

# Appendix 3

## Infrastructure Site Assessment Plans and Photos

### **Final Report**

August 22, 2014  
State Project # 2014-415  
NAC # 111-14011

# EASTERN STATE HOSPITAL SITE INFRASTRUCTURE MASTER PLAN

## SHEET INDEX

### GENERAL

G-1.....COVER

### HARD SCAPE (ROADS, SIDEWALKS, AND PARKING LOTS)

HS-1.....WESTLAKE NORTH

HS-2.....EASTLAKE NORTH

HS-3.....WESTLAKE SOUTH

HS-4.....EASTLAKE SOUTH

HS-5.....PINELODGE

HS-6.....SOUTH ENTRANCE

HS-7.....LAKELAND VILLAGE NORTH

HS-8.....LAKELAND VILLAGE SOUTH

### SANITARY SEWER SYSTEM (CONVEYANCE PIPES, AND MANHOLES)

SA-1.....WESTLAKE NORTH

SA-2.....EASTLAKE NORTH

SA-3.....WESTLAKE SOUTH

SA-4.....EASTLAKE SOUTH

SA-5.....PINELODGE

SA-6.....NOT USED

SA-7.....LAKELAND VILLAGE NORTH

SA-8.....LAKELAND VILLAGE SOUTH

### POTABLE WATER SYSTEM (WELLS, PUMPS, RESERVOIRS AND DISTRIBUTION PIPES)

WA-1.....WESTLAKE NORTH

WA-2.....EASTLAKE NORTH

WA-3.....WESTLAKE SOUTH

WA-4.....EASTLAKE SOUTH

WA-5.....PINELODGE

WA-6.....SOUTH ENTRANCE

WA-7.....LAKELAND VILLAGE NORTH

WA-8.....LAKELAND VILLAGE SOUTH

### STORM WATER SYSTEM (PONDS, COLLECTION STRUCTURES AND PIPING)

SD-1.....WESTLAKE NORTH

SD-2.....EASTLAKE NORTH

SD-3.....WESTLAKE SOUTH

SD-4.....EASTLAKE SOUTH

SD-5.....PINELODGE

SD-6.....NOT USED

SD-7.....LAKELAND VILLAGE NORTH

SD-8.....LAKELAND VILLAGE SOUTH

### IRRIGATION SYSTEM (MAIN LINE PIPES, PUMPS AND RESERVOIRS)

L-1.....WESTLAKE NORTH

L-2.....EASTLAKE NORTH

L-3.....WESTLAKE SOUTH

L-4.....EASTLAKE SOUTH

L-5.....PINELODGE

L-6.....NOT USED

L-7.....LAKELAND VILLAGE NORTH

L-8.....LAKELAND VILLAGE SOUTH

### NATURAL GAS SYSTEM (PIPES)

NG-1.....WESTLAKE NORTH

NG-2.....EASTLAKE NORTH

NG-3.....WESTLAKE SOUTH

NG-4.....EASTLAKE SOUTH







NG-5.....PINELODGE

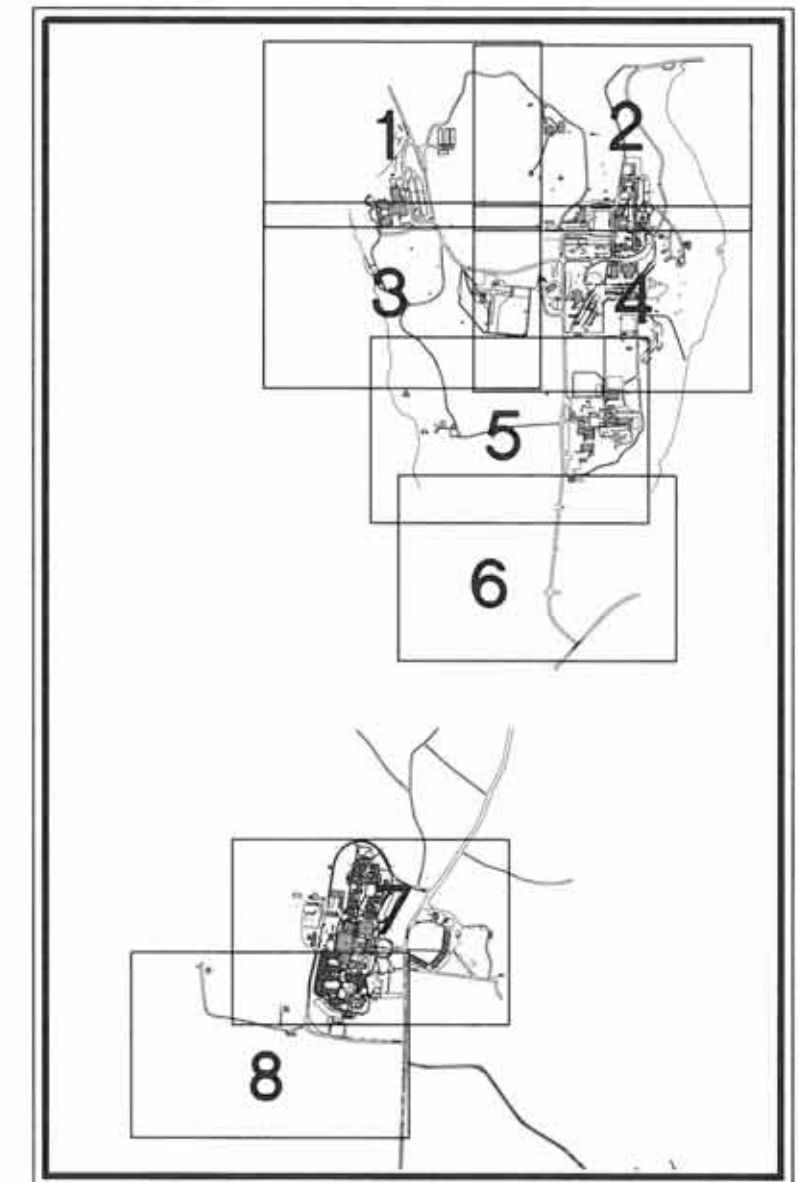
NG-6.....NOT USED

NG-7.....LAKELAND VILLAGE NORTH

NG-8.....LAKELAND VILLAGE SOUTH

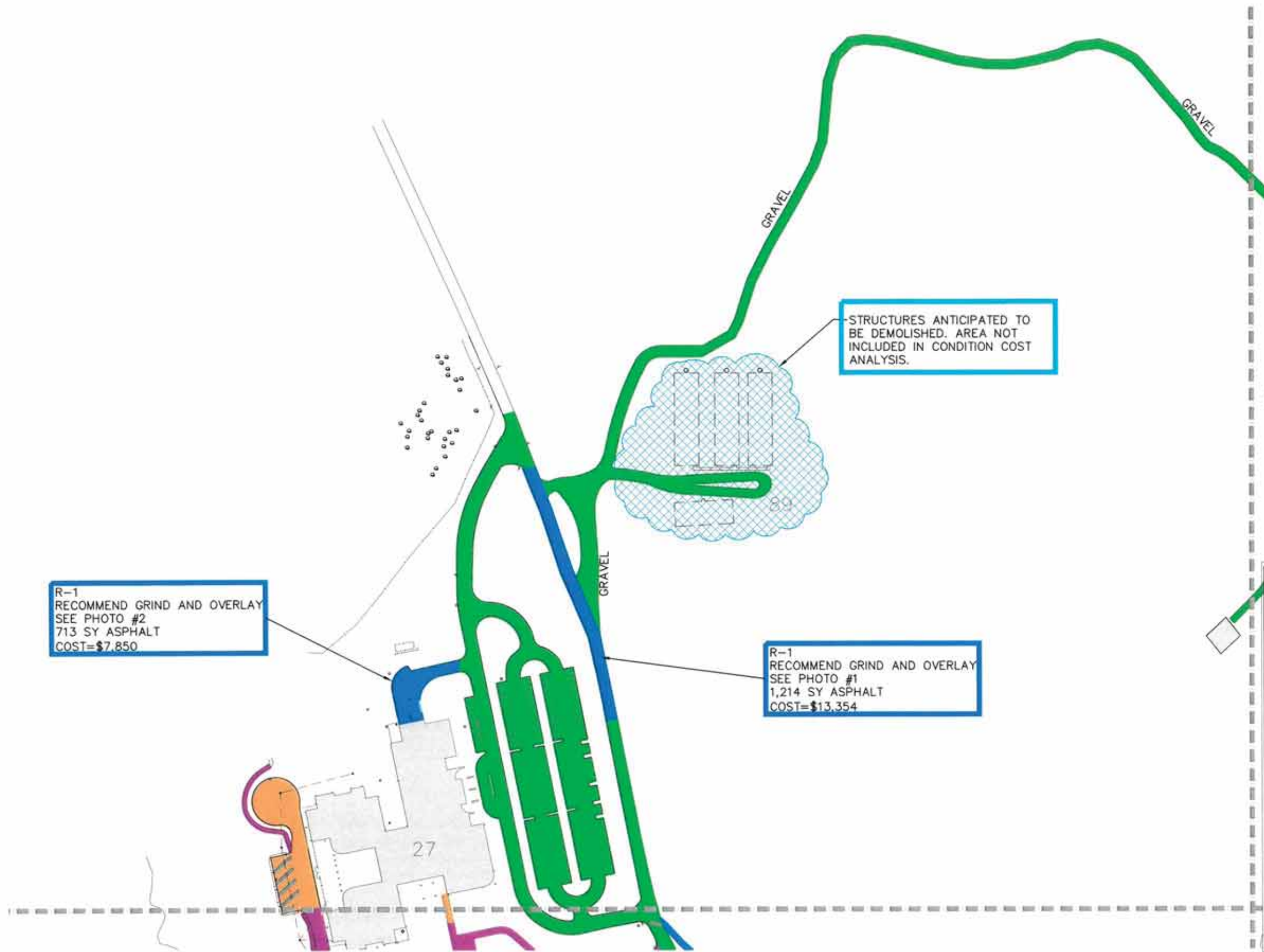
### LEGEND

-  ANTICIPATED TO BE DEMOLISHED
-  RATING 1-NEW CONDITION
-  RATING 2-GOOD CONDITION
-  RATING 3-FAIR CONDITION
-  RATING 4-POOR
-  RATING 5-FAILING



