



Knight Consulting Engineers, Inc.

September 6, 2019

Sisters & Brothers Investment Group
C/o Joseph Handy
75 South Winooski Avenue
Burlington, VT 05401

Re: Preliminary design sketches for temporary & permanent sheeting for the proposed multi-unit residential building to be located at 110 Riverside Avenue in Burlington, Vermont.

Dear Joe:

At the request of Abigail Dery, our firm has prepared the attached preliminary design sketches for temporary & permanent sheeting for the proposed multi-unit residential building to be located at 110 Riverside Avenue in Burlington, Vermont. The intent behind the sheeting is to provide temporary shoring to allow for construction of the planned buildings and parking lots, as well as, act as permanent retaining walls. The sheeting replaces the need for block retaining walls. Below is a summary of the design parameters:

1. The east wall is needed for construction of the eastern parking lot which will have cuts up to 14' deep at the property-line. This wall will be constructed using Grade 50 PZ22 cantilevered sheeting. Local stability was designed to provide minimum Factors-of-Safety of 1.3 during construction and 1.5 after construction at the toe of slope.
2. The west wall is needed for construction of the building foundation and for creating the patio areas south of the building which will have cuts up to 25' deep at the proposed wall location. This wall will be constructed using Grade 50 PZ22, PZ27 & PZ35 anchored sheeting and 100-kip to 400-kip soil anchors grouted into glacial till or bedrock. Some of the anchors will extend above-grade so it may be desirable to conceal them for aesthetics and to prevent tampering. Global stability will be improved from its current condition and designed to provide minimum Factors-of-Safety of 1.3 during construction and 1.5 after construction at the toe of slope.

Attached with this letter are the following:

1. East Wall & West Wall site plan sketches
2. SH1 - West elevation view of the East Wall
3. SH2 - North elevation view of the south property-line
4. SH3 - NW elevation view of the West Wall
5. Detail "A" - Cantilevered Sheeting (East Wall).
6. Detail "B" - Anchored Sheeting (West Wall).

If you have any questions, please contact the undersigned.

Sincerely,

Eric Goddard, P.E.
Senior Vice President
Sheeting Cover Letter.doc

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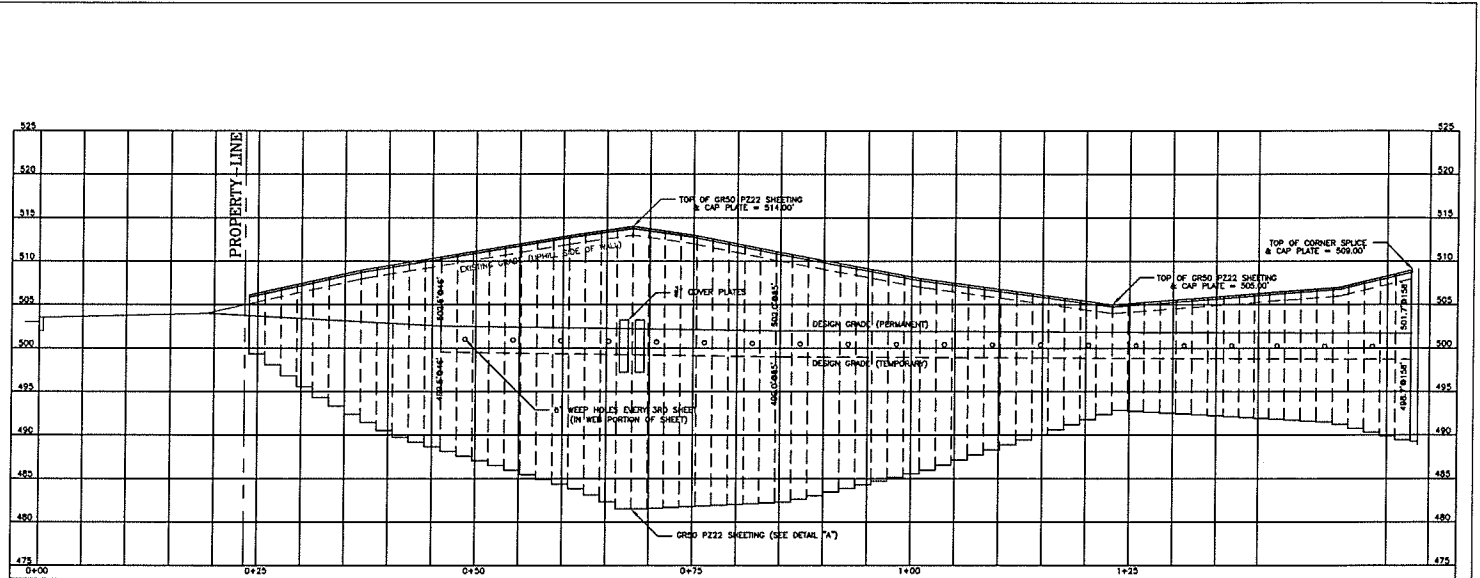
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WEST ELEVATION (EAST WALL)

