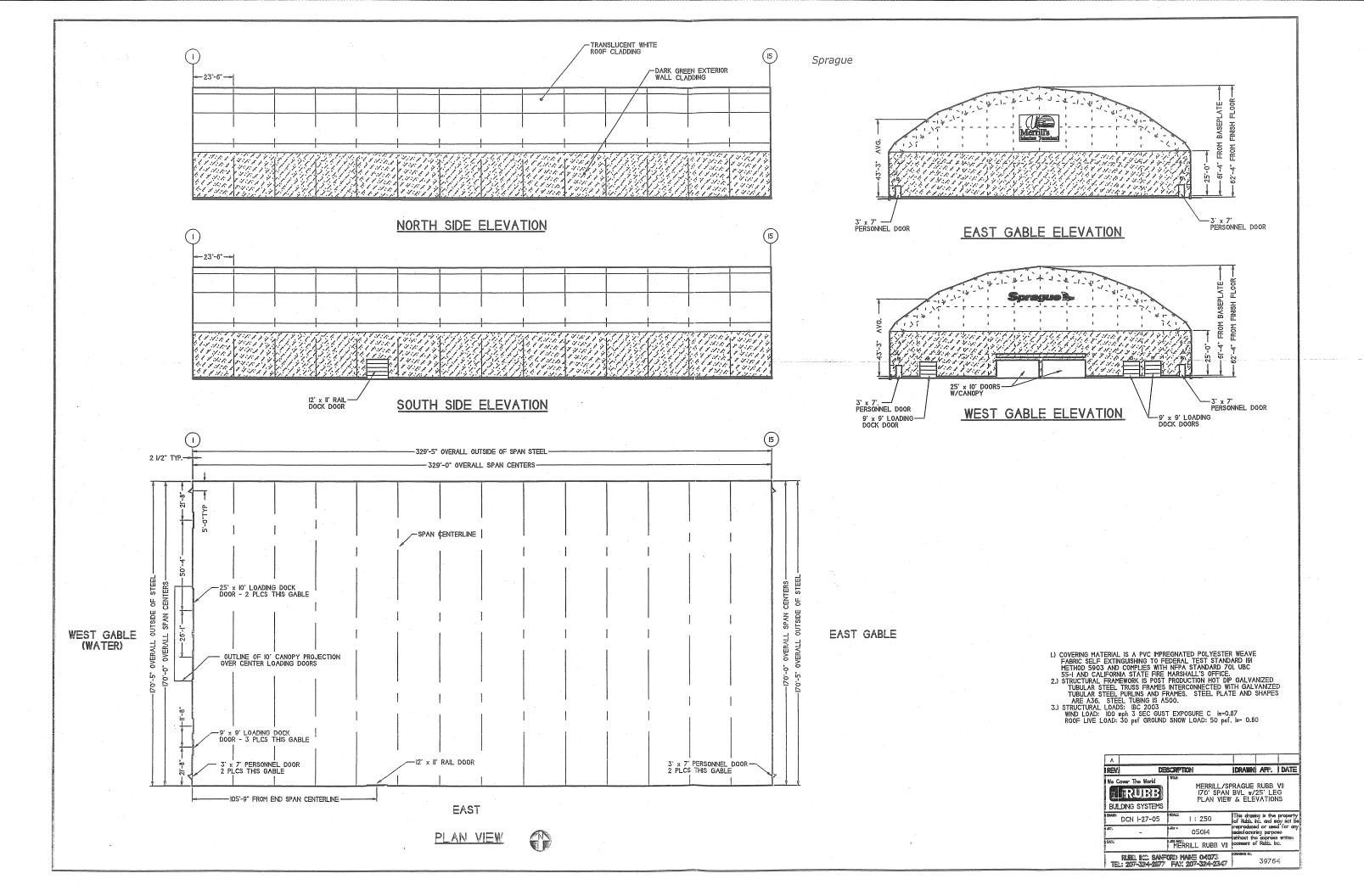
MERRILL INDUSTRIES, INC.

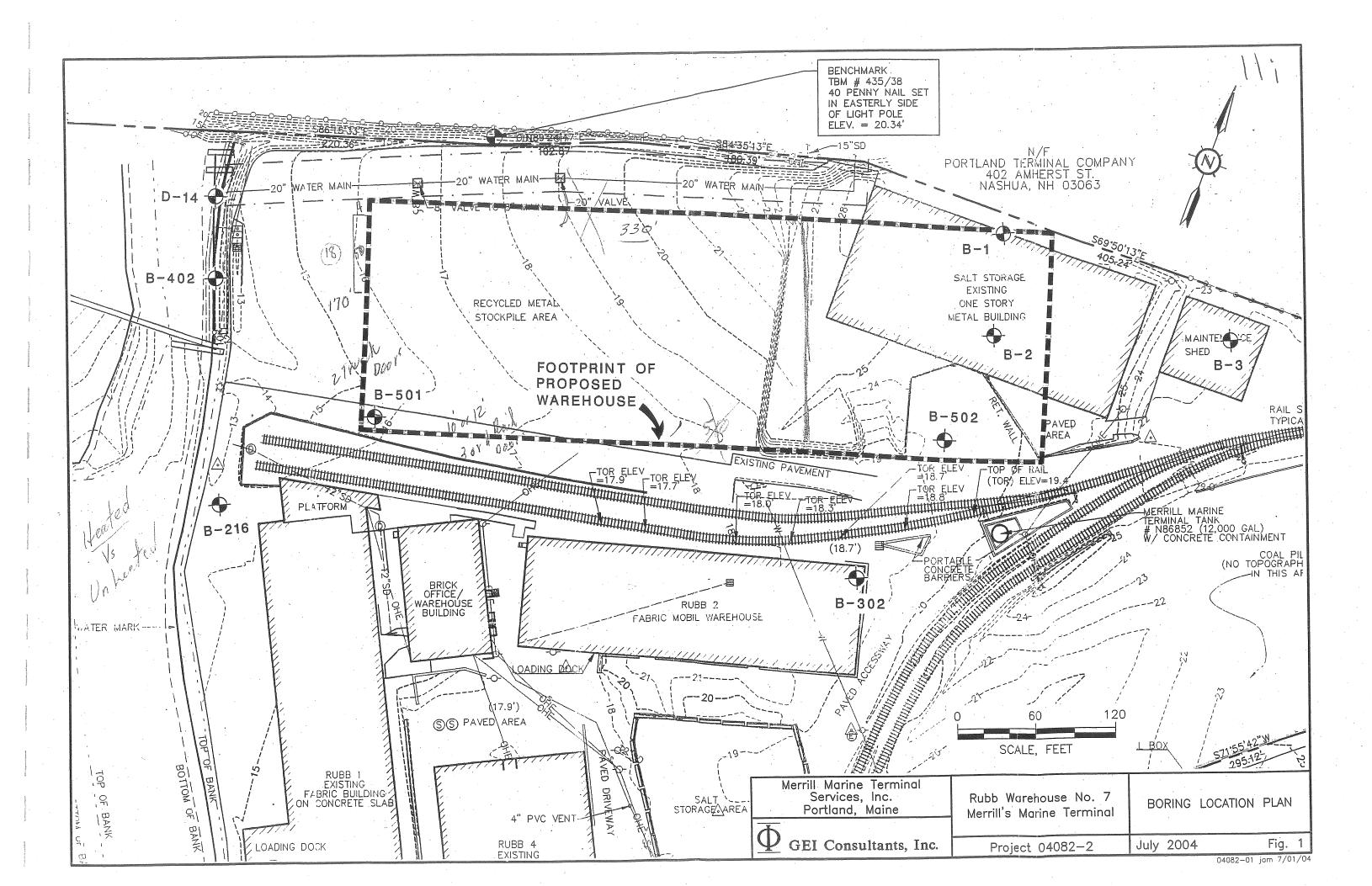


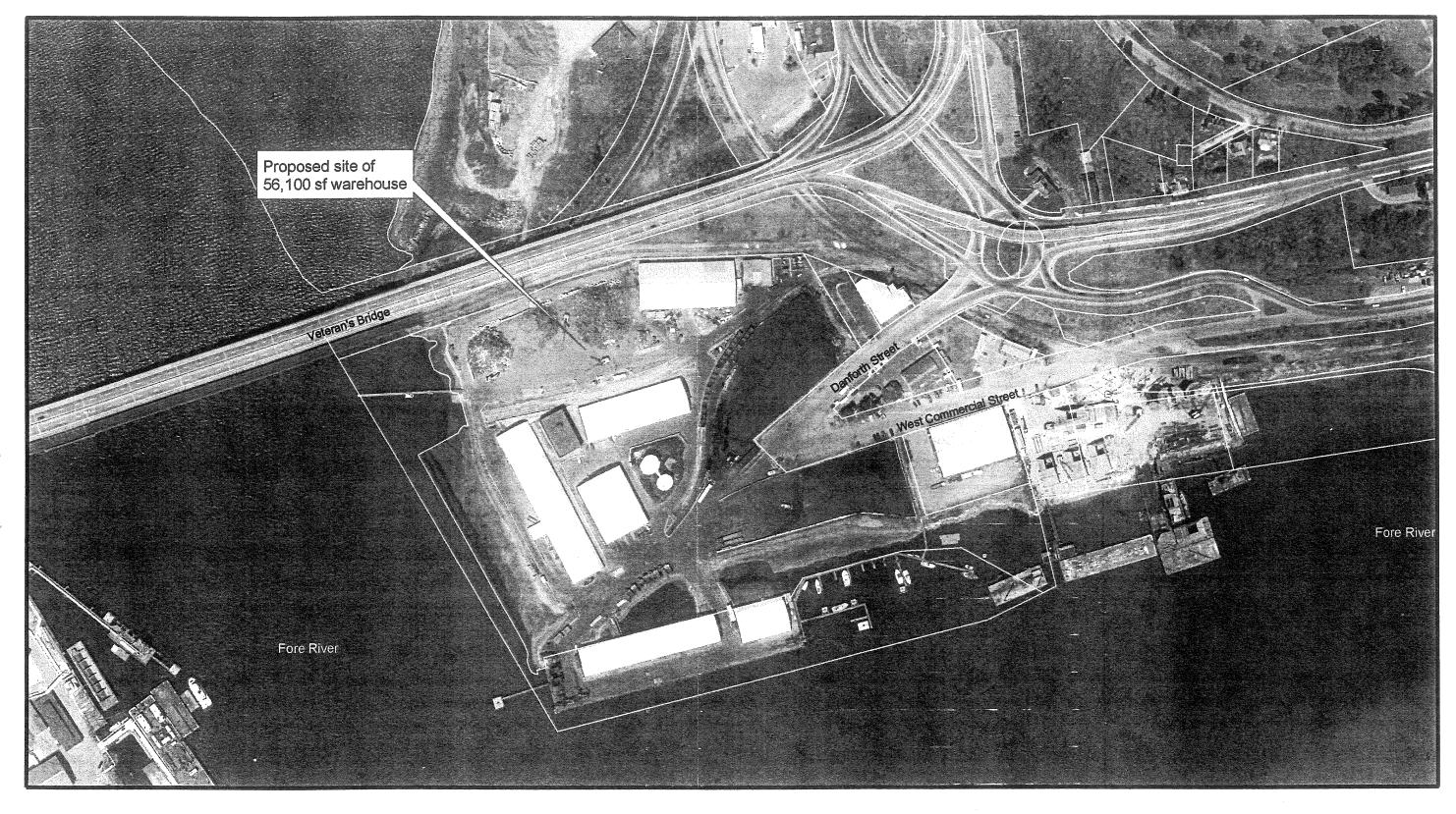


AVC WITH 25' WALL GIVES SPACE FOR 182 - 4' DIA x 5' HIGH ROLLS SPAN PER. = 240 LF - GABLE = 8,504 SF SURFACE AREA - 329' LONG = 96,088 SF **AVC RANGE** 85.0 81.6' -- 77.2' · SAME ROOF ANGLES - 57.3['] -54.2' AS RUBB IV 29.5' -27.9 17.0 61.2' 54.6' 57.6' 51.1' 46.9' 41.1' 29.9' 30.0 25.0' 24.9' 20' **BVE RANGE** 85.0' SAME ROOF ANGLES - 79.8' -- 75.9' AS RUBB VI 52.5' -- 55.2' SEE NOTE 1 -28.2' 26.9' -(53.5') 46.9' 50.5 44.0' 41.7' 35.7 27.5 30.01 21.3' 9.0' 19' 124' NOTE 1: We Cover The World 170' AVC AND BVE / 25' LEG BVE WITH 21' WALL GIVES SPACE INCREASING WALL OF BVE TO 25' FOR 182 - 4' DIA x 5' HIGH ROLLS SPAN PROFILE COMPARISON BRINGS SURFACE AREA TO 94,337 SF SPAN PER. = 230 LF - GABLE = 7,428 SF SURFACE AREA - 329' LONG = 90,641 SF **BUILDING SYSTEMS** OR 2% LESS THAN AVC WITH 25' WALL THIS ALSO INCREASE 9.7' CLEARANCE TO 16.1 GA 1:350 DCN 1/28/05 | 81974