KEYMAP

REVISIONS		 Taylor Engineering, Inc. Civil Design and Land Planning 116 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE:	SHEET
			NTS	G-1
DWN: GHF	DATE: _____	ESH INFRASTRUCTURE MASTER PLAN		COVER
CK'D: MAA	DATE: _____			

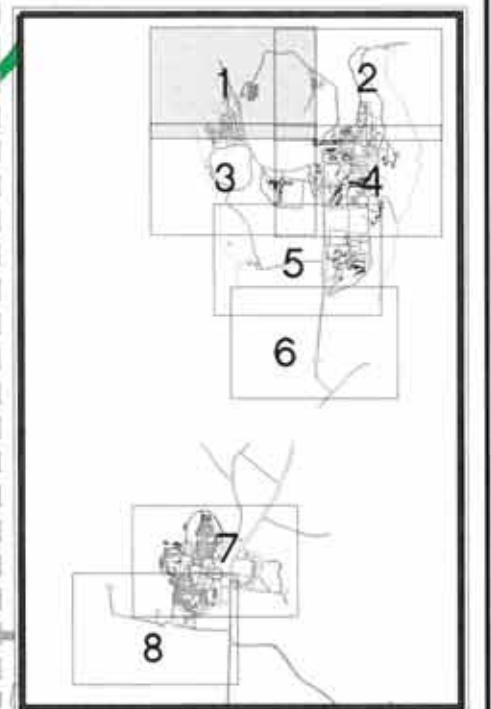


STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

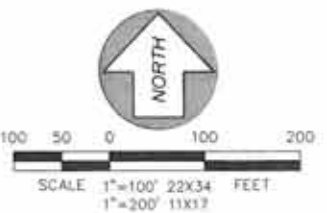
R-1  
RECOMMEND GRIND AND OVERLAY  
SEE PHOTO #2  
713 SY ASPHALT  
COST=\$7,850

R-1  
RECOMMEND GRIND AND OVERLAY  
SEE PHOTO #1  
1,214 SY ASPHALT  
COST=\$13,354

- LEGEND**
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KEYMAP



DWN: GHF CK'D: MAA	REVISIONS	<b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SHEET HS-1
	DATE: _____ DATE: _____		SCALE: 1"=100'
<b>ESH INFRASTRUCTURE MASTER PLAN</b>		HARD SCAPE	

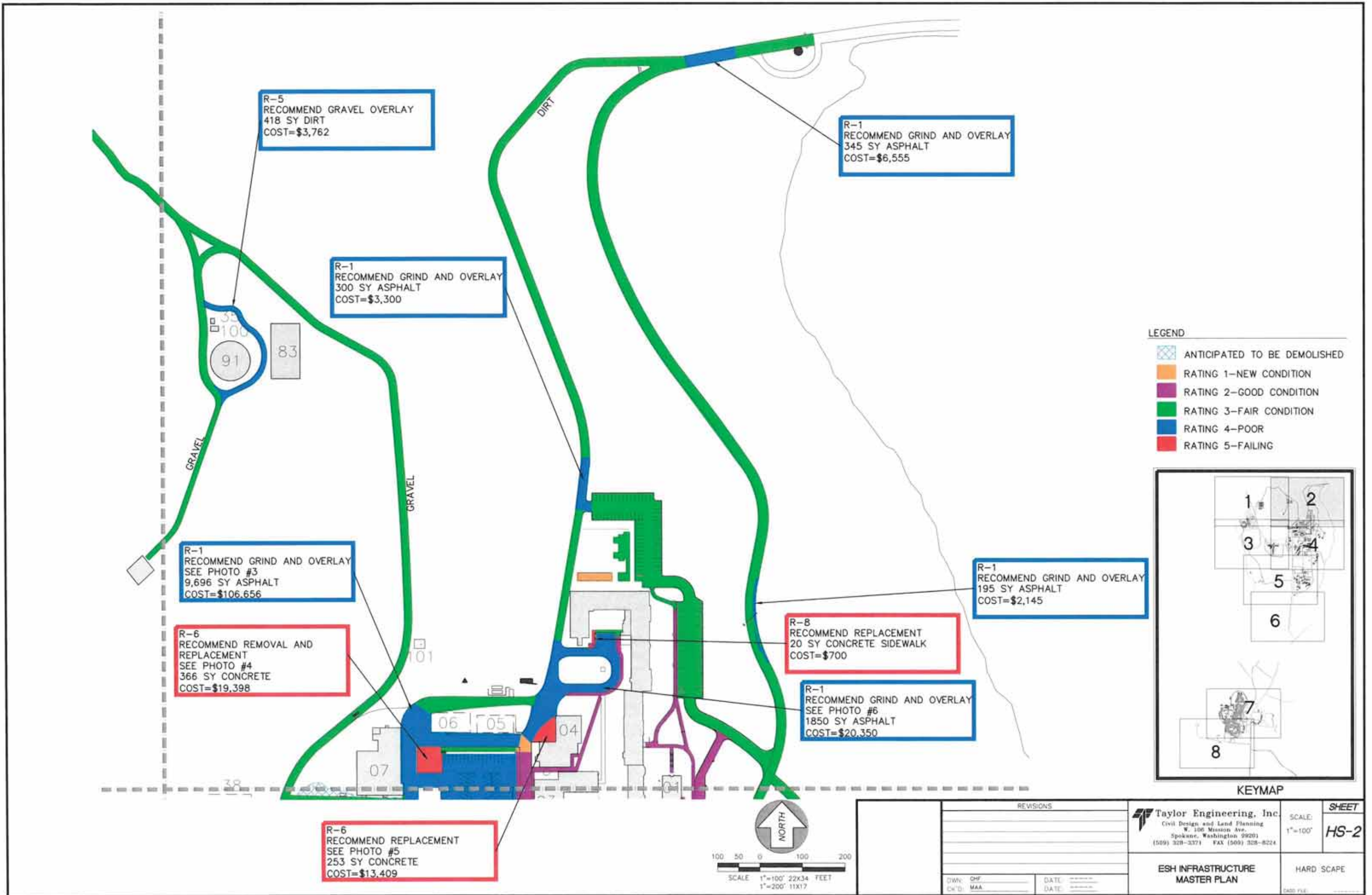


PHOTO #1



PHOTO #2





R-5  
RECOMMEND GRAVEL OVERLAY  
418 SY DIRT  
COST=\$3,762

R-1  
RECOMMEND GRIND AND OVERLAY  
345 SY ASPHALT  
COST=\$6,555

R-1  
RECOMMEND GRIND AND OVERLAY  
300 SY ASPHALT  
COST=\$3,300

R-1  
RECOMMEND GRIND AND OVERLAY  
SEE PHOTO #3  
9,696 SY ASPHALT  
COST=\$106,656

R-6  
RECOMMEND REMOVAL AND  
REPLACEMENT  
SEE PHOTO #4  
366 SY CONCRETE  
COST=\$19,398

R-1  
RECOMMEND GRIND AND OVERLAY  
195 SY ASPHALT  
COST=\$2,145

R-8  
RECOMMEND REPLACEMENT  
20 SY CONCRETE SIDEWALK  
COST=\$700

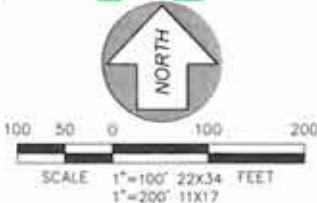
R-1  
RECOMMEND GRIND AND OVERLAY  
SEE PHOTO #6  
1850 SY ASPHALT  
COST=\$20,350

R-6  
RECOMMEND REPLACEMENT  
SEE PHOTO #5  
253 SY CONCRETE  
COST=\$13,409

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KEYMAP



REVISIONS	

**Taylor Engineering, Inc.**  
Civil Design and Land Planning  
W. 106 Mission Ave.  
Spokane, Washington 99201  
(509) 328-3371 FAX (509) 328-8224