SCALE: 1" = 5' HOR.
1" = 5' VERT.

PRELIMINARY
DESIGN

NO.	DATE	REVISION	BY
		West Elev. (East Wall)	
		EXCAVATION SHEETING	
		110 RIVERSIDE AVE.	
		HOUSING	
		BURLINGTON, VT	
			12239
			09/04/19
			SCALE NOTED

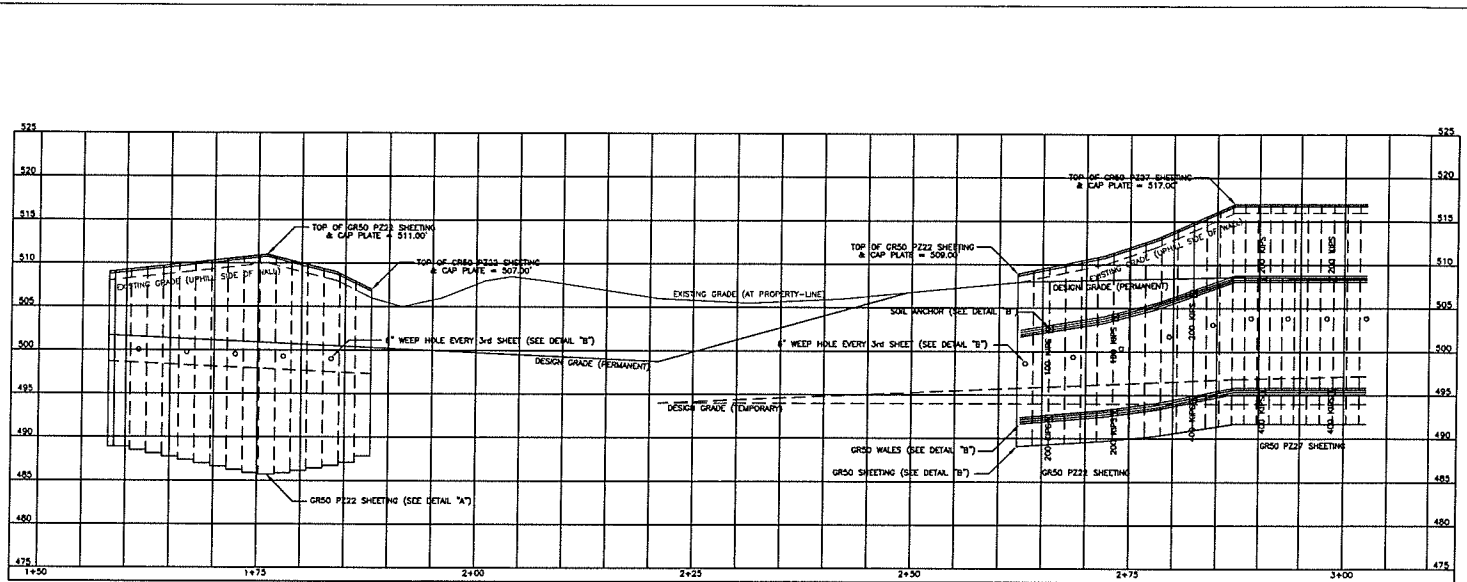
SH1

PROJECT CONSULTING ENGINEERS, INC.
100 NORTH CHURCH STREET, SUITE 100, BURLINGTON, VT 05401
PHONE: 802-249-1111 FAX: 802-249-1112