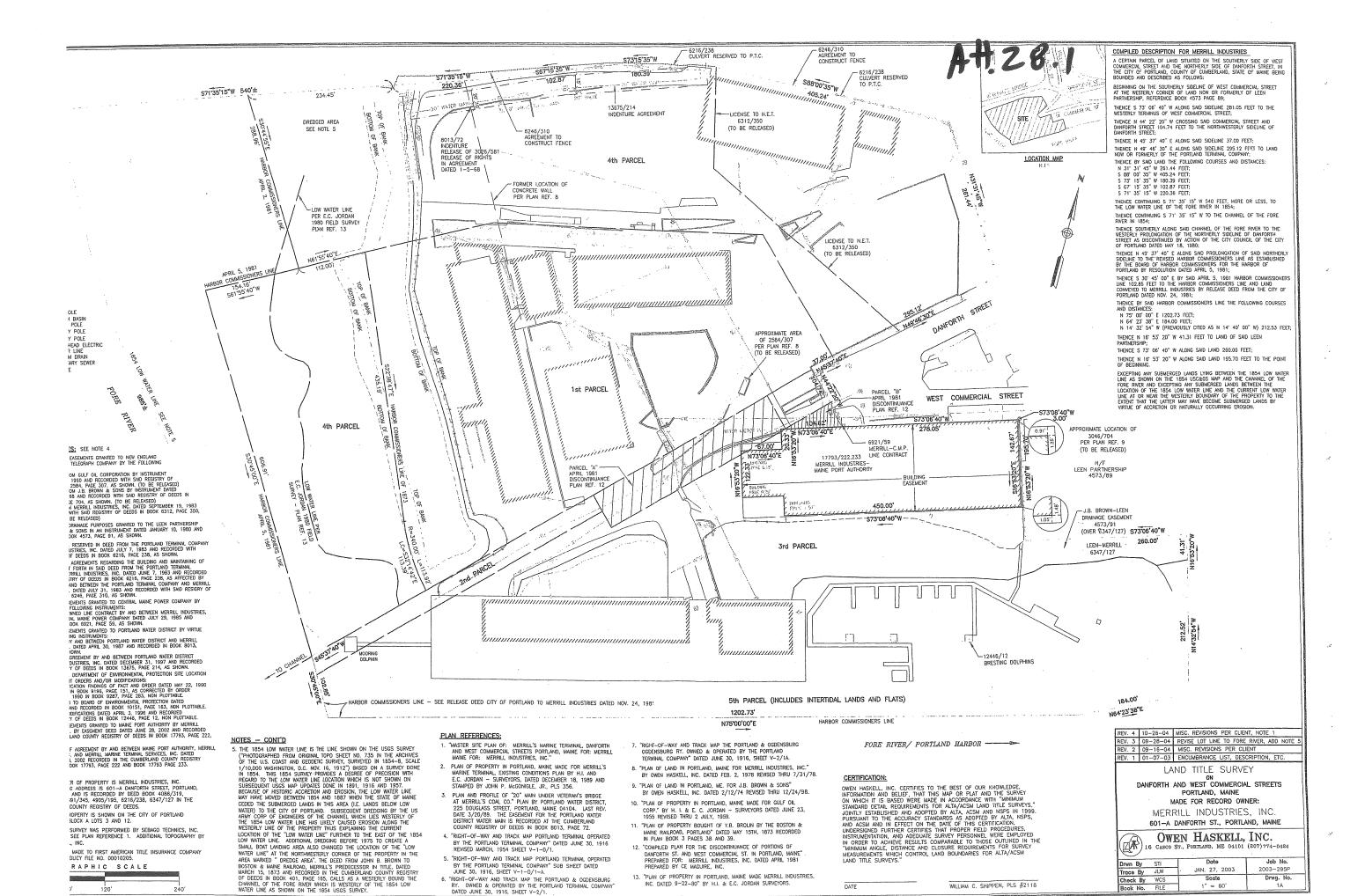




N Feet 0 115 230 460

Merrill Marine Terminal Proposed Warehouse

Map prepared for the City of Portland Planning Board by the Portland Planning Division using data from the Portland GIS Work Group January 2005



"PLAN OF PROPERTY IN PORTLAND, MAINE MADE MERRILL INDUSTRIES, INC. DATED 9-22-80" BY H.I. & E.C. JORDAN SURVEYORS.

RIGHT-OF-WAY AND TRACK MAP THE PORTLAND & OGDENSBURG RY. OWNED & OPERATED BY THE PORTLAND TERMINAL COMPANY DATED JUNE 30, 1916, SHEET V-2/1.

Trace By JLW

WILLIAM C. SHIPPEN, PLS #2118

Check By WCS

Drwg. No.

Scale

LOCATION MAP

BULK SHED

CAPPED IRON ROD TO BE SET WATER VALVE HYDRANT UTILITY POLE LIGHT POLE MANHOLE CATCH BASIN BOLLARD

RIVER

FORE

GRAPHIC SCALE

TOPOGRAGPHIC SURVEY

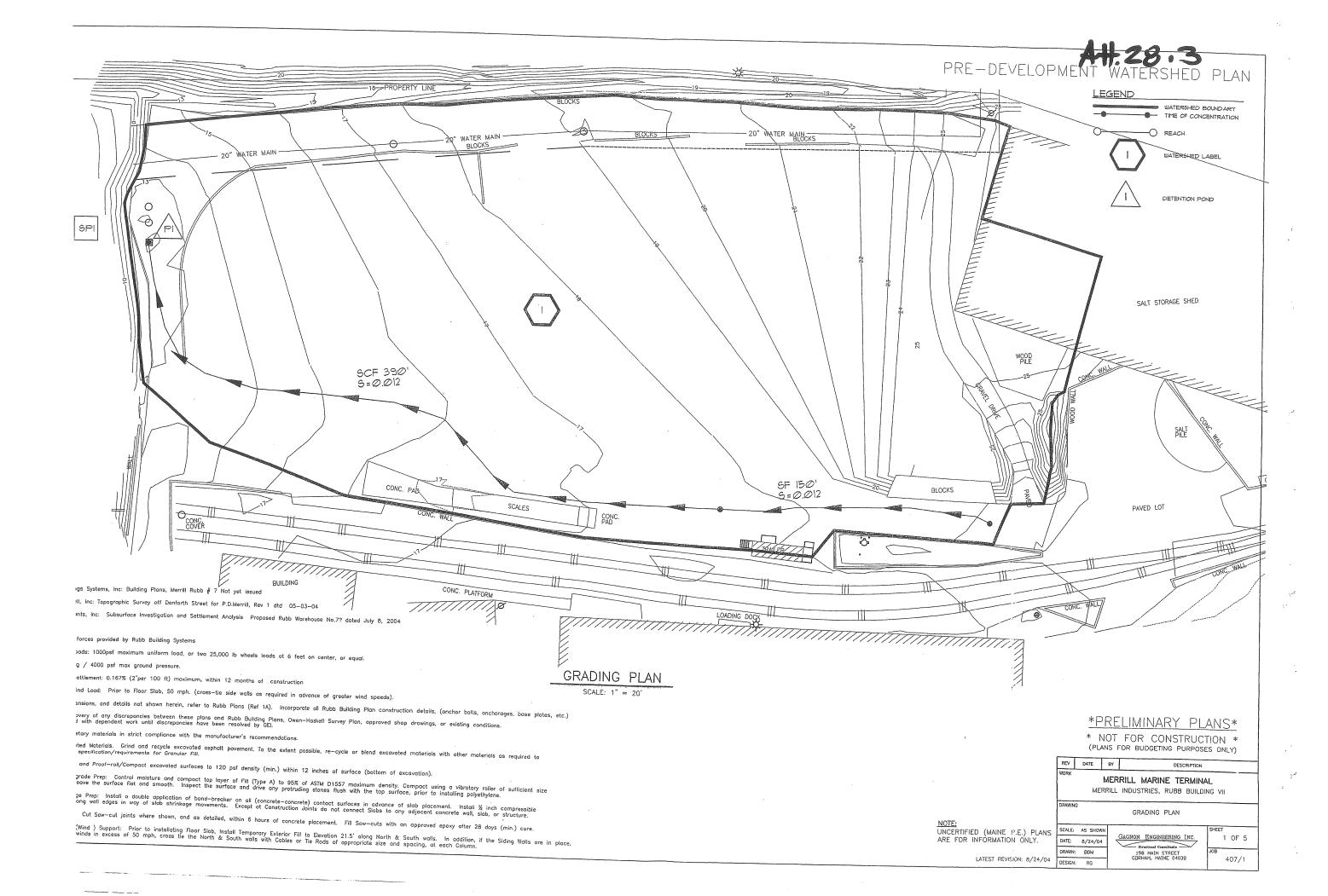
OFF
DANFORTH STREET, PORTLAND, MAINE
MADE FOR

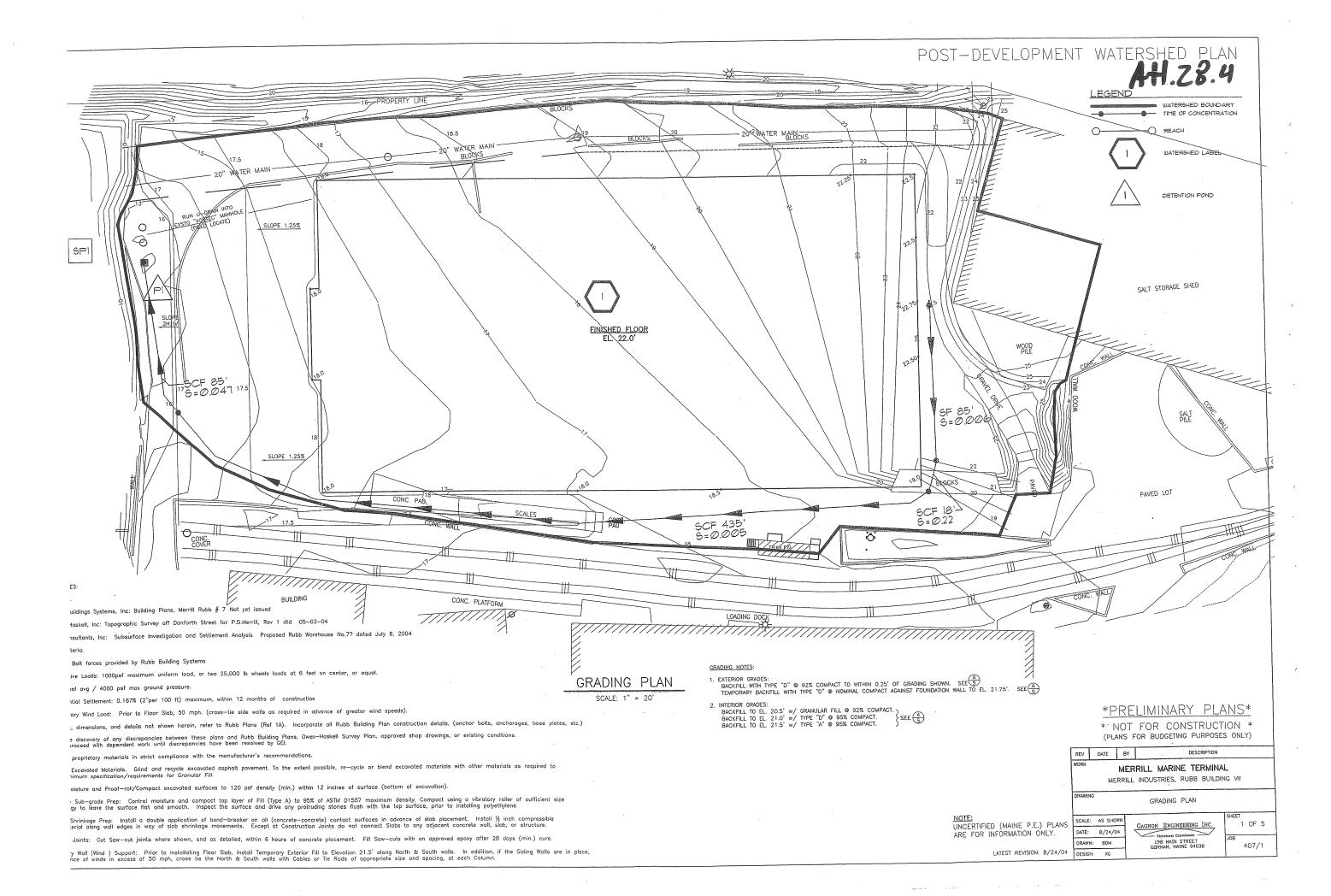
MERRILL INDUSTRIES, INC.