SCALE:  
1"=100'  
**HS-2**

**ESH INFRASTRUCTURE  
MASTER PLAN**

HARD SCAPE

DATE FILE



PHOTO #3



PHOTO #4

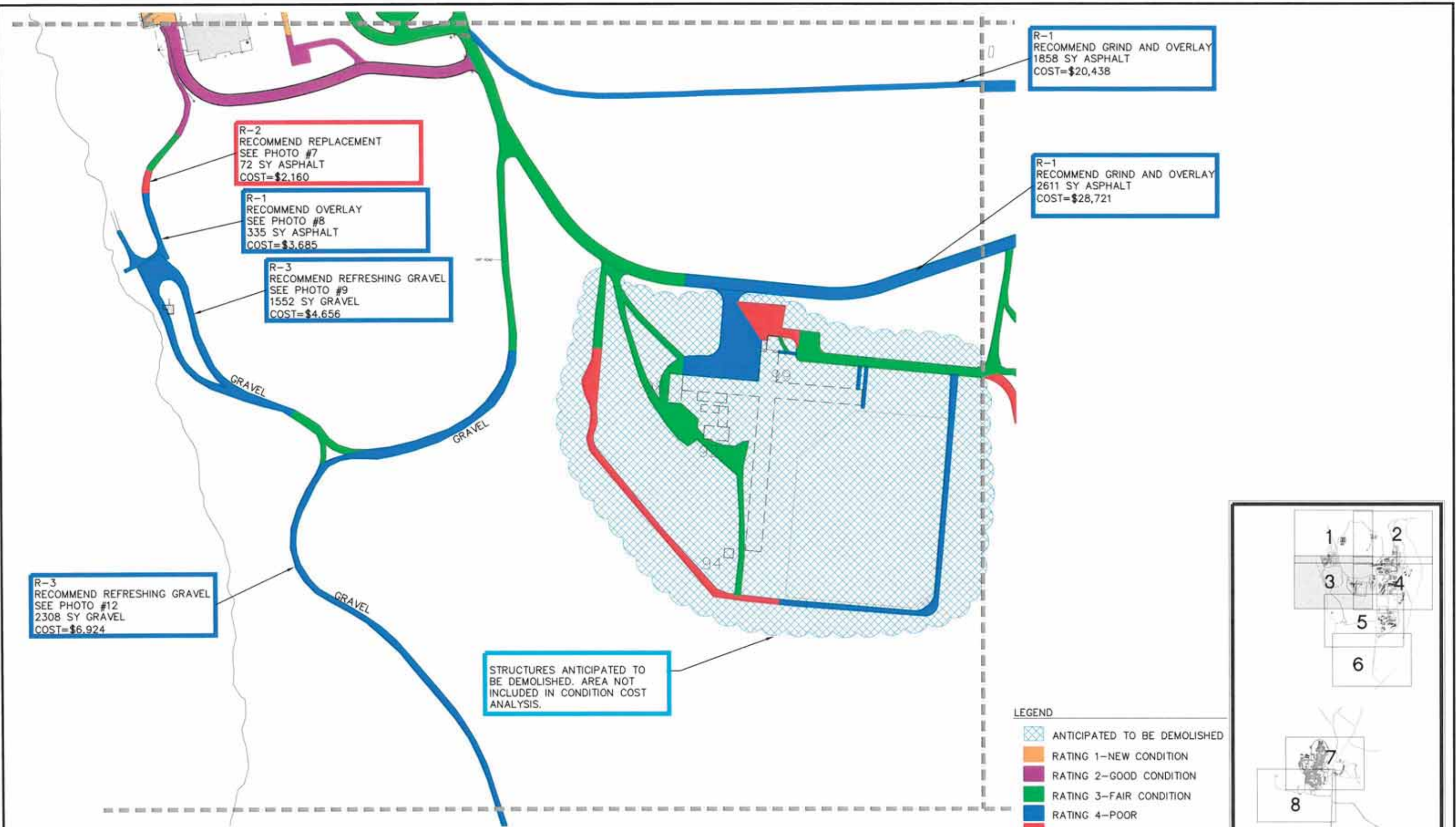


PHOTO #5



PHOTO #6





R-2  
RECOMMEND REPLACEMENT  
SEE PHOTO #7  
72 SY ASPHALT  
COST=\$2,160

R-1  
RECOMMEND OVERLAY  
SEE PHOTO #8  
335 SY ASPHALT  
COST=\$3,685

R-3  
RECOMMEND REFRESHING GRAVEL  
SEE PHOTO #9  
1552 SY GRAVEL  
COST=\$4,656

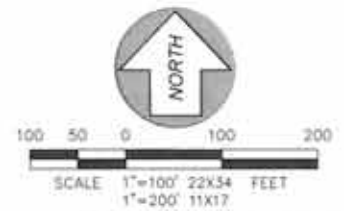
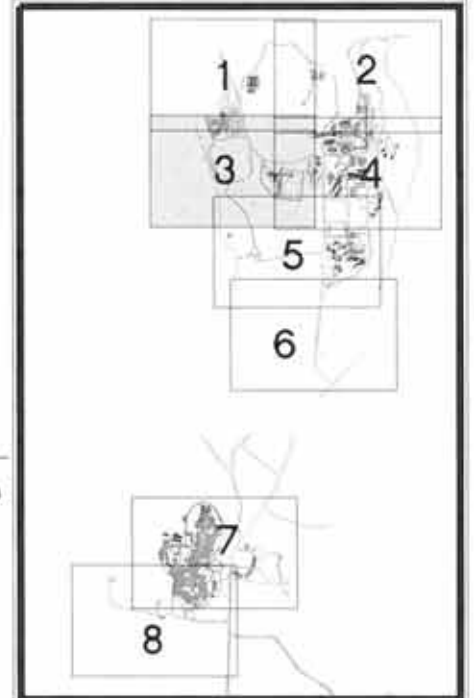
R-3  
RECOMMEND REFRESHING GRAVEL  
SEE PHOTO #12  
2308 SY GRAVEL  
COST=\$6,924

R-1  
RECOMMEND GRIND AND OVERLAY  
1858 SY ASPHALT  
COST=\$20,438

R-1  
RECOMMEND GRIND AND OVERLAY  
2611 SY ASPHALT  
COST=\$28,721

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

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DWN: GHF CK'D: MAA	REVISIONS _____ _____ _____	<b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE 1"=100'	SHEET <b>HS-3</b>
	DATE: _____ DATE: _____		<b>ESH INFRASTRUCTURE MASTER PLAN</b>	HARD SCAPE CAD FILE: _____