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NORTH ELEVATION (SOUTH PROPERTY-LINE)

SCALE: 1" = 3' HOR.
1" = 3' VERT.

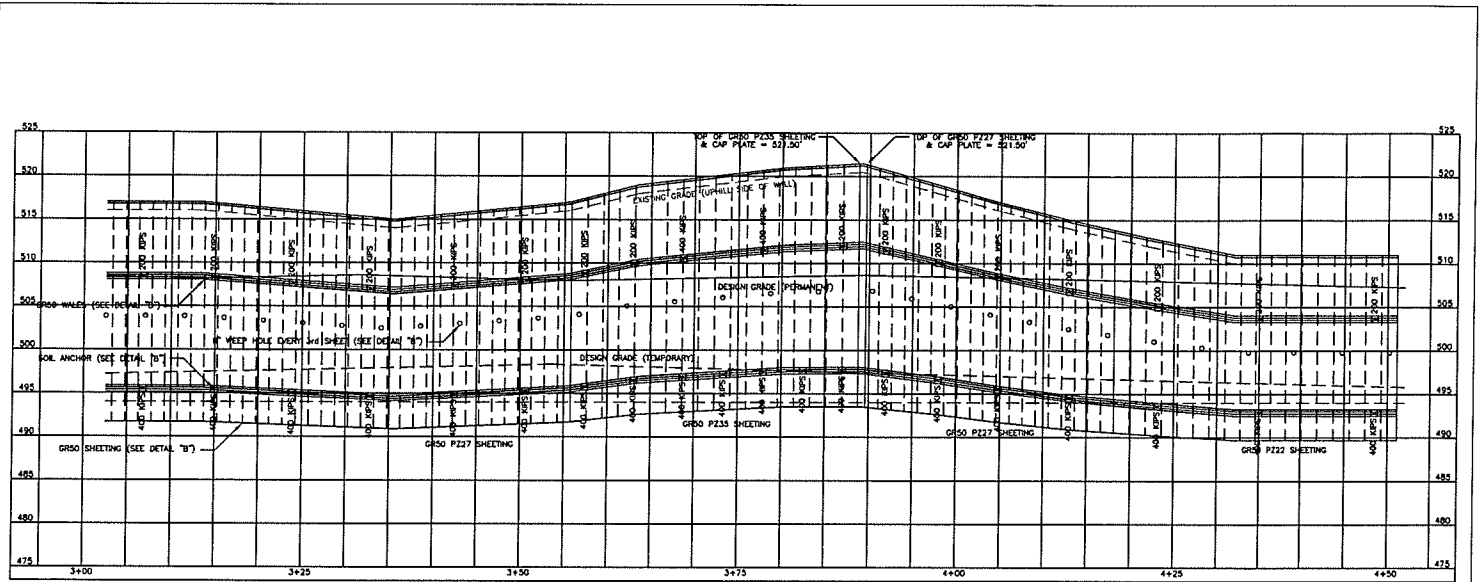
PRELIMINARY
DESIGN

NO.	DATE	REVISION	DRW. NO.
			SH2
North Elev. (South Side) EXCAVATION SHEETING 110 RIVERSIDE AVE. HOUSING BURLINGTON, VT			19239 09/06/19 DATE NOTED
EGC EGC	WEBB PROJECT CONSULTING ENGINEERS, INC. <small>40 COLLEGE STREET, SUITE 200, BURLINGTON, VT 05401</small>		

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NORTHWEST ELEVATION (WEST WALL)

SCALE: 1" = 6' HOR.
1" = 5' VERT.