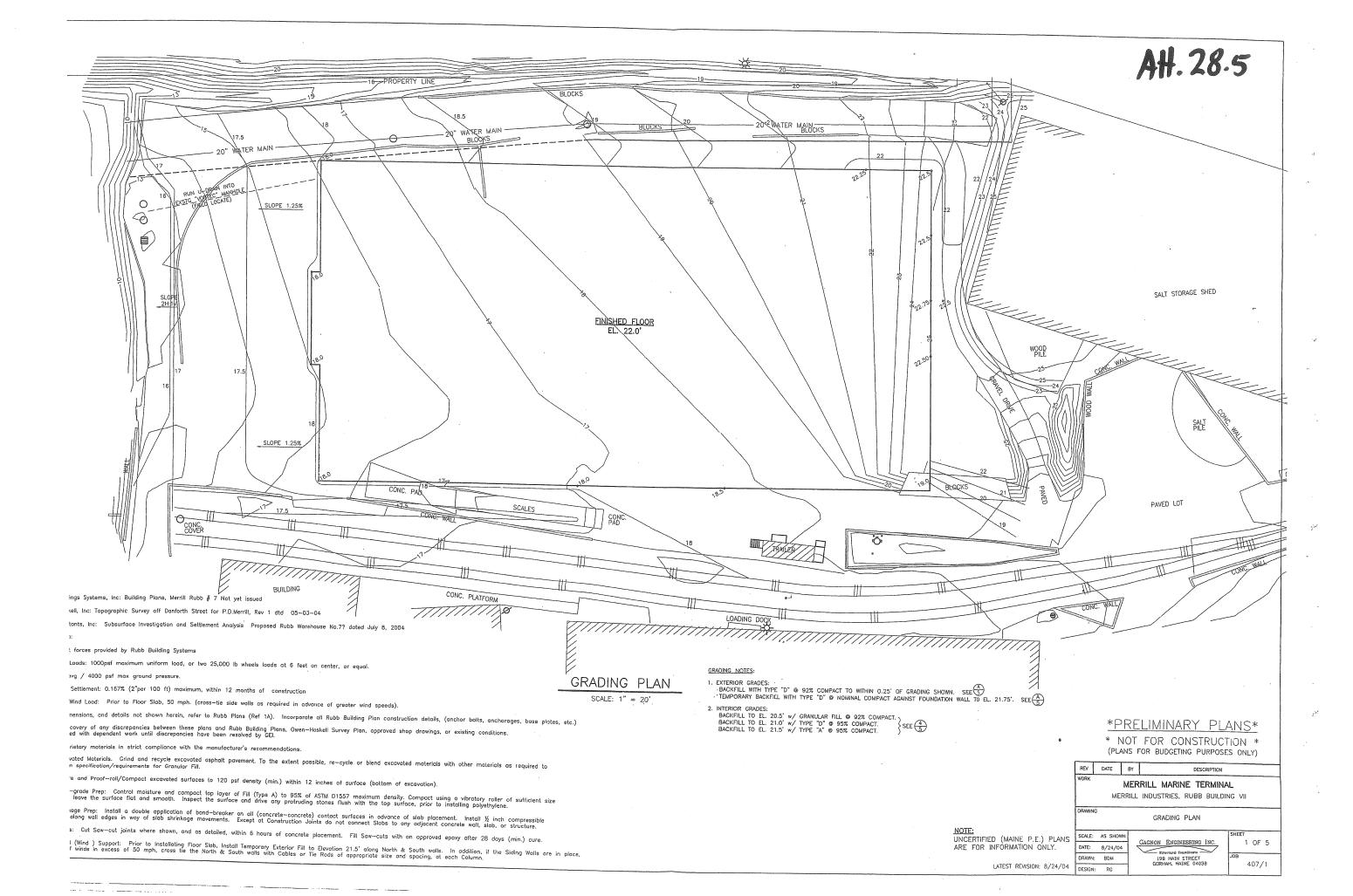


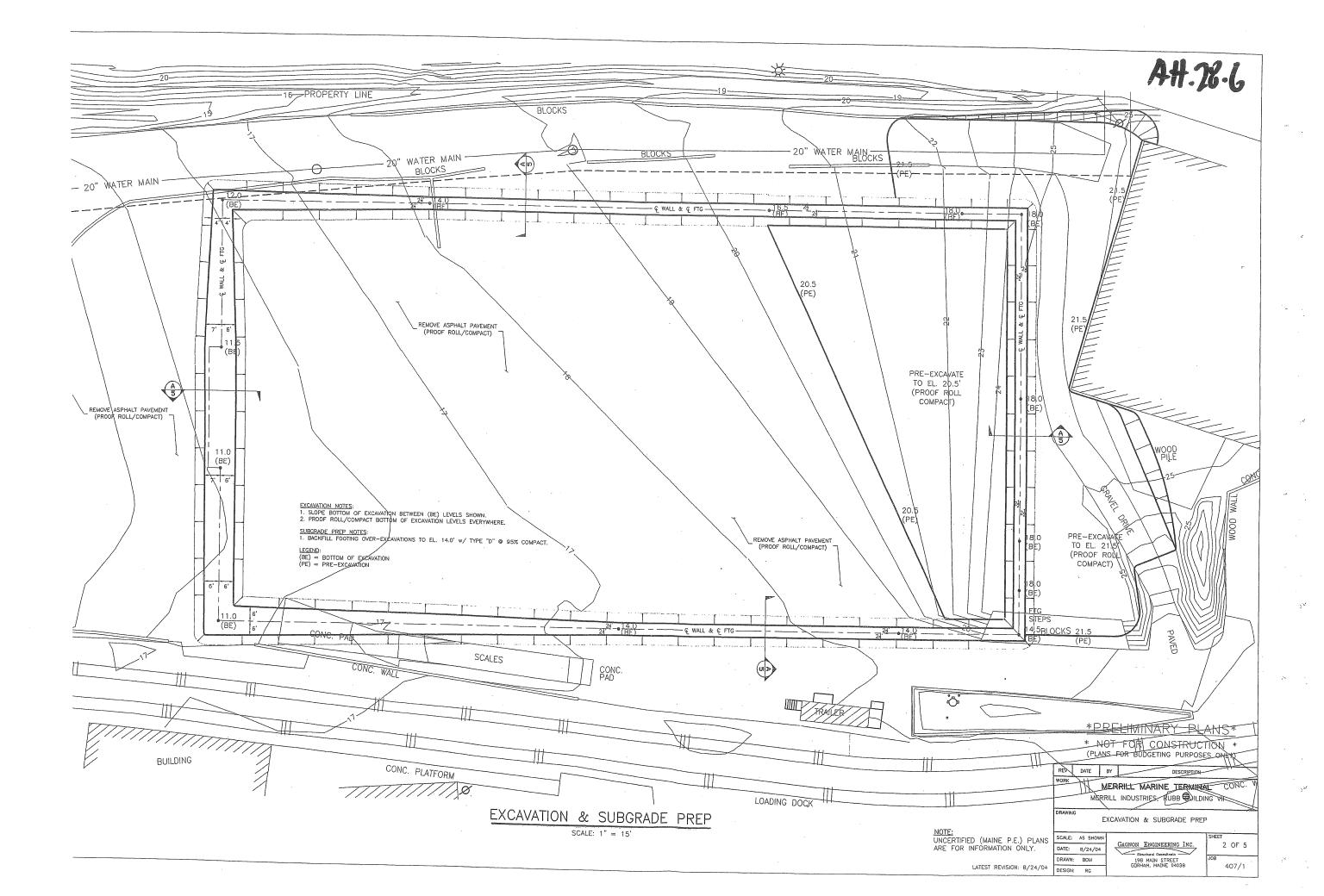
$\cup W$	ΕN	I HAS	K	ELL.	INC.
ASCO	ST.,	PORTLAND,	ME	04101	(207) 774-04
		-			

Drwn By Trace By	RES RWC	Date APRIL 26, 2004	Job No. 2003-295 P
Check By	WCS	Scale	Drwg. No.
Book No.	989	1" = 40'	1









MATERIALS

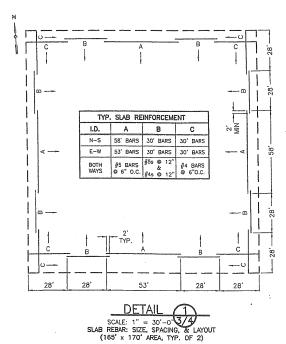
1. Earthwork:

© SLAB © CJ

FOOTING STEP

SLAB CONSTRUCTION JOINT (@ Q OF CONCRETE SLAB)

- A) Granular Fill: MDOT Granular Borrow, spec. 703.19, 9 inch maximum size, 10% maximum #200
- B) Type D Fill: MDOT Aggregate for Sub-base, spec.703.06 b, Type D.
- C) Type A Fill: MDOT Aggregate for Base, spec.703.06 a, Type A.
- all three Fill Materials, Submit Laboratory Test Results for Gradations (ASTM D422), and Moisture Density (ASTM D1557 amit In—Place Density Tests, performed by Qualified Independent Testing Agency.
- Rigid Cellular Polystyrene (RCPS), R5.0 min per inch, ASTM C578, Dow brand "Styrofoam" or approved equal.
- Polyethylene: Plastic Water Vapor Retarder for use under concrete slabs. ASTM E1745, smooth, 10 mils thick, two layers, lop adjacent sheets and stagger joints. Americover (brand) Vapor Block VB10, or approved equal.
- 4. Concrete & Reinforcing Bars: see Concrete Notes
- 5. Steel Plates & Shapes: ASTM A36, Galvanized, unless noted otherwise, or approved equal.



LATEST REVISION: 8/24/04 DESIGN: RG

PRELIMINARY PLANS

* NOT FOR CONSTRUCTION *. (PLANS FOR BUDGETING PURPOSES ONLY)

	REV	DATE	ΒΥ	DESCRIPTION		
	MERRILL MARINE TERMINAL MERRILL INDUSTRIES, RUBB BUILDING VII					
	DRAWIN	IG	PARTI	AL FOUNDATION PLAN (WES	Т)	
NOTE: UNCERTIFIED (MAINE P.E.) PLANS ARE FOR INFORMATION ONLY.	SCALE:	8/24/0	-1.	GAGNON ENGINEERING INC.	SHEET 3 OF 5	
CATEGO DE MEION DE 104 /04	DRAWN	N: BDM		198 MAIN STREET GURHAM, MAINE 04038	Јов 407/1	

PARTIAL FOUNDATION PLAN SCALE: 1" = 10'-0"

L1'-1" WALL (TYP)

3'-3" FTG [(TYP. U.N.O.)

(2) 1½ 0 x 10' LG. THRD RODS © EA. RUBB BLDG COL. (EXACT LOCATIONS OF COLS TO BE DETERMINED)

(PRELIM COL. SPACING = 23'-6" O.C.)

332'-0" (OUTSIDE TO OUTSIDE)

3'-3" FTG (TYP. U.N.O.)

L1'-1" WALL (TYP)

LT/CONCR. (FIN. FLR)

EL. 22.0' (TYP.)

(2) $1_3^{\rm F}$ % x 10' LG. THRD RODS @ EA. RUBB BLDG COL. (EYACT LOCATIONS OF COLS TO BE DETERMINED) (PRELIM COL. SPACING = 23'-6" O.C.)

166'-0" (WEST OUTSIDE TO ()

FNDN WALL CJ-SEE 7 5

_T/CONCR. WALL EL. 23.0' (TYP. U.N.O.)

PERSONNEL DOOR (3'-4" R.O.)
(T/WALL EL. 21.5')

I'-1" WALL (TYP.)

4'-4" FTG @ WEST WALL

T/CONCR. WALL EL. 23.0' (TYP. U.N.O.)

_T/CONCR. WALL EL. 21.5' (TYP. @ DOORS)

5'-0" x 50'-0" LOADING AREA

2 - #4 BARS x 4'-0" -@ LOADING AREA CORNERS (TOP & BOT OF MAT)

DOCK LEVELER

DOCK LEVELER

PERSONNEL DOOR (3'-4" R.O.)

-T/CONCR. WALL EL. 21.5' (TYP. @ DOORS)

DOOR @

JBB VII ©_

LEVELER Q-

LEVELER Q-

22'-0"

7'-6"

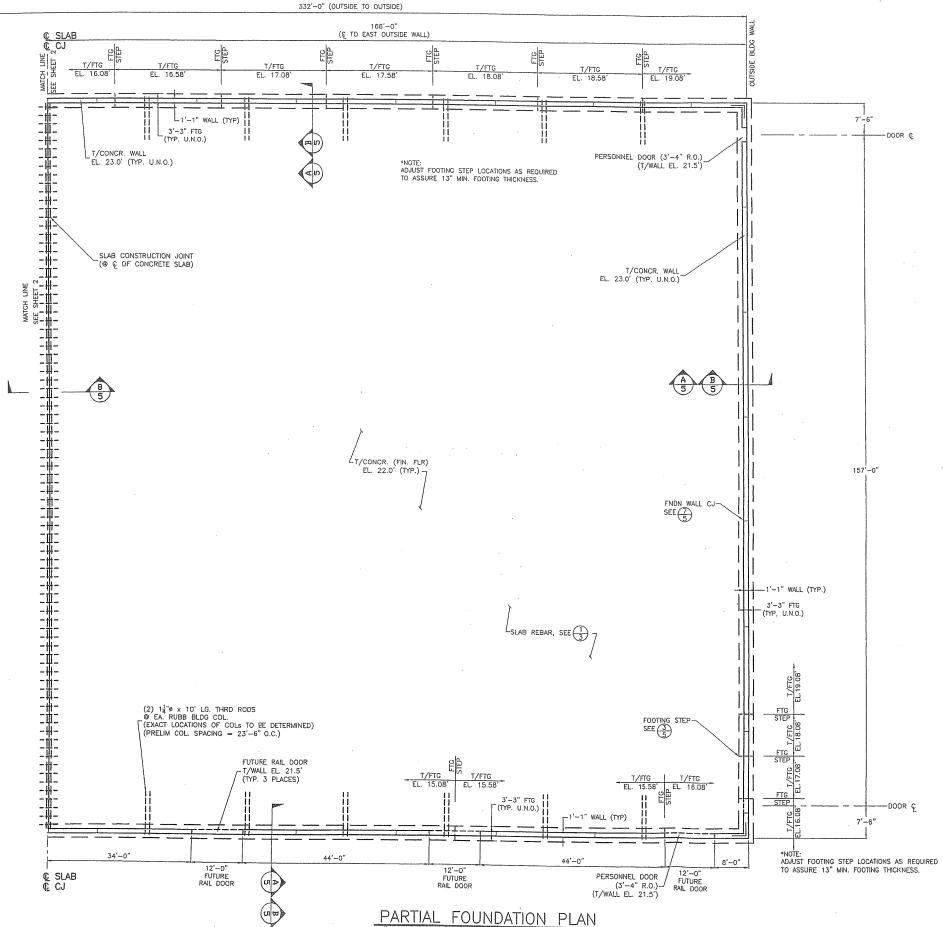
12'-6"

T/FTG EL. 15.08 © SLAB © CJ

T/CONCR. WALL

EL. 23.0' (TYP. U.N.O.)