PHOTO #7



PHOTO #8



PHOTO #9



PHOTO #10



PHOTO #11

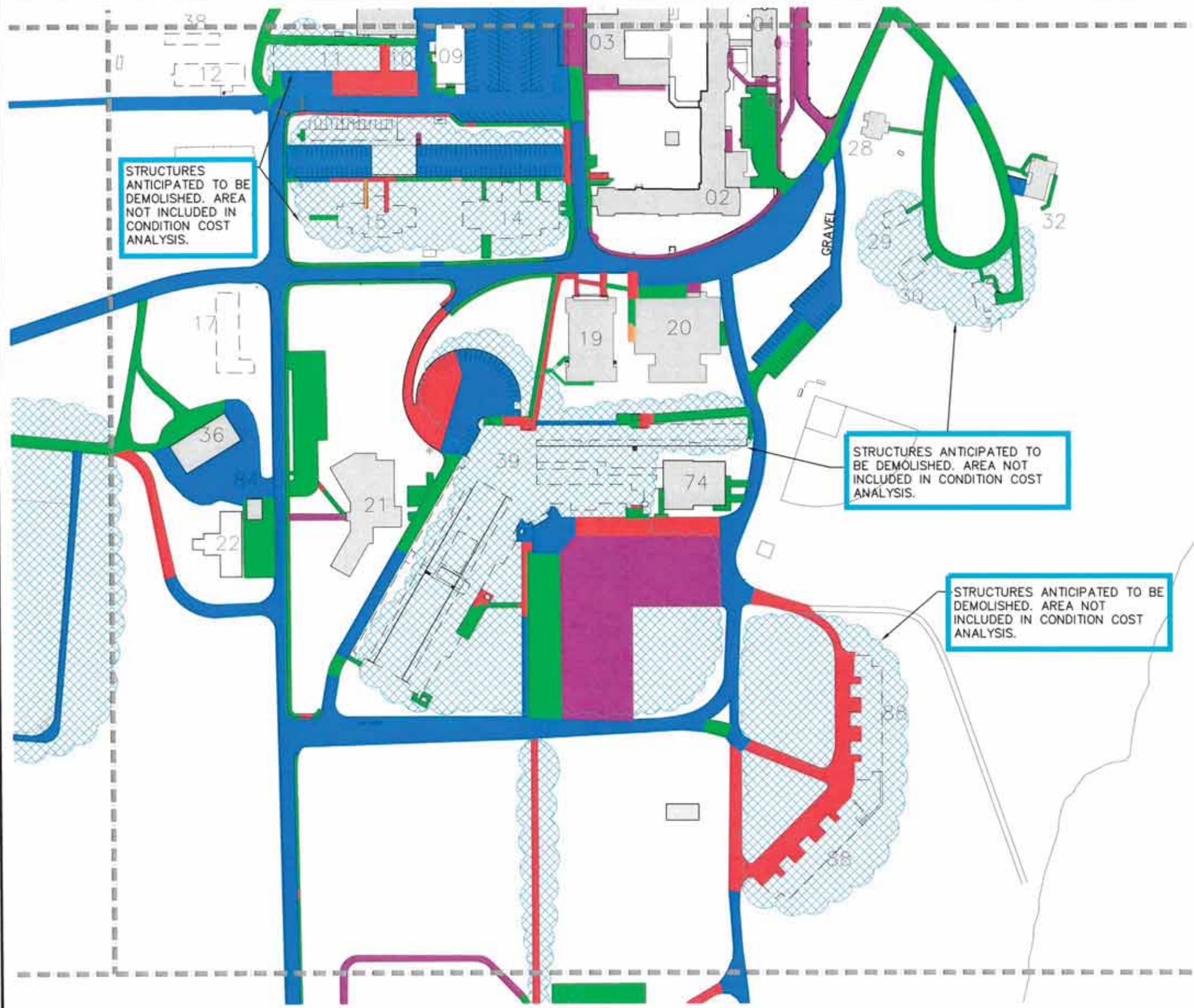


PHOTO #13



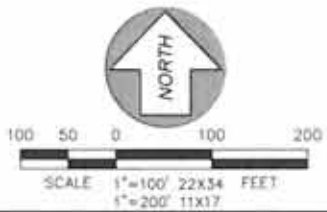
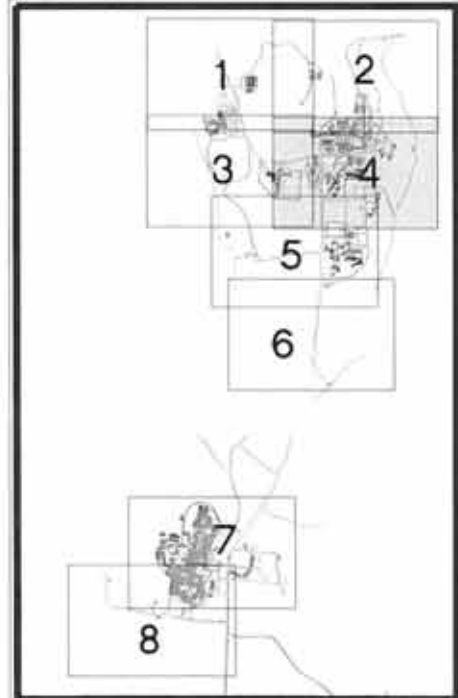
PHOTO #12





HARD SURFACING DEFICIENCIES				
CODE	RECOMMENDATION	AREA	PHOTO #	COST
R-1	GRIND AND OVERLAY	29,228 SY	#14	\$555,332
R-2	REPLACEMENT	2,352 SY	#16	\$70,560
R-3	REFRESHING GRAVEL	1,267 SY		\$3,801
R-4				
R-5				
R-6				
R-7	CRACK SEAL AND GRINDING	67 SY		\$134.00
R-8	REPLACEMENT	753 SY	#15	\$26,355

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REVISIONS		Taylor Engineering, Inc. Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE:	<b>SHEET</b>
			1"=100'	<b>HS-4</b>
DWN: GHF CK'D: MAA		DATE: _____ DATE: _____	<b>ESH INFRASTRUCTURE MASTER PLAN</b> HARD SCAPE	





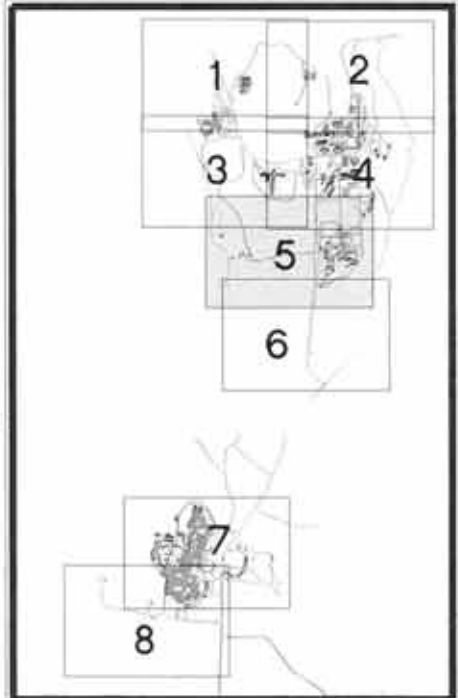
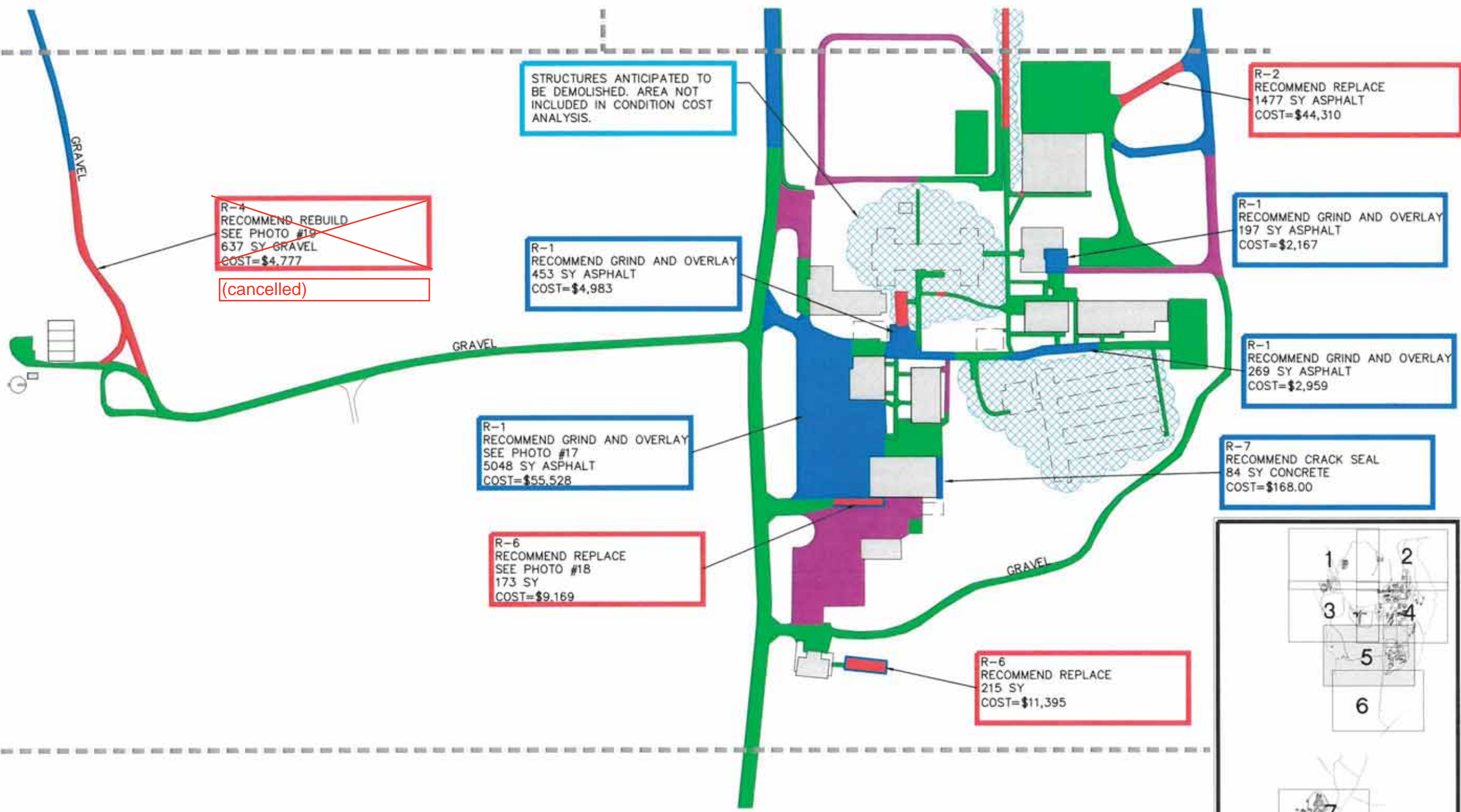
PHOTO #14



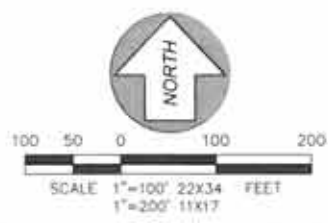
PHOTO #15



PHOTO #16



- LEGEND**
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REVISIONS		Taylor Engineering, Inc. Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE:	SHEET
DWN: SHF	DATE: _____		ESH INFRASTRUCTURE MASTER PLAN	1"=100'
CHK'D: MAA	DATE: _____	HARD SCAPE		