PRELIMINARY
DESIGN

NO.	DATE	REVISION	REV.
		NW Elev. (West Wall)	SH3
EXCAVATION SHEETING 110 RIVERSIDE AVE. HOUSING BURLINGTON, VT			19239
<small>ERIC ROBERTSON CONSULTING ENGINEERS, INC.</small> <small>100 RIVERSIDE AVE., SUITE 200, BURLINGTON, VT 05401</small>			<small>07/25/19</small> <small>NOTED</small>

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300 PSF SURCHARGE
(SLOPES < 18.4° or 3H:1V)

12"
TYP.

PROPERTY-LINE

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ANCHOR & WALE WITH BEVELED SHIMS

T_a = 100-400 KIPS (20° INCLINE & GROUTED INTO TILL OR BEDROCK)

PRE-CUT 6" DIA. WEEP
HOLE IN STEEL SHEET PILE
WEBS AT 5.50' O.C. (HOR)

GRADE 50 PZ 22, 27 & 35 SHEETPILE

ANCHOR & WALE WITH BEVELED SHIMS

BOTTOM OF EXCAVATION

T_a = 100-400 KIPS (20° INCLINE & GROUTED INTO TILL OR BEDROCK)

B
DET

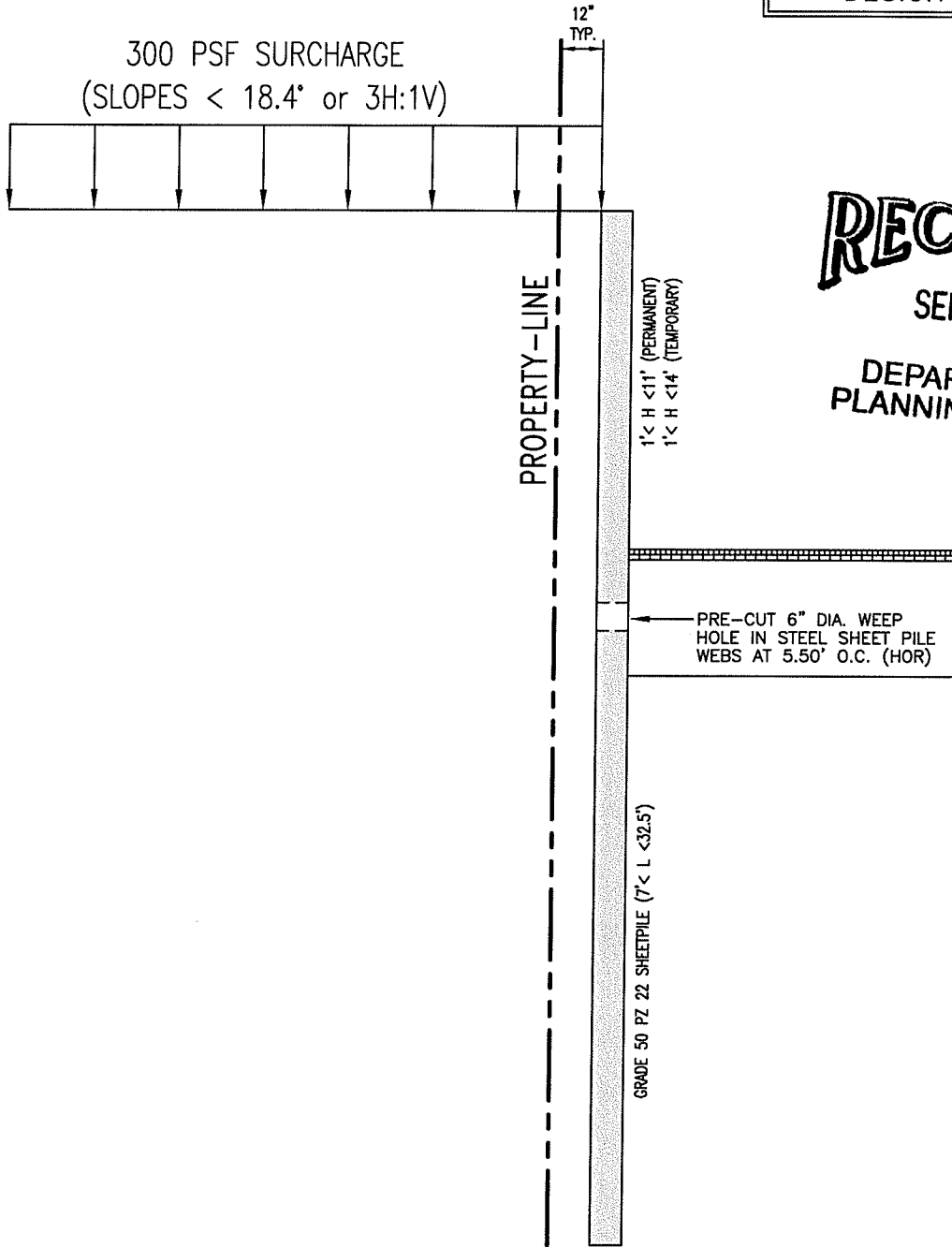
DETAIL - ANCHORED SHEETING (WEST WALL)