 L_{SLAB} REBAR, SEE $\frac{1}{3}$



PARTIAL FOUNDATION PLAN

SCALE: 1" = 10'-0"

CONCRETE NOTES:

1. Concrete Shall meet the following requirements:

Location	Compr. Stren	% Air	Slump (Plain/MRWR)	Notes & Additives
Footings	3000 psi	5%-7%	6" / 10"	
Walls	3500 psi	5%-7%	3½" / 5½"	Mid—Range Water Reducer (MRWR) As required
Floor	3500 psi	2½%-3½%	3½" / 5½"	MRWR as req'd, Grace Shrinkage Reducing Agent UCO Sealer—Hardener

- Concrete Supply. Concrete shall be supplied by MDOT—approved commercial batching plant(s) or other, if pre—approved by the Engineer.
- Contractor shall engage the services of an approved Concrete Testing Agency to perform compliance tests on fresh and hardened Concrete in accordance with ASTM C31 & C39, respectively. Sampling, Air content, and Slump tests shall be performed in accordance with appropriate ASTM standards.
- 4. Unless otherwise directed, one test cylinder shall be broken at 7 days, and two cylinders at 28 days, from each sampled truckload. The fourth cylinder shall be held in reserve at the testing laboratory for possible further testing at the discretion of the Engineer, for the durotion of the project. Sample the first, last, and intermediate truckloads (15 % min), randomly selected by the Engineer.
- 5. Engineer may direct improvements in the concrete mix design (for no additional compensation to the Contractor) on the basis on early concrete placement 7—day compressive strength tests, or other test results. Improvements shall be made in all subsequent concrete.
- 6. Forms: Plywood—faced or Steel—faced, smooth finish quality, free of wood—grain and form—panel joint lines. Forms shall be securely interconnected so as not to become mis—aligned during concrete placement. Forms shall be adequately cross—tied to resist concrete pressures without form—panel distortions or excessive deflections between ties. Formwork must be secured and braced so as to remain plumb and maintain horizontal alignments during concrete placement. Chamfer forms (3/4" x 3/4") at exposed corners and exposed edges, except as otherwise detailed.
- 7. Imbedded Form Ties shall include a ½" minimum break-back that will be filled with portland-cement grout (or mortar, as appropriate) immediately after form removal.
- 8. Hardened Concrete Tolerances.

Footings: 1"± on width, height, and top elevation.

Walls: $1/8"\pm$ on width (thickness) and top elevation. $1/16"\pm$ per foot on plumbness. 3/16"± per 10' on horizontal alignment at top of wall

Slob-On-Grade: 1/8"± per 10' on top finished surface

- 9. Reinforcing Bars: Grade 60 deformed bars (ASTM A615).
- 10. Smooth Dowels: ASTM A307, A36, or better.
- Bars Splices shall be avoided to the extent possible. Minimum lap—splice lengths shall be 36 bar diameters for plain bars, unless otherwise noted.
- 12. Reinforcement shall be stored & protected, placed, supported, secured, and fastened according to MDOT specifications.
- 13. Concrete placed within formed boundaries or designated construction joints shall be placed in a continuous operation. All concrete shall meet maximum slump (and other) requirements and be installed without excessive dropping or other segregation—producing methods. All concrete will be consolidated using appropriately—sized, mechanical; high—frequency, internal vibrators.
- 14. Place, finish, and cure slab—on—grade concrete using only generally—accepted, good—practice methods and operations, particularly with respect to the timing of critical finishing techniques, Except as otherwise specified or detailed on the Plans, follow the recommendations of ACI 302.1R "Guide for Concrete Floor and Slab Construction". The slab—on—grade is classified as a Class 5 (ACI 302.1R), single-course, industrial floor; with a float and hard-steel trowel finish.
- 15. Footing forms may be removed after 24 hours provided the footing is immediately backfilled to the top of the footing. Wall forms may be removed after 48 hours of placement provided on approved chemical curing agent is immediately applied to exposed surfaces, or the surfaces are kept continuously wet by approved water-curing methods; otherwise, wall forms shall remain in place at least 7 days after concrete placement.
- 16. The Slab—on—Grade surface shall be water—cured by keeping the concrete continuously wet with fresh water for at least 7 days after concrete placement.
- 17. No vehicular loads will be allowed on the Slab—on—Grade within 7 days of concrete placement, and only light (passenger) vehicle will be allowed on the slab within 7 days thereafter (14 days of concrete placement).
- 18. Additives. Dose, Mix, Apply, and otherwise install Concrete Admixtures, Sealers, Hardeners, Curing Agents, etc. in strict compliance with the respective manufacturer's recommendations.

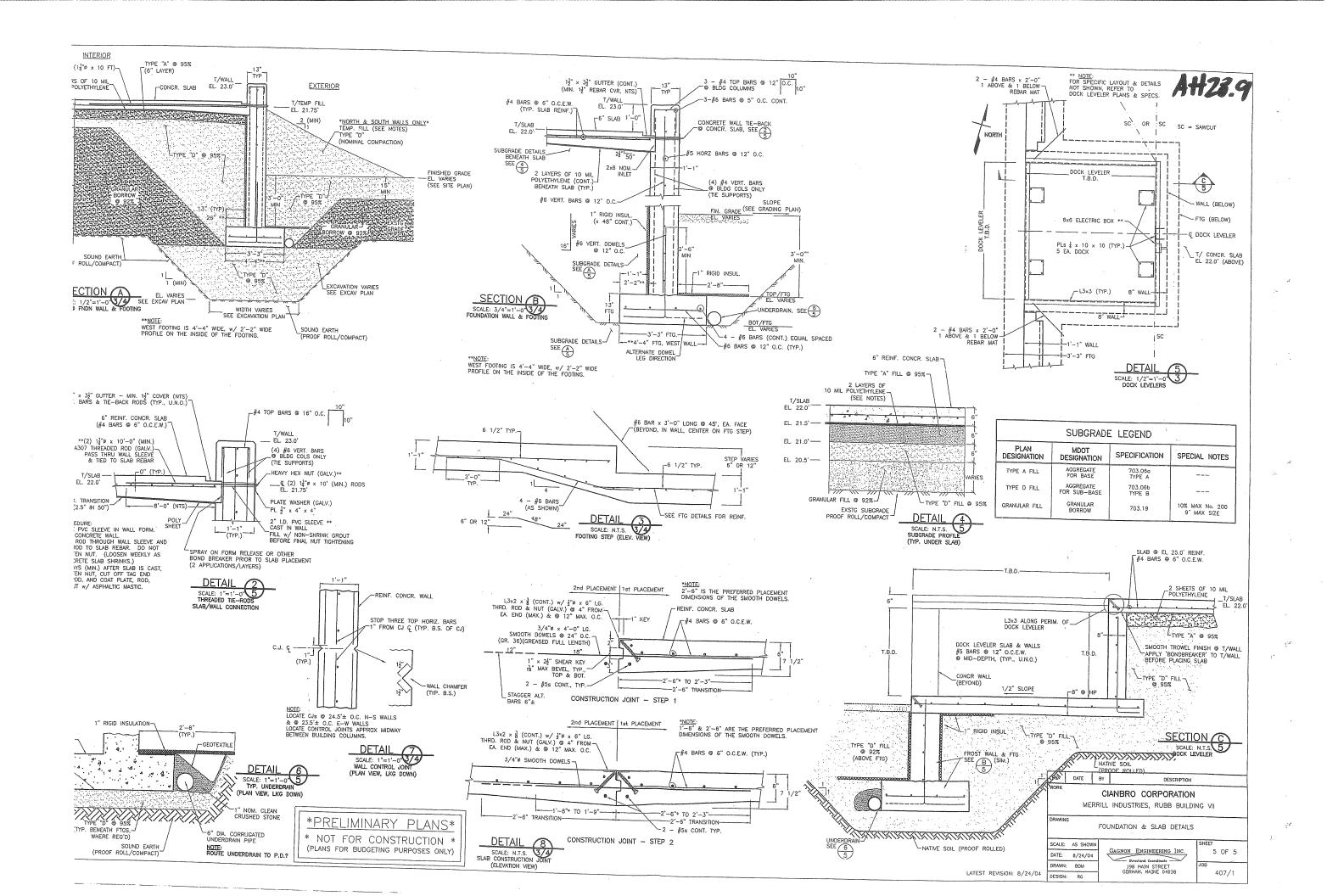
PRELIMINARY PLANS

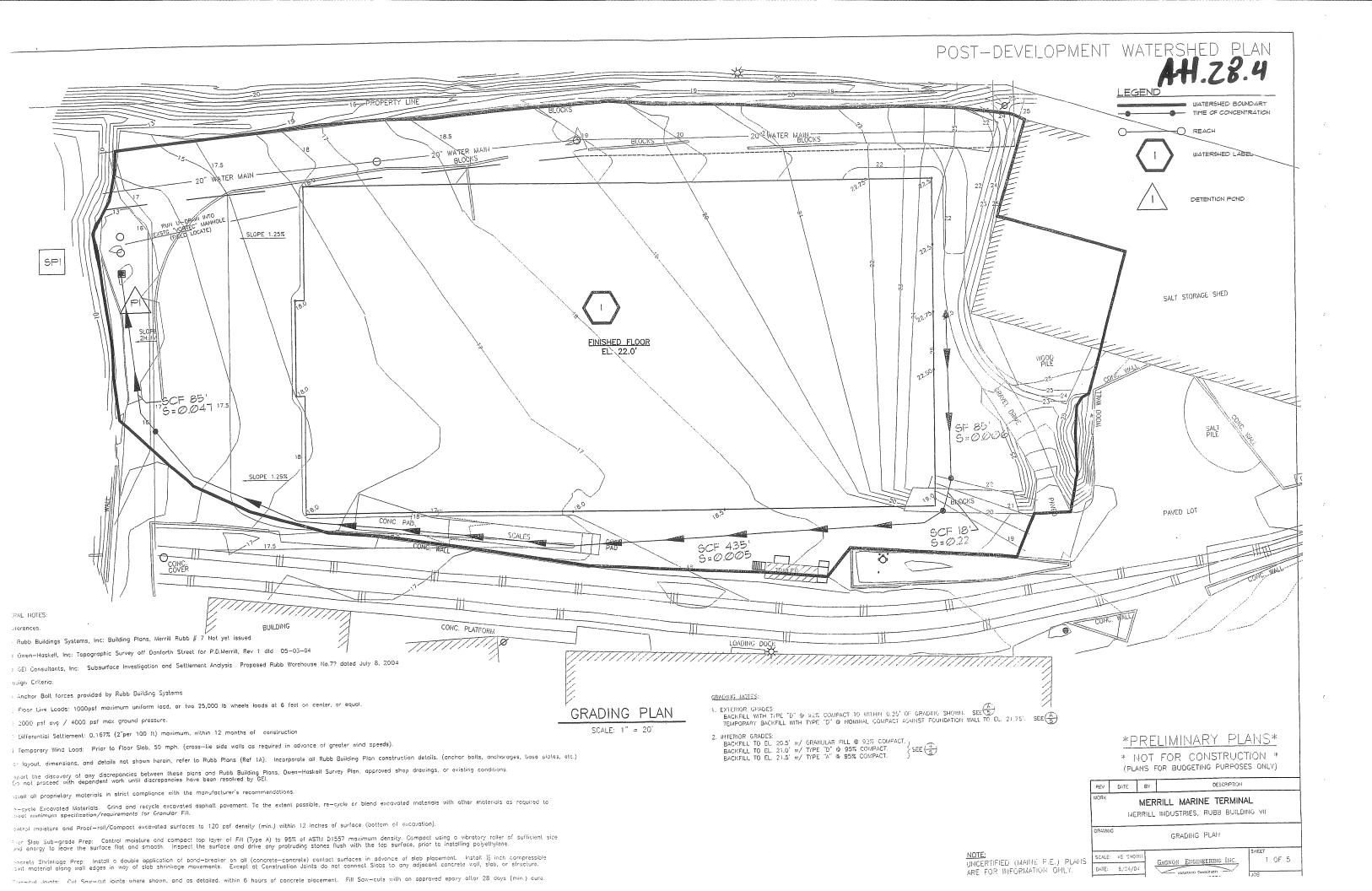
* NOT FOR CONSTRUCTION * (PLANS FOR BUDGETING PURPOSES ONLY)