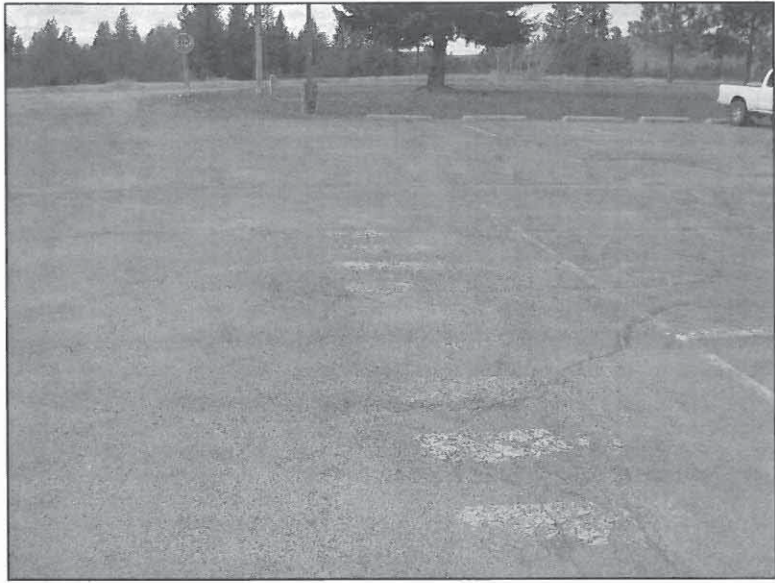


PHOTO #17

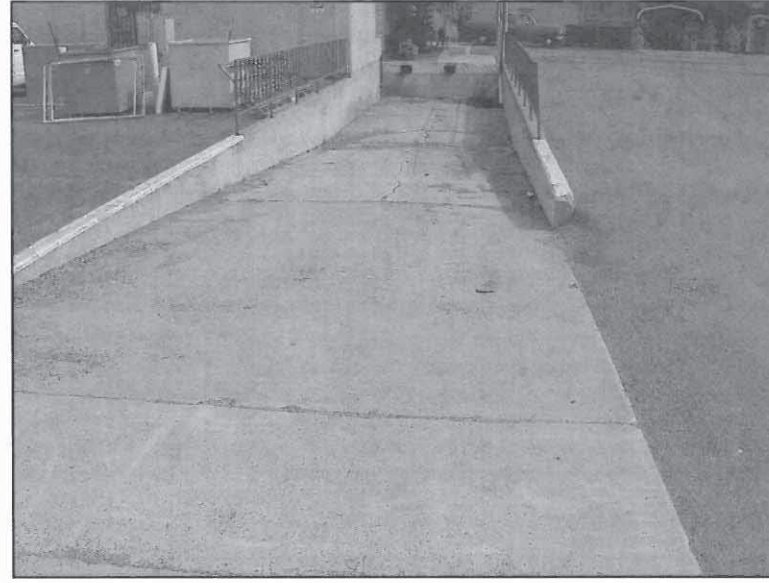
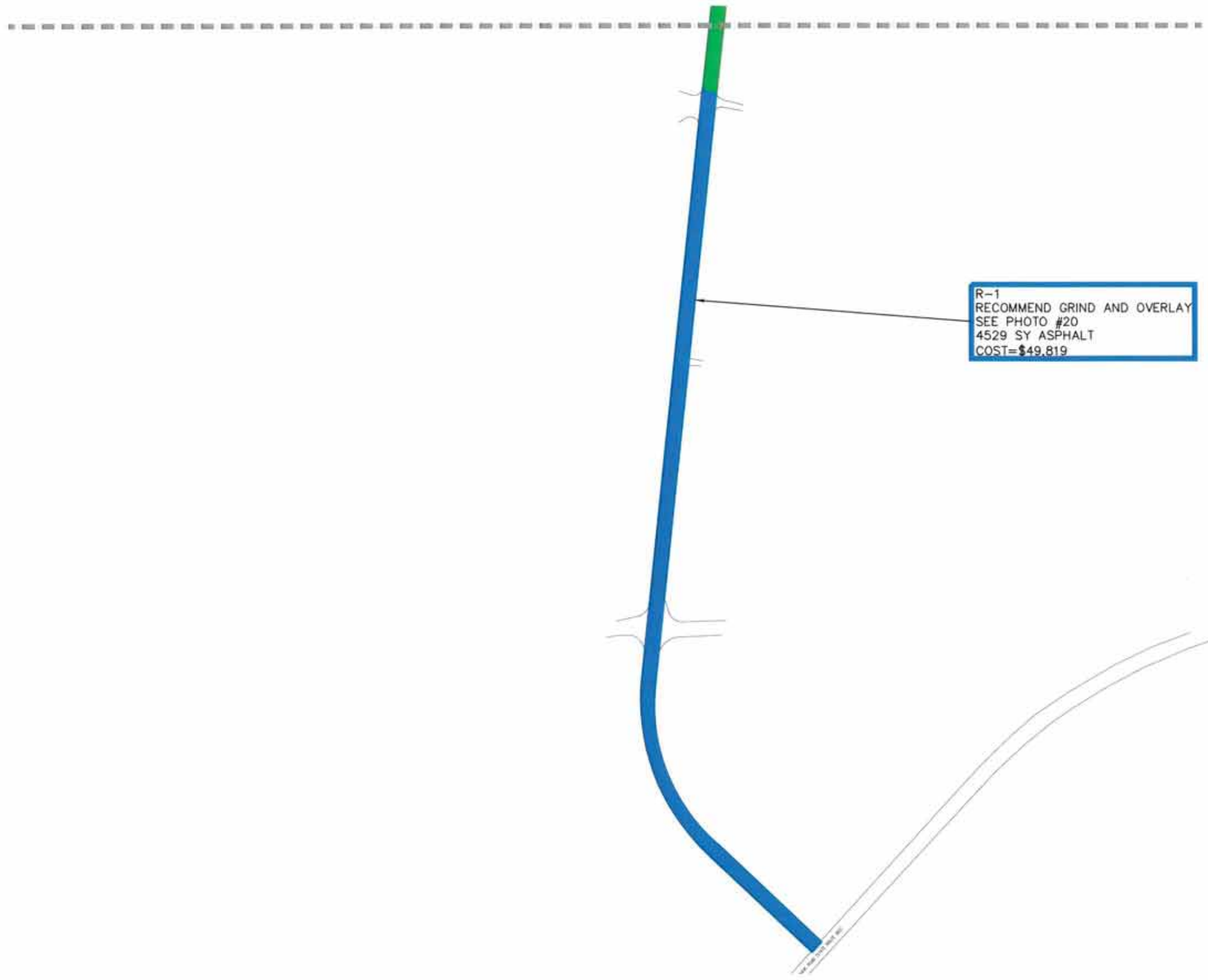


PHOTO #18



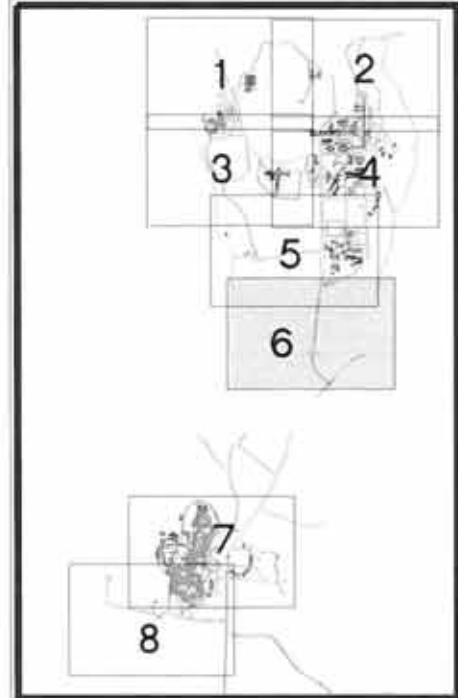
PHOTO #19



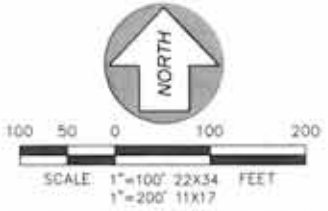


R-1  
RECOMMEND GRIND AND OVERLAY  
SEE PHOTO #20  
4529 SY ASPHALT  
COST=\$49,819

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KEYMAP



	REVISIONS		Taylor Engineering, Inc. Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3321 FAX (509) 328-8224	SCALE:	SHEET
				1"=100'	HS-6
DWN: SH'	DATE: _____	ESH INFRASTRUCTURE MASTER PLAN		HARD SCAPE	
CK'D: MAA	DATE: _____			CARD FILE: _____	








PHOTO #20



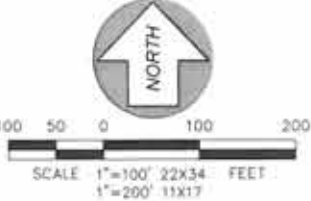
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LAKELAND APT. MAY BE DEMOLISHED IF RESTORED  
 R-1 578 SY=\$10,982  
 R-2 4,206 SY=\$126,180  
 R-8 518 SY=\$18,130