3/8" = 1'-0"

NO.	DATE	REVISION
DETAIL "B"		
EXCAVATION SHEETING 110 RIVERSIDE AVE. HOUSING BURLINGTON, VT		
		DWG. NO. B
		PROJ. NO. 19239
		DATE: 09/06/19
DWN: EHG CKD: EHG		SCALE: NTS

KCE KNIGHT CONSULTING ENGINEERS, INC.
183 COMMERCE STREET, WILLISTON, VT, 05495 - TEL. 879-8343

PRELIMINARY
DESIGN



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A
DET

DETAIL - CANTILEVERED SHEETING (EAST WALL)
3/8" = 1'-0"

NO.	DATE	REVISION	DWG. NO.
			A
DETAIL "A"			
EXCAVATION SHEETING 110 RIVERSIDE AVE. HOUSING BURLINGTON, VT			PROJ. NO. 19239
DWN: EHG CKD: EHG			DATE: 09/04/19
KCE KNIGHT CONSULTING ENGINEERS, INC. 183 COMMERCE STREET, WILLISTON, VT, 05495 - TEL. 879-8343			SCALE: NTS

N/F LOLA HOLDINGS LLC

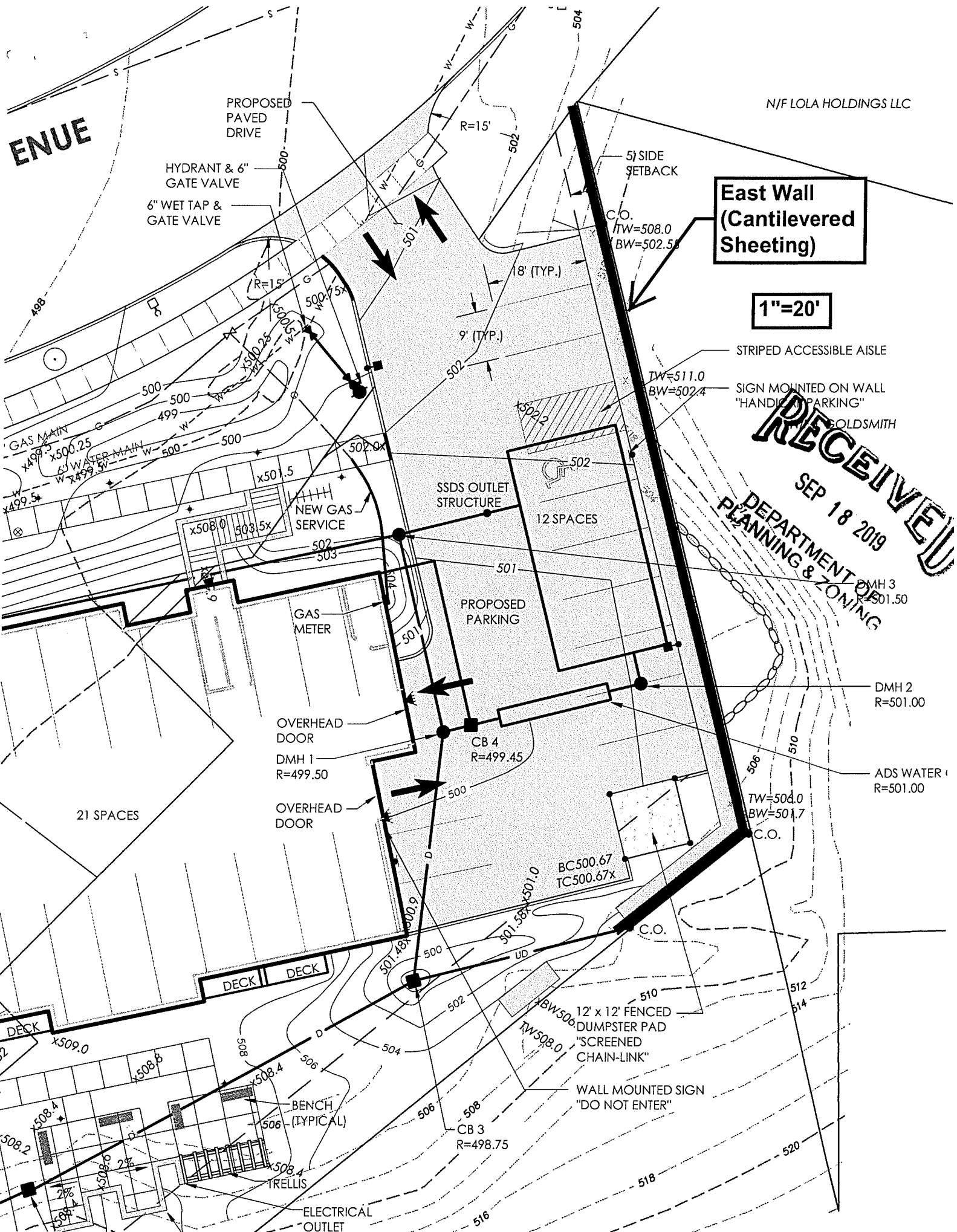
ENUE

East Wall
(Cantilevered
Sheeting)

1"=20'

STRIPED ACCESSIBLE AISLE
SIGN MOUNTED ON WALL
"HANDICAPPED PARKING"

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DMH 3
R=501.50

DMH 2
R=501.00

ADS WATER
R=501.00

TW=504.0
BW=501.7
C.O.

BC500.67
TC500.67x

12' x 12' FENCED
DUMPSTER PAD
"SCREENED
CHAIN-LINK"

WALL MOUNTED SIGN
"DO NOT ENTER"

CB 3
R=498.75

ELECTRICAL
OUTLET

BENCH
(TYPICAL)

TRELLIS

DECK DECK

OVERHEAD
DOOR

DMH 1
R=499.50

OVERHEAD
DOOR

GAS
METER

PROPOSED
PARKING

SSDS OUTLET
STRUCTURE

12 SPACES

NEW GAS
SERVICE

x508.0
x503.5x

x501.5

x500.25

x500.5x

x500.25

x500.5x

x500.25

x500.5x

x500.25

x500.5x

GAS MAIN
x499.5
x500.25

6" WATER MAIN
x499.5
x500.25

x499.5
x500.25

x499.5
x500.25

x499.5
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PROPOSED RESIDENTIAL APARTMENT BUILDING WITH UNDERGROUND PARKING