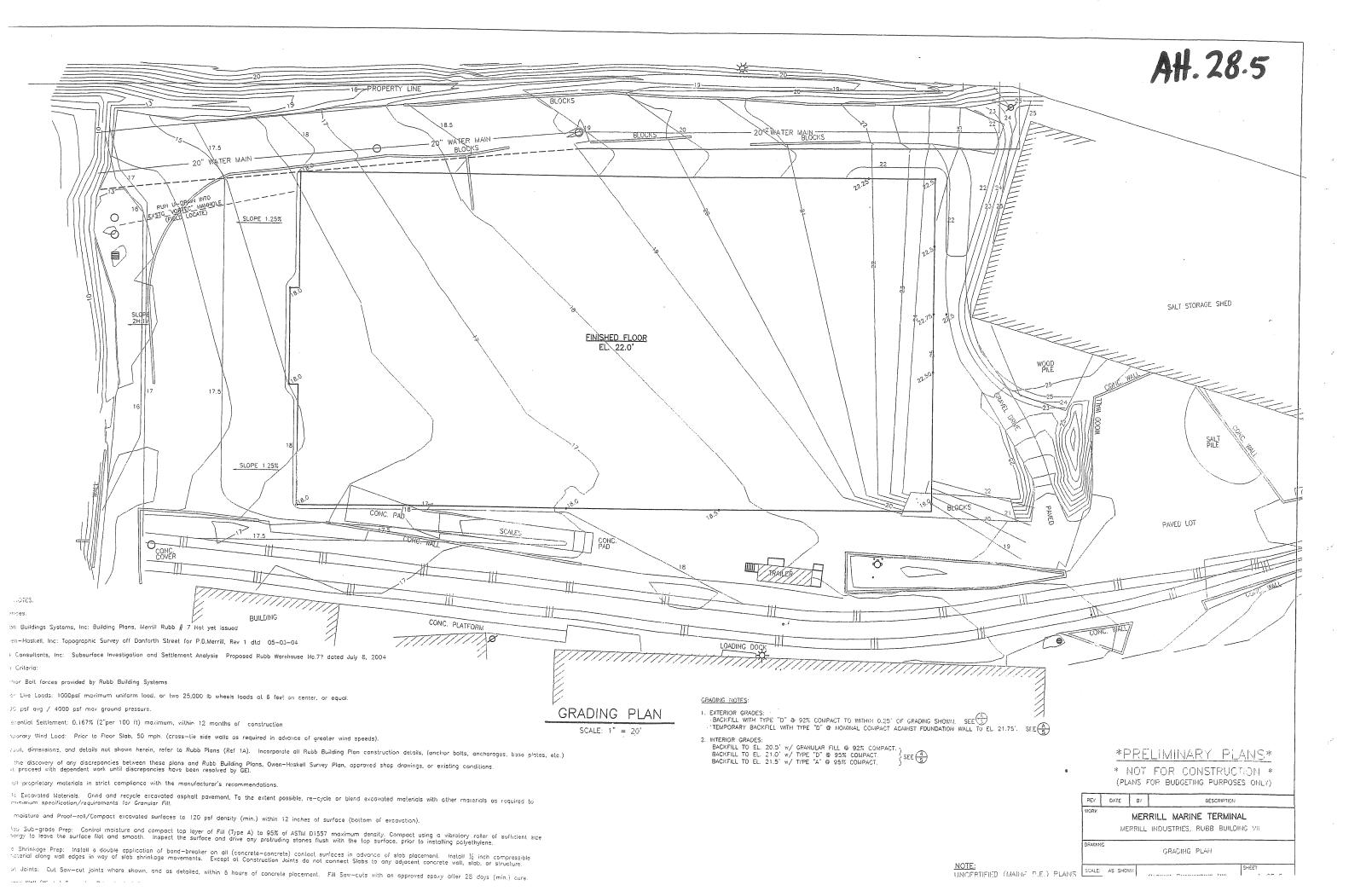
REV	DATE	BY	DESCRIPTION								
MERRILL MARINE TERMINAL MERRILL INDUSTRIES, RUBB BUILDING VII											
DRAWIN	DRAWING PARTIAL FOUNDATION PLAN (EAST)										
SCALE:	8/24/0		GAGNON ENGINEERING INC.	SHEET 4 OF 5							
DRAWN		7	Structural Consultants 198 MAIN STREET GORHAM, MAINE 04038	јов 407/1							

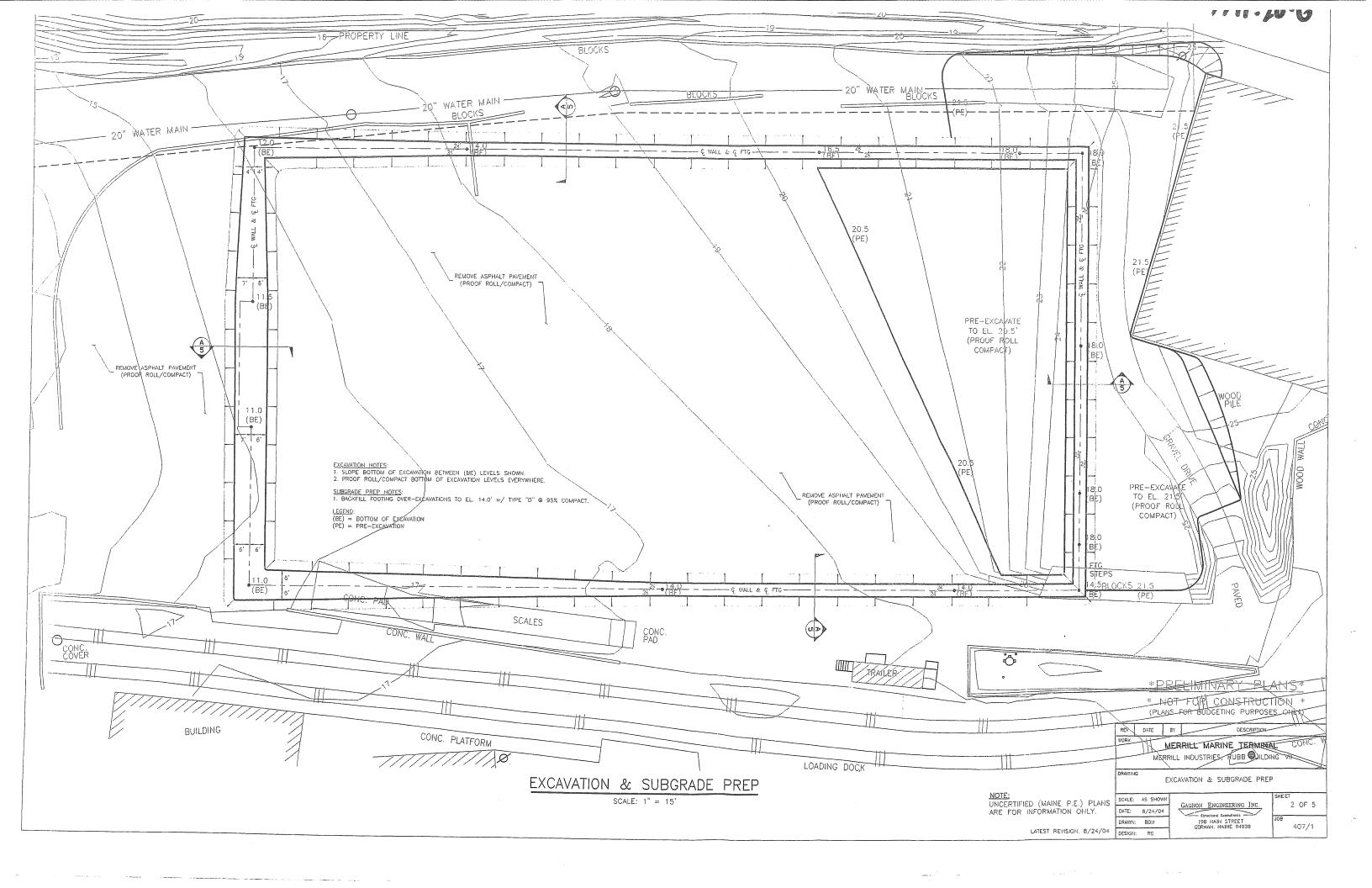
UNCERTIFIED (MAINE P.E.) PL ARE FOR INFORMATION ONLY.

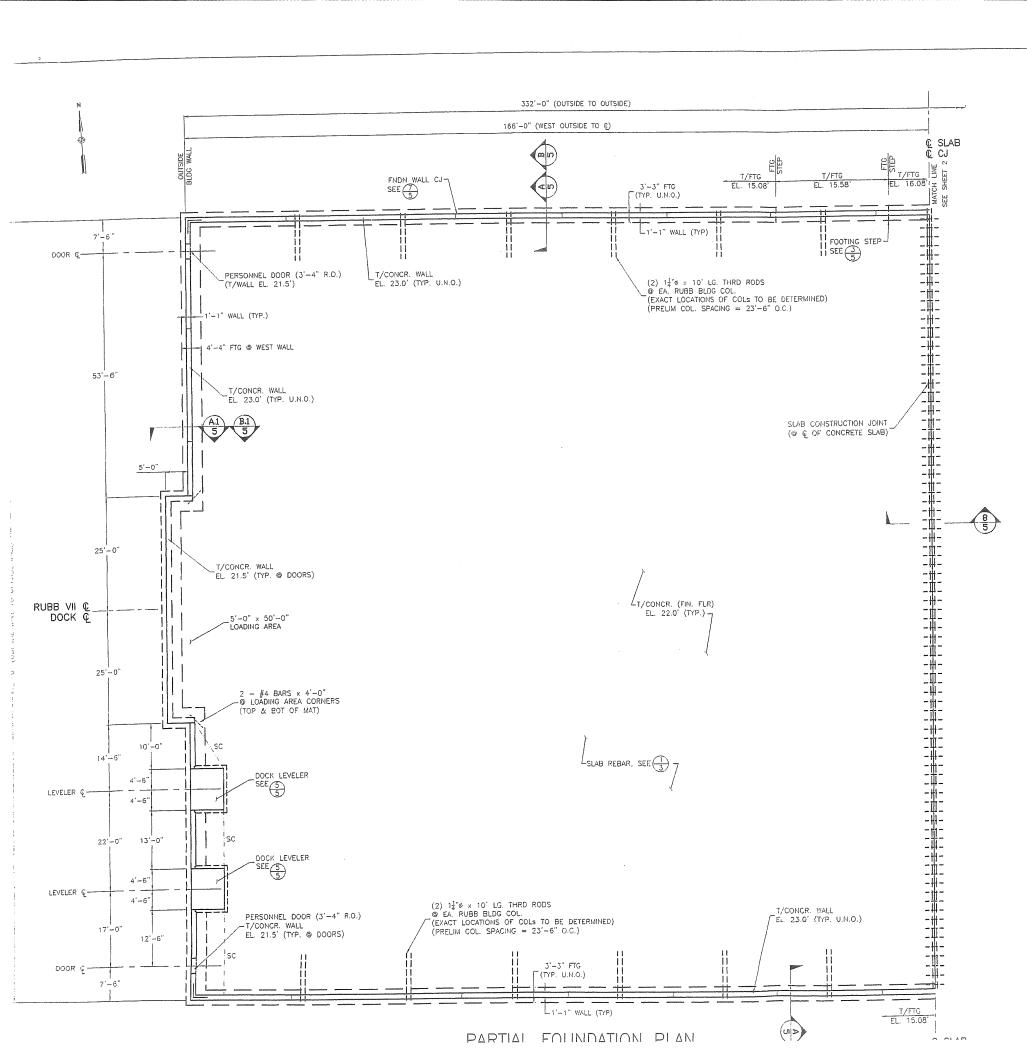
LATEST REVISION: 8/24







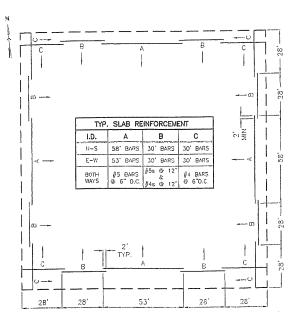




AH.28.7

MATERIALS

- 1. Earthwork:
- A) Granular Fill: MDOT Granular Borrow, spec. 703.19, 9 inch maximum size, 10% maximum #200
- B) Type D Fill: MDOT Aggregate for Sub-base, spec.703.06 b, Type D.
- C) Type A Fill: MDOT Aggregate for Base, spec.703.06 a, Type A.
- Note: For all three Fill Materials, Submit Laboratory Test Results for Gradations (ASTM D422), and Maisture Density (ASTM D1557)
 Submit In—Place Density Tests, performed by Qualified Independent Testing Agency.
- 2. Rigid Insulation: Rigid Cellular Polystyrene (RCPS), R5.0 min per inch, ASTM C578, Dow brand "Styrofoom" or approved equal.
- Polyethylene: Plastic Water Vapor Retarder for use under concrete slabs. ASTM E1745, smooth, 10 mils thick, two layers, lop adjacent sheets and stagger joints. Americover (brand) Vapor Block VB10, or approved equal.
- 4 Committee & Baladanaina Barra and Concrete Notes
- 5. Steel Plates & Shapes: ASTM A36, Galvanized, unless noted otherwise, or approved equal.