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HARD SURFACING DEFICIENCIES				
CODE	RECOMMENDATION	AREA	PHOTO #	COST
R-1	GRIND AND OVERLAY	10,076 SY	24	\$191,444
R-2	REPLACE	5,125 SY	23	\$153,750
R-3				
R-4				
R-5				
R-6				
R-7	CRACK SEAL AND GRINDING	760 SY		\$1,520
R-8	REPLACE	1308 SY	21 & 22	\$45,780



REVISIONS		 <b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 106 Winston Ave. Spokane, Washington 99201 (509) 328-3374 FAX (509) 328-8224	SCALE: 1"=100'	SHEET <b>HS-7</b>
DWN: GHF CK'D: MAX	DATE: _____ DATE: _____		ESH INFRASTRUCTURE MASTER PLAN	HARD SCAPE



PHOTO #21



PHOTO #22



PHOTO #23



PHOTO #24





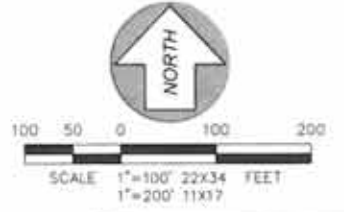
LAKELAND APT. MAY BE DEMOLISHED IF RESTORED  
SEE SHEET HS-7 FOR  
HARD SURFACING  
CONDITION QUANTITIES  
AND COST

STRUCTURES ANTICIPATED TO BE DEMOLISHED.  
AREA NOT INCLUDED IN CONDITION COST  
ANALYSIS.

- LEGEND**
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HARD SURFACING DEFICIENCIES				
CODE	RECOMMENDATION	AREA	PHOTO #	COST
R-1	GRIND AND OVERLAY	7,330 SY	27	\$80,630
R-2	REPLACE	538 SY	28	\$16,140
R-3				
R-4				
R-5				
R-6	REPLACE	289 SY	25	\$15,317
R-7	CRACK SEAL AND GRINDING	689 SY		\$1,378
R-8	REPLACE	1,011 SY	26	\$35,385



DWN: <u>OHF</u> CK'D: <u>MAA</u>	REVISIONS _____ _____ _____	<b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 100 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	SHEET <b>HS-8</b>
	DATE: _____ DATE: _____		<b>ESH INFRASTRUCTURE MASTER PLAN</b>	HARD SCAPE



PHOTO #25



PHOTO #26

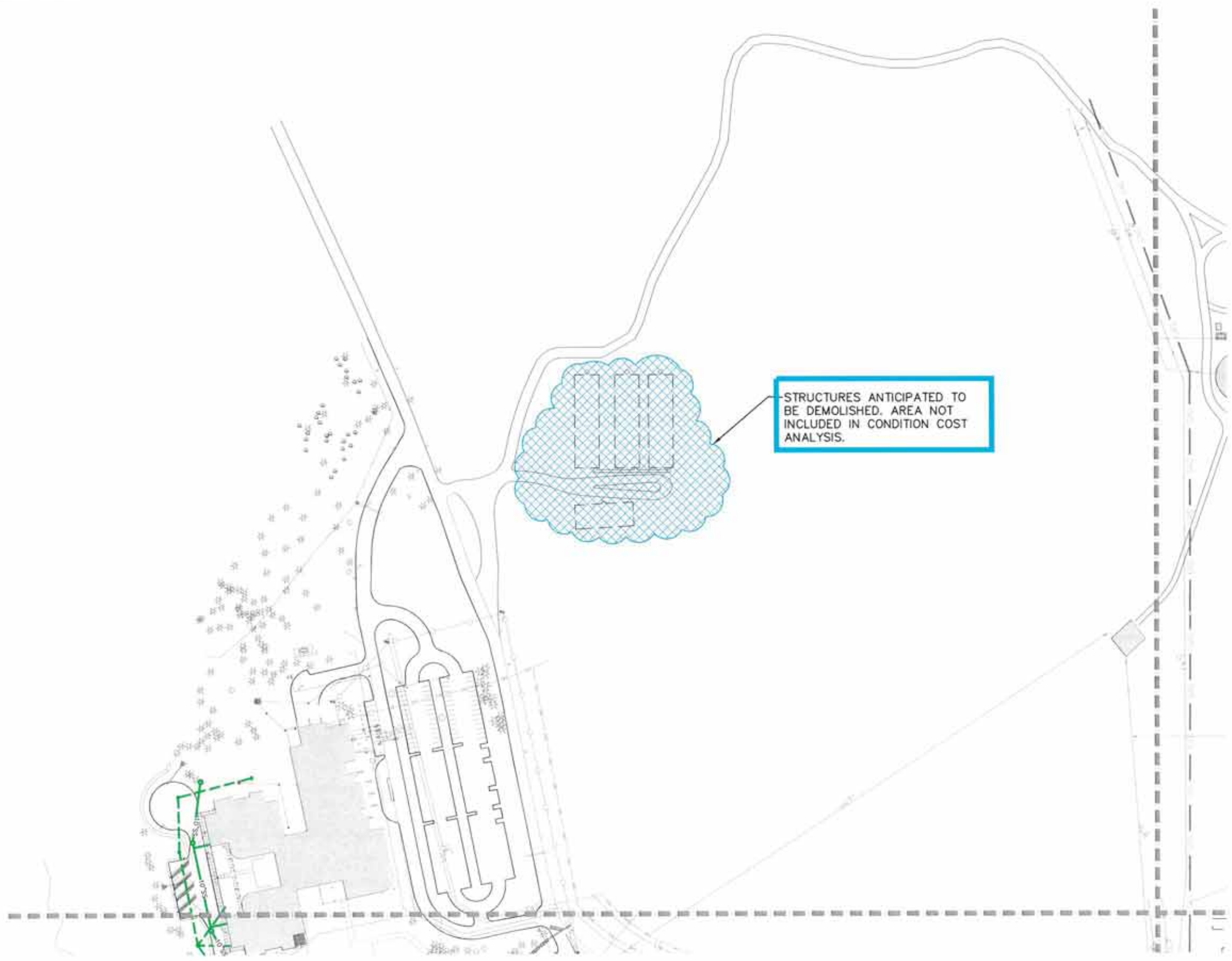


PHOTO #27









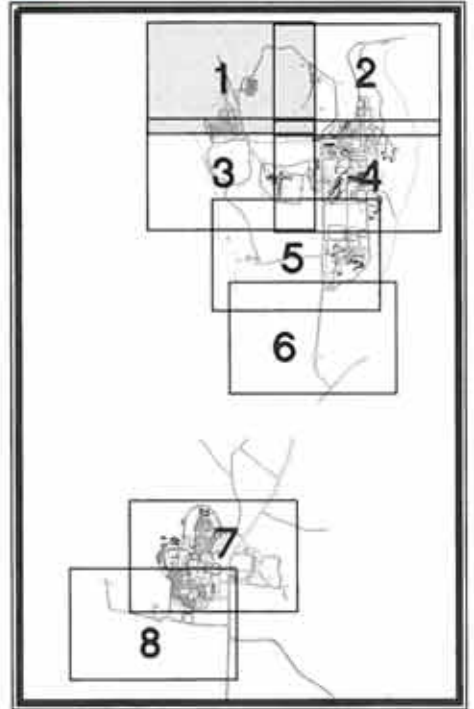
PHOTO #28



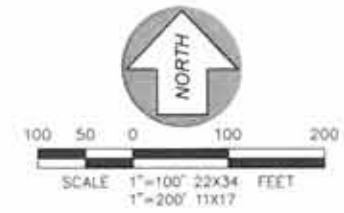


**LEGEND**

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**KEYMAP**



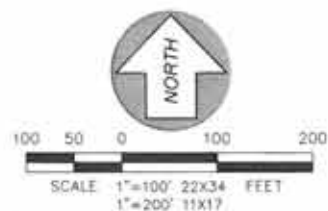
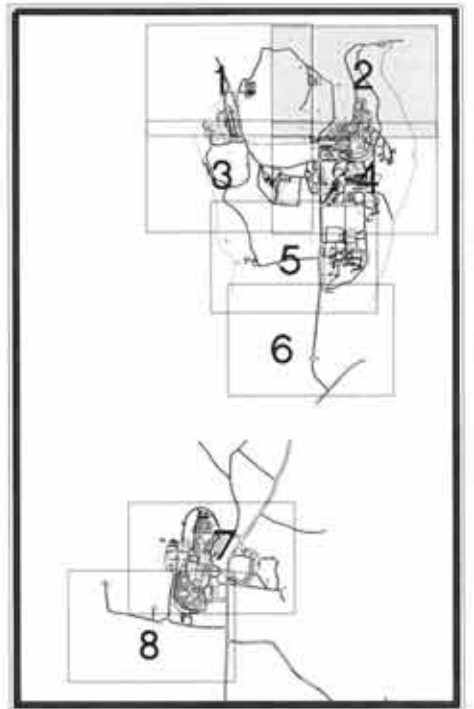
REVISIONS	