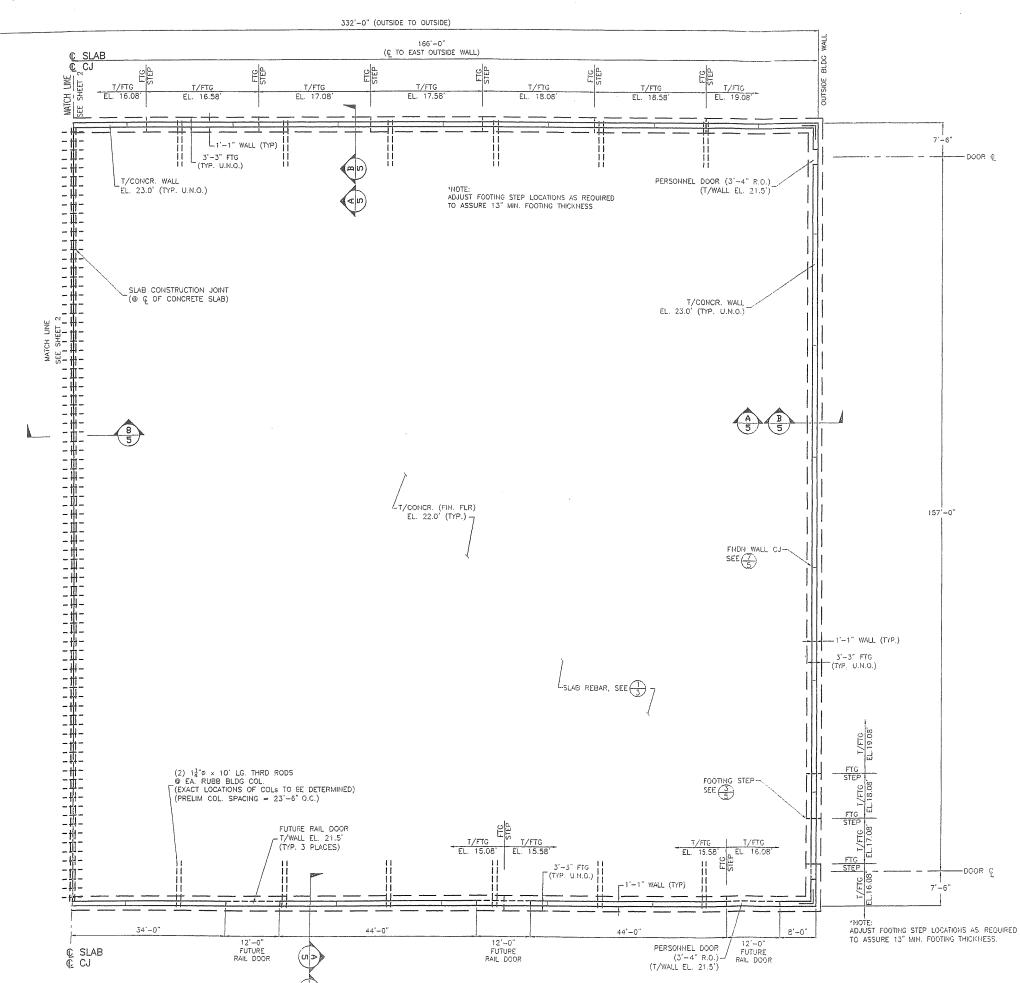


SCALE: 1" = 30'-0'3/4 SLAB REBAR: SIZE, SPACING, & LAYOUT (155' x 170' AREA, TYP. OF 2)

PRELIMINARY PLANS

* NOT FOR CONSTRUCTION * (PLANS FOR BUDGETING PURPOSES ONLY)

	REV	DATE	ВУ	DESCRIPTION		
	MERRILL MARINE TERMINAL MERRILL INDUSTRIES, RUBB BUILDING VII					
	DRAWII.	iG	PARTU	AL FOUNDATION PLAN (WES	Γ)	
NOTE: UNCERTIFIED (MAINE P.E.) PLANS ARE FOR INFORMATION ONLY.	SCALE:	AS SHO 8/24/0	-	GAGNON ENGINEERING INC.	SHEET 3 OF 5	



CONCRETE NOTES:

1. Concrete Shall meet the following requirements:

Location	Compr. Stren	% Air	Slump (Ploin/MRWR)	Notes & Additives
Footings	3000 psi	5%-7%	6" / 10"	
Walls	3500 psi	5%-7%	3½" / 5½"	Mid-Range Water Reducer (MRWR) As required
Floor	3500 psi	2½%-3½%	3½" / 5½"	MRWR as req'd, Grace Shrinkage Reducing Agent UCO Sealer—Hardener

- Concrete Supply. Concrete shall be supplied by MDOT—approved commercial batching plant(s) or other, if pre—approved by the Engineer.
- 3. Contractor shall engage the services of an approved Concrete Testing Agency to perform compliance tests on fresh and hardened Concrete in accordance with ASTM C31 & C39, respectively. Sampling, Air content, and Slump tests shall be performed in accordance with appropriate ASTM standards.
- 4. Unless otherwise directed, one test cylinder shall be broken at 7 days, and two cylinders at 28 days, from each sampled truckload. The fourth cylinder shall be held in reserve at the testing laboratory for possible further testing at the discretion of the Engineer, for the duration of the project. Sample the first, last, and intermediate truckloads (15 % min), randomly selected by the Engineer.
- Engineer may direct improvements in the concrete mix design (for no additional compensation to the Contractor) on the basis on early concrete placement 7-day compressive strength tests, or other test results. Improvements shall be made in all subsequent concrete.
- 6. Forms: Plywood—faced or Steel—faced, smooth finish quality, free of wood—grain and form—panel joint lines. Forms shall be securely interconnected so as not to become mis—aligned during concrete placement. Forms shall be adequately cross—tied to resist concrete pressures without form—panel distortions or excessive deflections between ties. Formwork must be secured and braced so as to remain plumb and maintain horizontal alignments during concrete placement. Chamfer forms (5/4" x 3/4") at exposed corners and exposed edges, except as otherwise detailed.
- 7. Imbedded Form Ties shall include a ½" minimum break—back that will be filled with portland—cement grout (or mortar, as appropriate) immediately after form removal.
- 8. Hardened Concrete Tolerances.

Footings: 1"4: on width, height, and top elevation.

Walls: 1/8" \pm on width (thickness) and top elevation, 1/16" \pm per foot on plumbness, 3/16" \pm per 10' on horizontal alignment at top of wall.

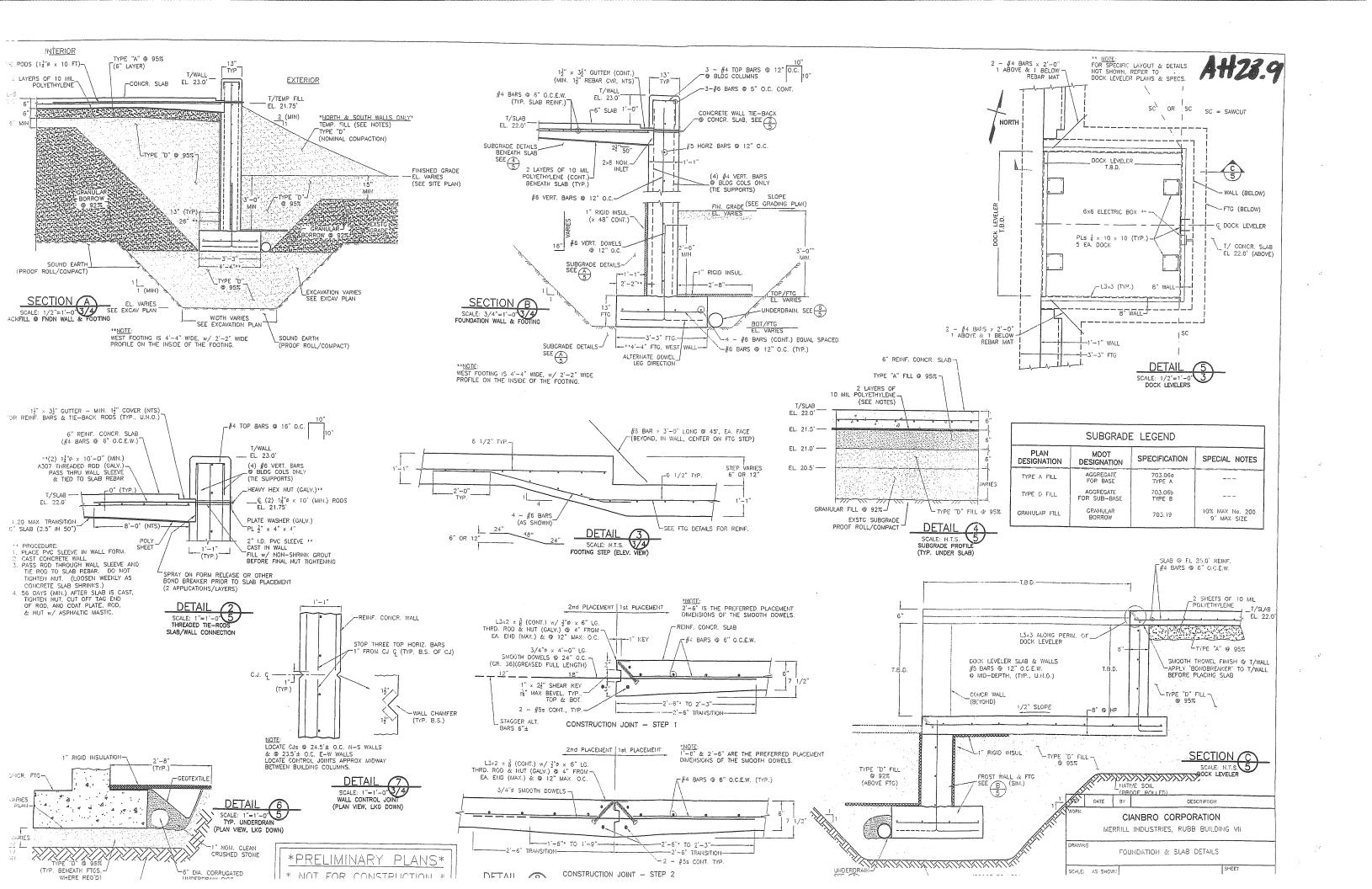
Slab-On-Grade: 1/8"± per 10' on top finished surface

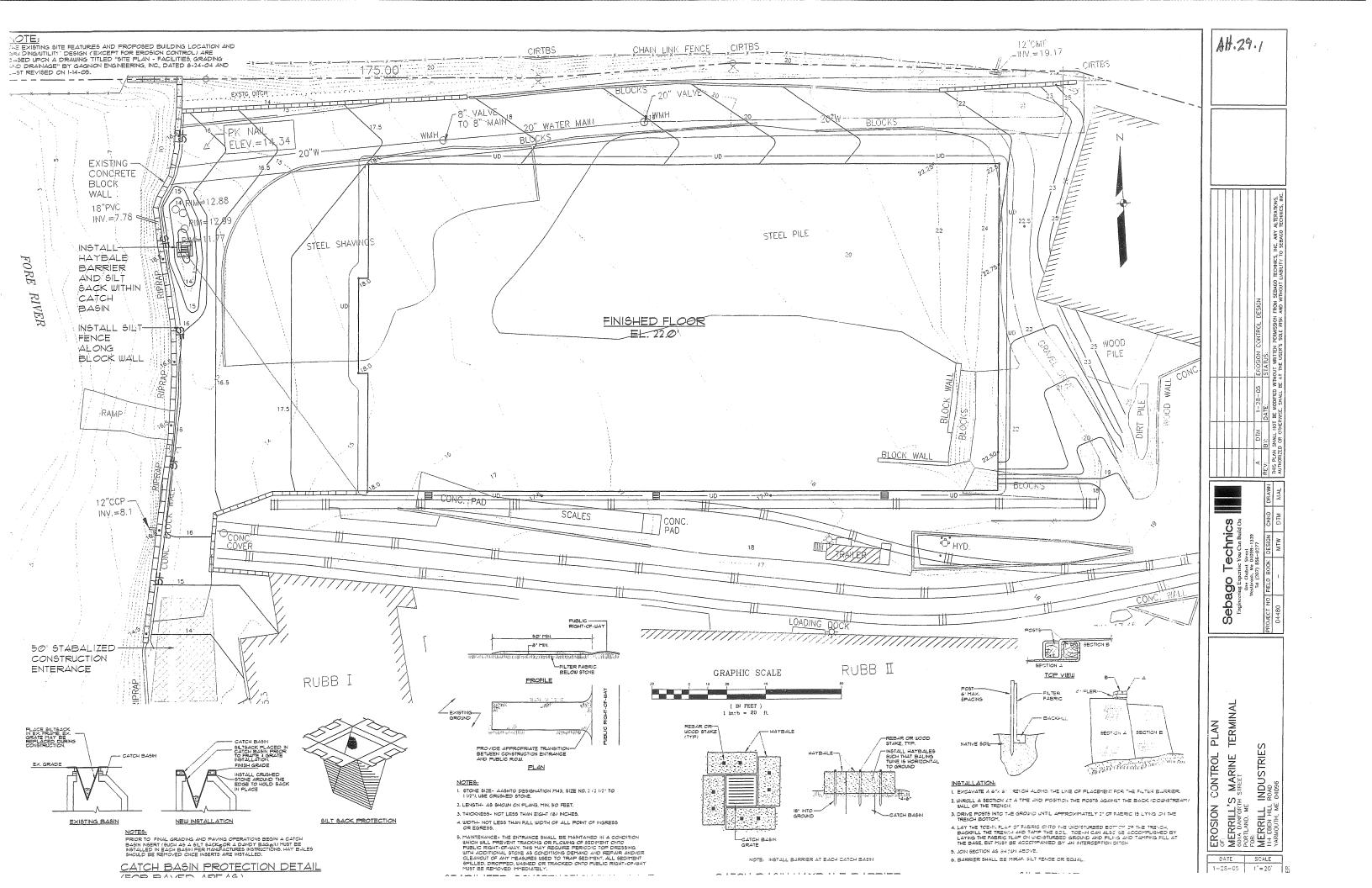
- 9. Reinforcing Bars: Grade 60 deformed bars (ASTM A615).
- 10. Smooth Dowels: ASTM A307, A36, or better.
- Bars Splices shall be avoided to the extent possible. Minimum tap—splice lengths shall be 36 bar diameters for plain bars, unless otherwise noted.
- 12. Reinforcement shall be stored & protected, placed, supported, secured, and fastened according to MDOT specifications.
- 13. Concrete placed within formed boundaries or designated construction joints shall be placed in a continuous operation. All concrete shall meet maximum slump (and other) requirements and be installed without excessive dropping or other segrogation—producing methods. All concrete will be consolidated using appropriately—sized, mechanical, high—frequency, internal vibrators.
- 14. Place, finish, and cure slab—on—grade concrete using only generally—accepted, good—practice methods and operations, particularly with respect to the timing of critical finishing techniques. Except as otherwise specified or detailed on the Plans, follow the recommendations of ACI 302.1R "Guide for Concrete Floor and Slab Construction". The stab—on—grade is classified as a Class 5 (ACI 302.1R), single—course, industrial floor; with a float and hard—steel trowel finish.
- 15. Footing forms may be removed after 24 hours provided the footing is immediately backfilled to the top of the footing. Wall forms may be removed after 48 hours of placement provided an approved chemical curing agent is immediately applied to exposed surfaces, or the surfaces are kept continuously well by approved water—curing methods; otherwise, wall forms shall remain in place at least 7 days after concrete placement.
- 16. The Slab-on-Grade surface shall be water-cured by keeping the concrete continuously wet with fresh water for at least 7 days after concrete placement.
- 17. He vehicular loads will be allowed on the Slob—on—Grade within 7 days of concrete placement, and only light (passenger) vehicle will be allowed on the slob within 7 days thereafter (14 days of concrete placement).
- Additives. Dose, Mix. Apply. and otherwise install Concrete Admixtures, Sealers, Hardeners, Curing Agents, etc. in strict compliance with the respective manufacturer's recommendations.

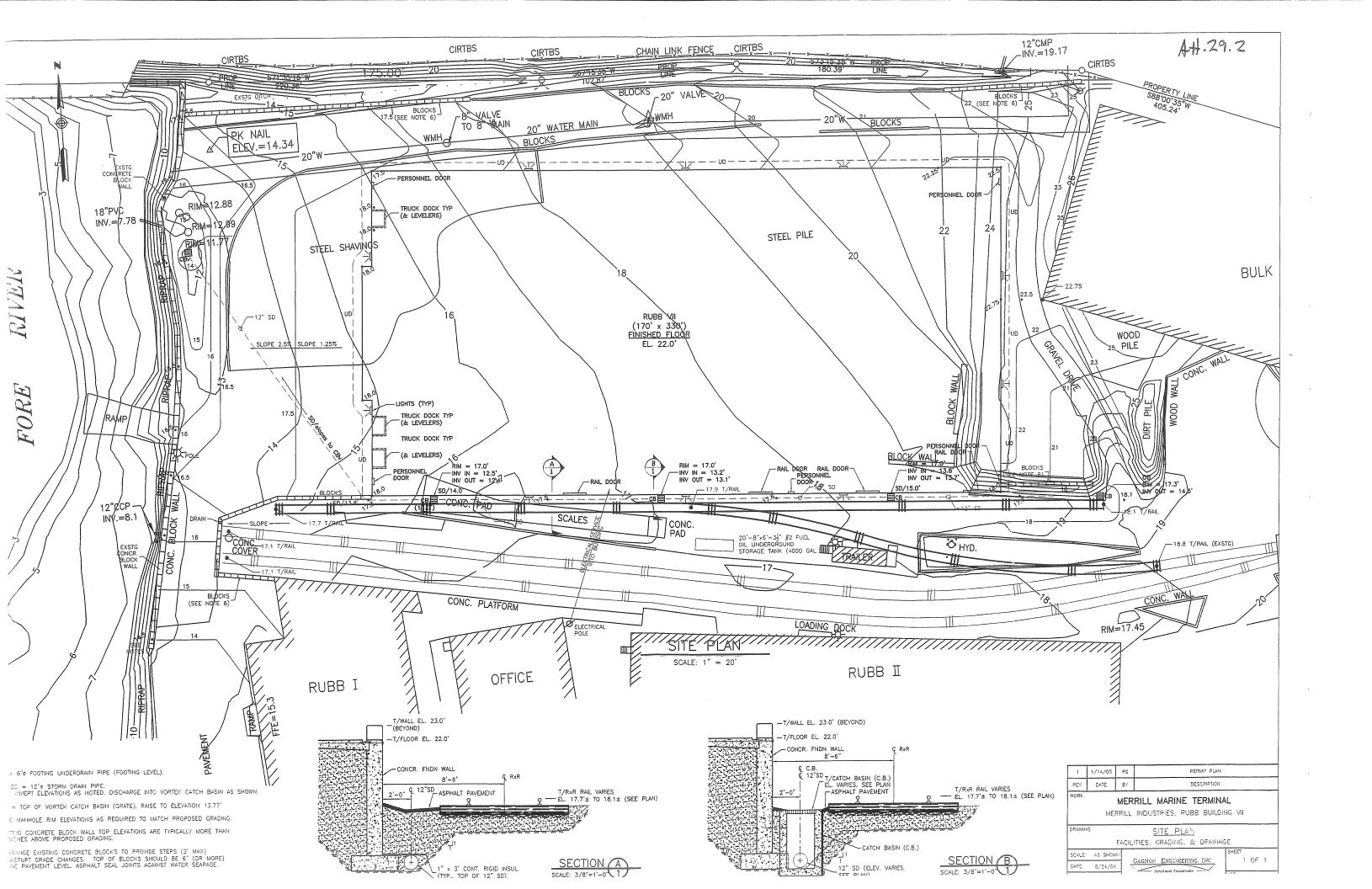
PRELIMINARY PLANS

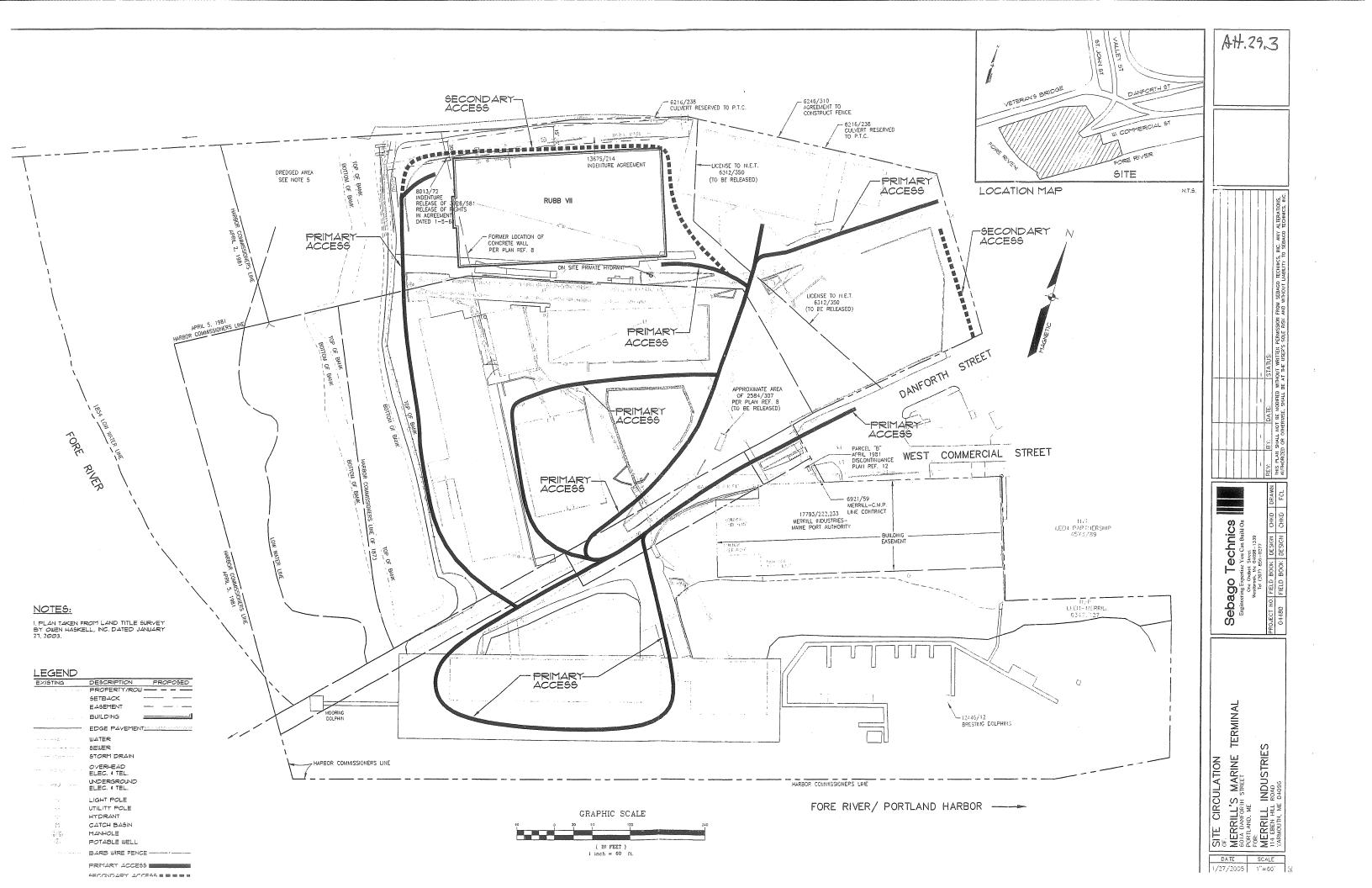
* NOT FOR CONSTRUCTION *
(PLANS FOR BUDGETING PURPOSES ONLY)