 <b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 100 Mission Ave. Spokane, Washington 99201 (509) 328-5371 FAX (509) 328-8224	SCALE: 1"=100'	<b>SHEET</b> <b>SA-1</b>
	<b>ESH INFRASTRUCTURE MASTER PLAN</b> SANITARY SEWER <small>CADD FILE: .....</small>	

DWN: GHP	DATE: _____
CK'D: MAA	DATE: _____



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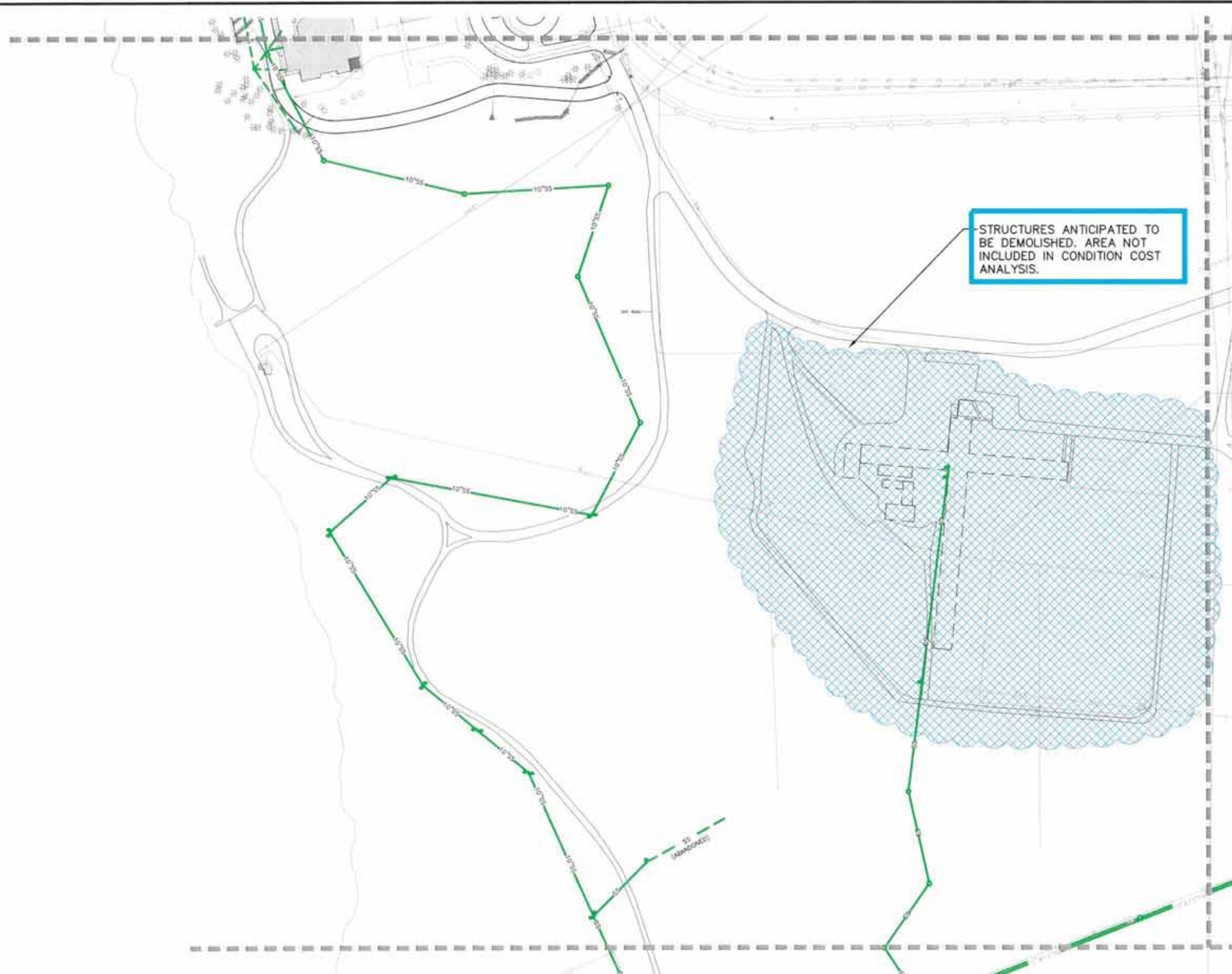


REVISIONS	

 <b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	<b>SHEET</b> <b>SA-2</b>
	<b>ESH INFRASTRUCTURE MASTER PLAN</b> SANITARY SEWER <small>COORD FILE: _____</small>	







DWN: GHF	DATE: _____
CK'D: MAA	DATE: _____

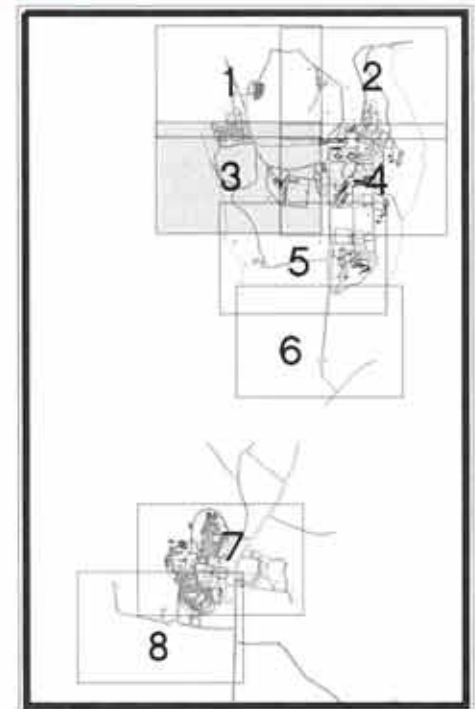




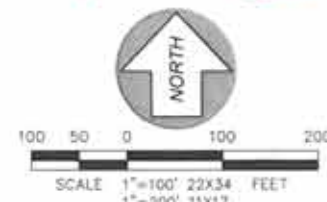
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

**LEGEND**

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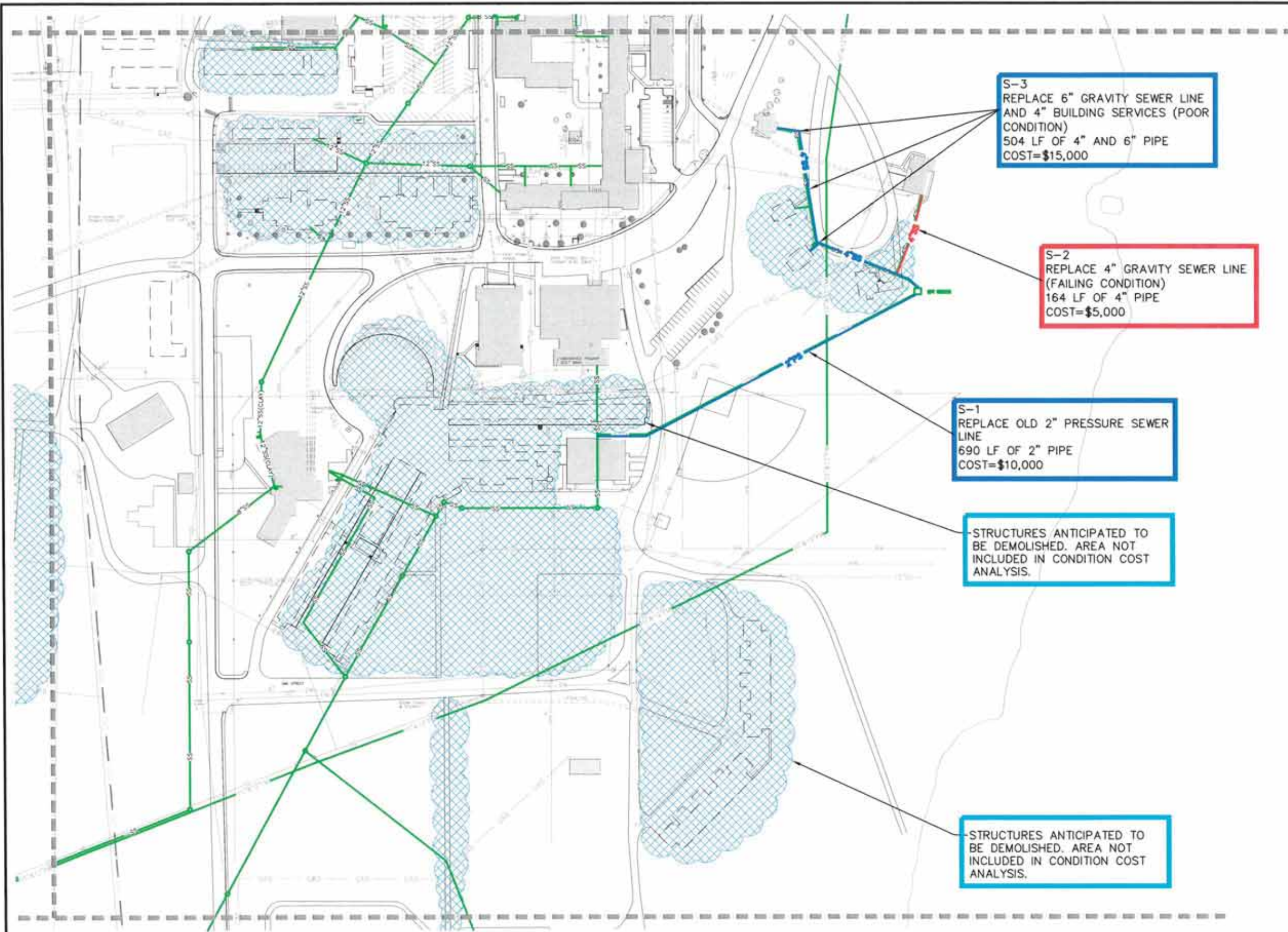