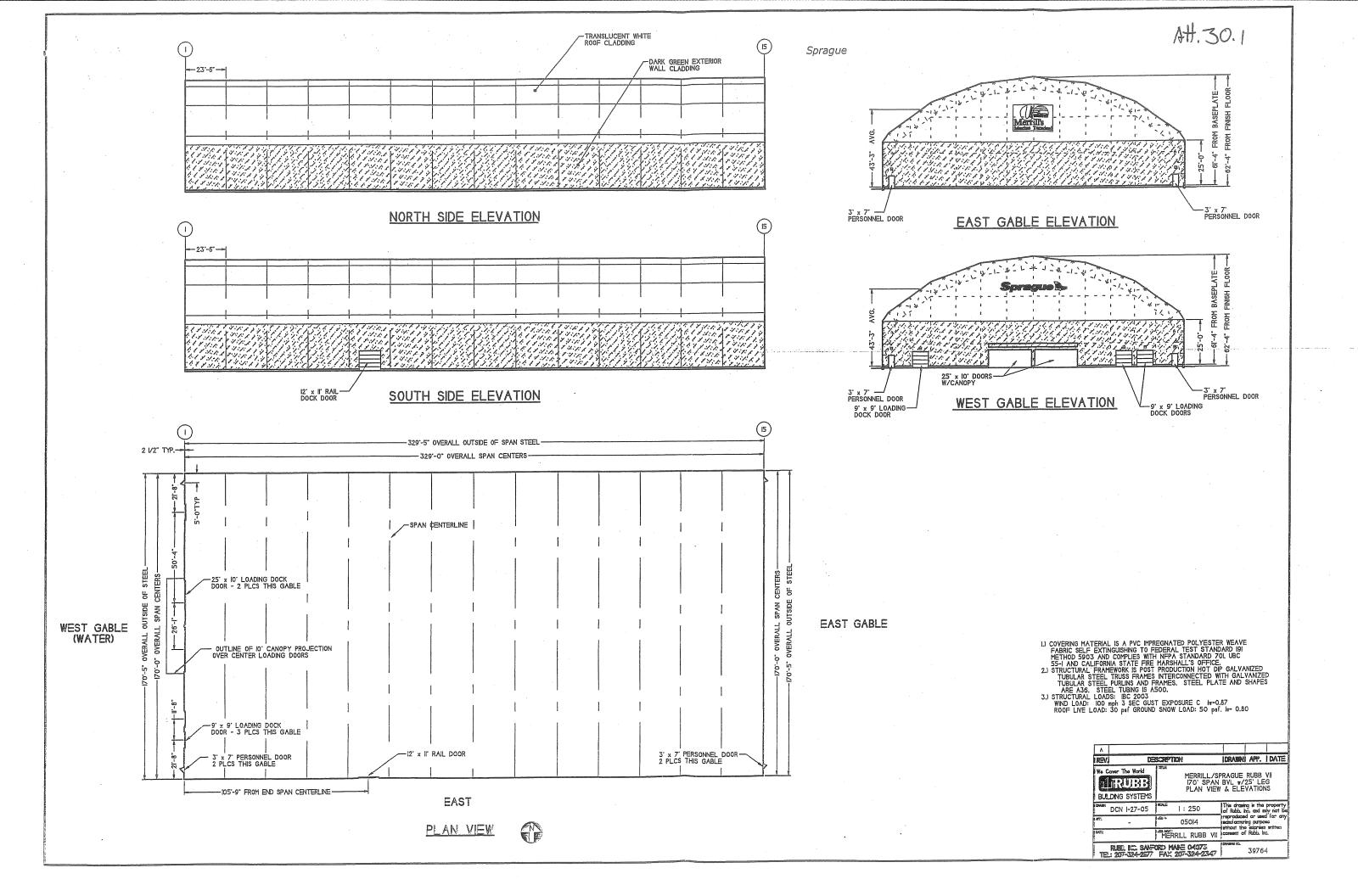
	REV DATE BY DESCRIPTION					
	MERRILL MARINE TERMINAL MERRILL INDUSTRIES, RUBB BUILDING VII					
	DPAWIN	IG	PARTI	L FOUNDATION PLAN (EAST)		
NOTE: UNCERTIFIED (MAINE P.E.) PLANS	SCALE:	AS 5H0	-	GAGNON ENGINEERING INC. SHEET 4 OF 5		

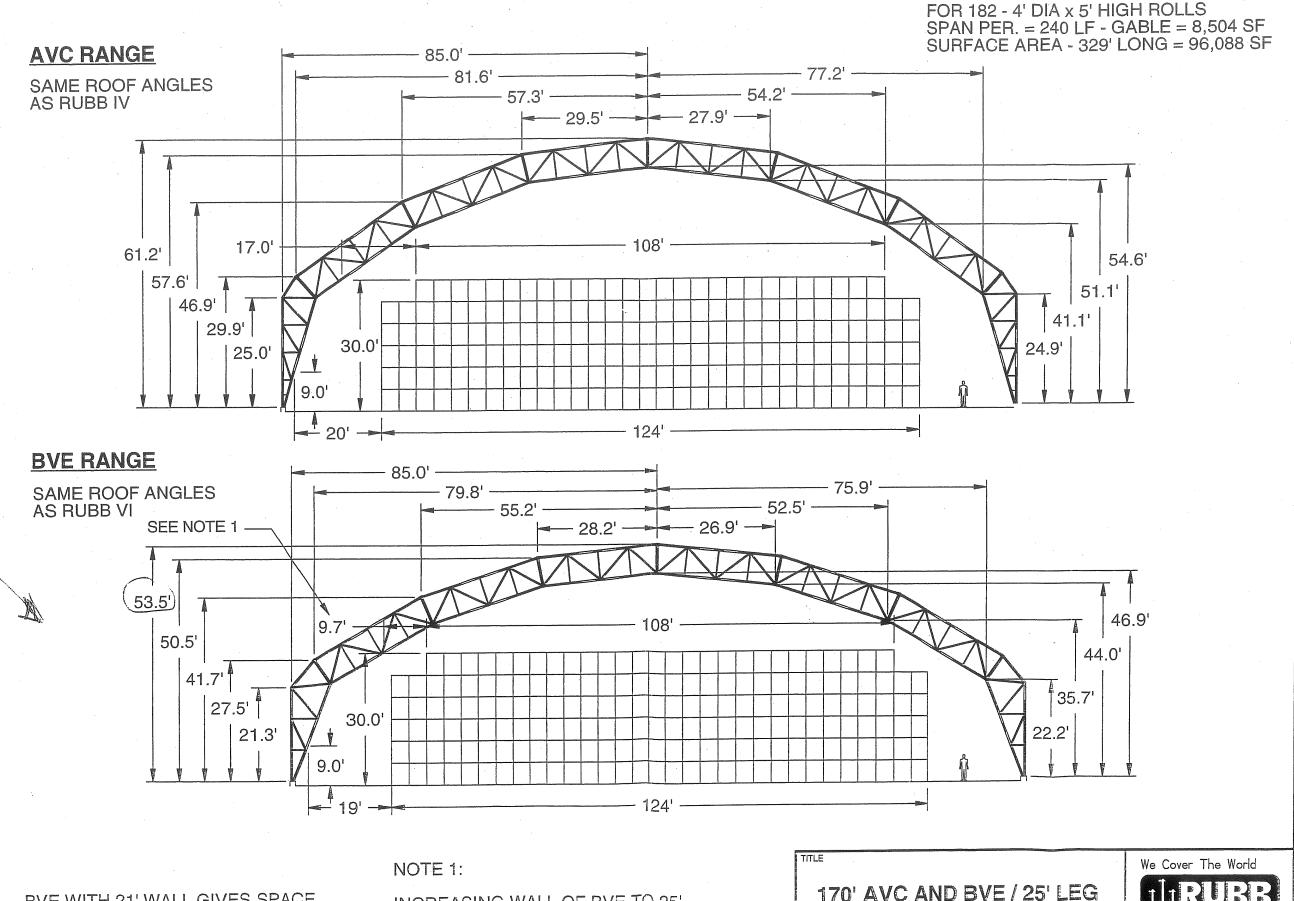












BVE WITH 21' WALL GIVES SPACE FOR 182 - 4' DIA x 5' HIGH ROLLS SPAN PER. = 230 LF - GABLE = 7,428 SF SURFACE AREA - 329' LONG = 90,641 SF

INCREASING WALL OF BVE TO 25' BRINGS SURFACE AREA TO 94,337 SF OR 2% LESS THAN AVC WITH 25' WALL.
THIS ALSO INCREASE 9.7' CLEARANCE TO 16.1 GA

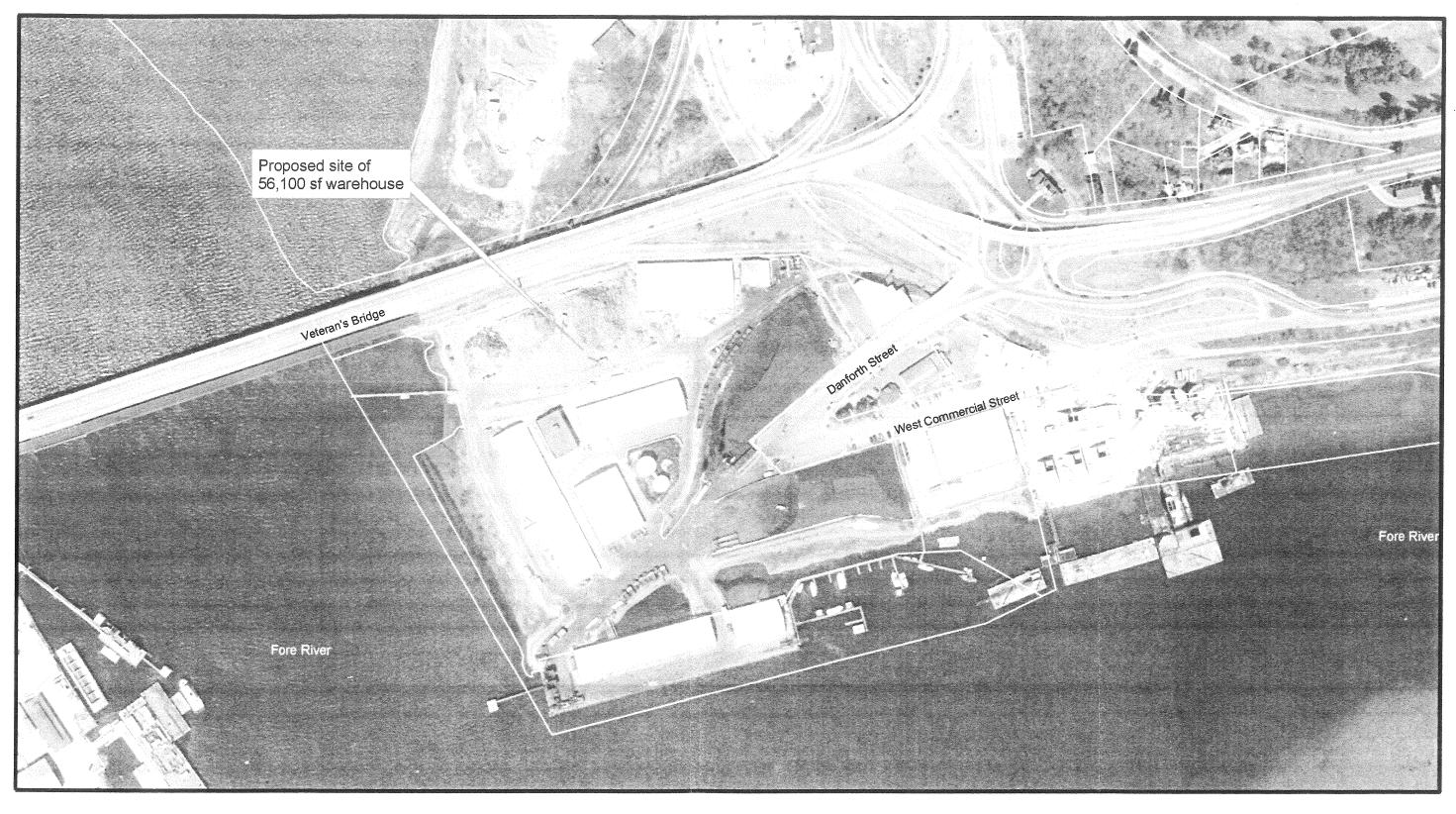
170' AVC AND BVE / 25' LEG SPAN PROFILE COMPARISON **BUILDING SYSTEMS**

1:350

DCN

AVC WITH 25' WALL GIVES SPACE

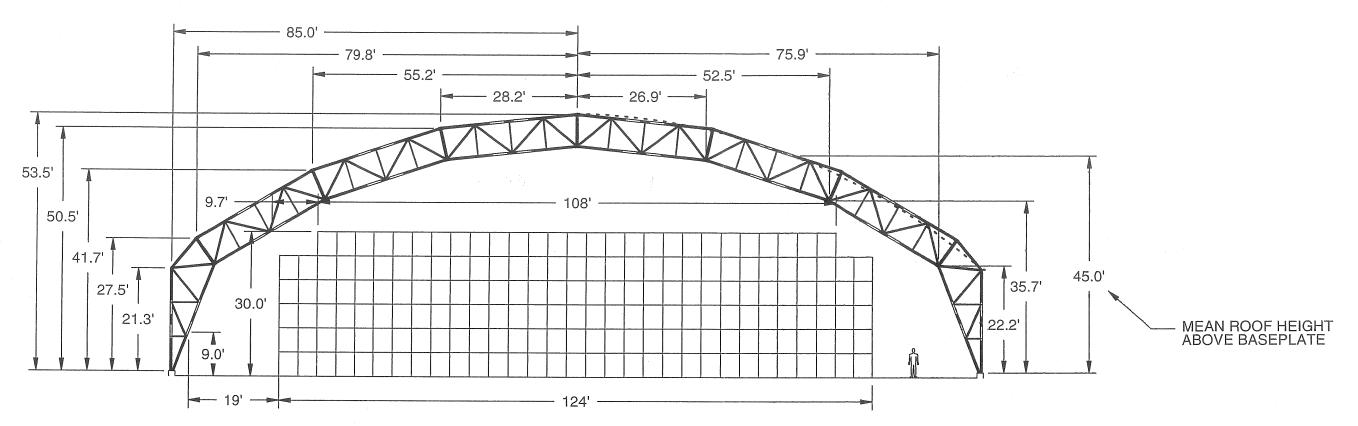
1/28/05 81974





Merrill Marine Terminal Proposed Warehouse

Map prepared for the City of Portland Planning Board by the Portland Planning Division using data from the Portland GIS Work Group January 2005



RUBB VII - PROPOSED 170' SPAN BVE RANGE W/21' LEG