KEYMAP

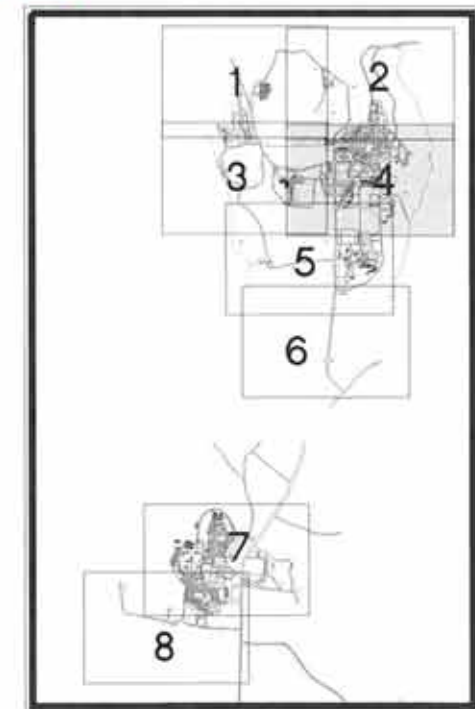


DWN: GHF CK'D: MAA	REVISIONS	<b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 100 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SHEET <b>SA-3</b>
	DATE: _____ DATE: _____		SCALE: 1"=100'
<b>ESH INFRASTRUCTURE MASTER PLAN</b>			

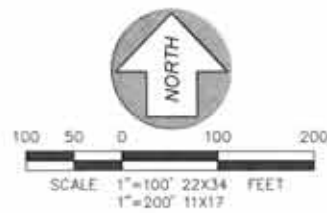




- LEGEND**
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KEYMAP



DWN: <u>grf</u> CK'D: <u>MAA</u>	REVISIONS _____ _____ _____	<b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 105 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	SHEET <b>SA-4</b>
	DATE: _____ DATE: _____		<b>ESH INFRASTRUCTURE          MASTER PLAN</b>	SANITARY SEWER ESD: FILE: _____







S-11  
 BURY ~200 LF 4" PVC PRESSURE  
 RETURN LINE FROM SECONDARY  
 OVERFLOW BASIN.  
 COST=\$500.00

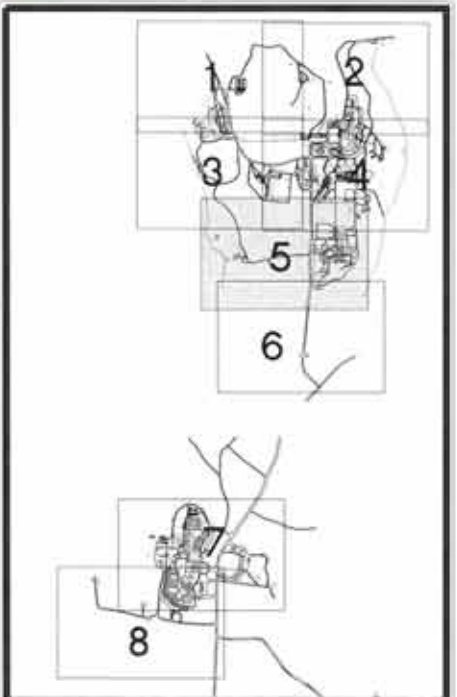
S-8  
 SAND-BLAST AND RE-COAT EXPOSED  
 STEEL TANKS AND IRON PIPING ON  
 PRIMARY AND SECONDARY OVERFLOW  
 BASINS.  
 COST=\$5,000

S-9  
 REPAIR AND REPLACE MISSING  
 BITUMINOUS SHINGLE ROOFING TILES  
 ON GAZEBO ROOF  
 COST=\$400.00

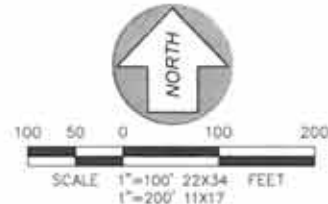
S-10  
 REPAIR 60 LF FENCE AROUND  
 WASTEWATER CONVEYANCE AND  
 OVERFLOW FACILITY AND RESET FENCE  
 POSTS AT 2 ACCESS GATES.  
 COST=\$2,000

STRUCTURES ANTICIPATED TO  
 BE DEMOLISHED. AREA NOT  
 INCLUDED IN CONDITION COST  
 ANALYSIS.

- LEGEND
-  ANTICIPATED TO BE DEMOLISHED
  -  RATING 1-NEW CONDITION
  -  RATING 2-GOOD CONDITION
  -  RATING 3-FAIR CONDITION
  -  RATING 4-POOR
  -  RATING 5-FAILING



KEYMAP



DW: GHF CK: MAA	REVISIONS   	 Taylor Engineering, Inc. Civil Design and Land Planning W. 100 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	SHEET SA-5
	DATE: _____ DATE: _____		ESH INFRASTRUCTURE MASTER PLAN	SANITARY SEWER DATE P.L.: _____






STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

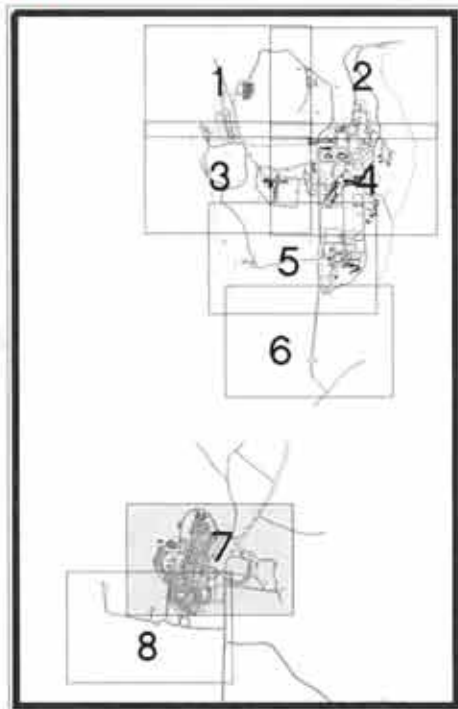
S-5  
INSTALL NEW 6" GRAVITY SEWER LINE (POOR CONDITION) AROUND AUTO SHOP  
150 LF OF 6" PIPE  
COST=\$4,500

S-4  
INSTALL NEW 4" GRAVITY SEWER LINE (FAILING CONDITION)  
XXX LF OF 4" PIPE  
COST=\$XXXX

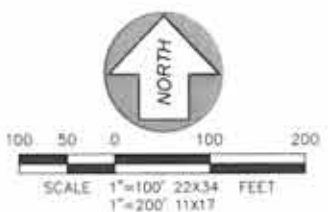
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

- LEGEND
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  -  RATING 1-NEW CONDITION
  -  RATING 2-GOOD CONDITION
  -  RATING 3-FAIR CONDITION
  -  RATING 4-POOR
  -  RATING 5-FAILING



KEYMAP



DWN: GHF CK'D: MAA	REVISIONS _____ _____ _____	<b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 100 Mission Ave. Spokane, Washington 99201 (509) 328-3374 FAX (509) 328-8224	SCALE: 1"=100'	SHEET <b>SA-7</b>
	DATE: _____ DATE: _____		<b>ESH INFRASTRUCTURE          MASTER PLAN</b>	SANITARY SEWER GRID FILE: _____

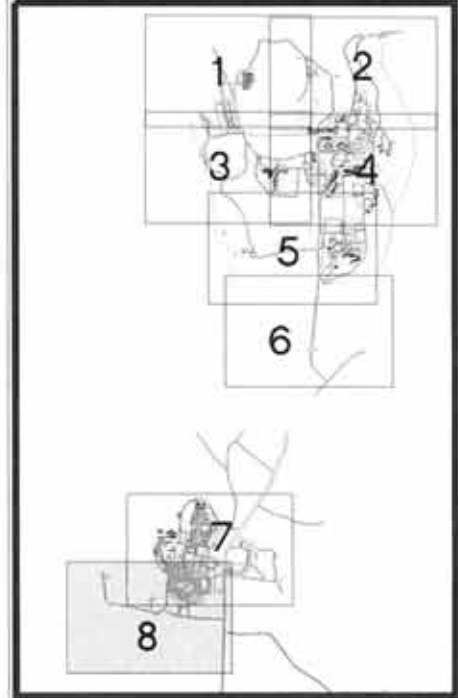


S-5  
 INSTALL NEW 6" GRAVITY SEWER  
 LINE (FAILING CONDITION)  
 125 LF OF 6" PIPE (12' DEEP)  
 COST=\$10,000

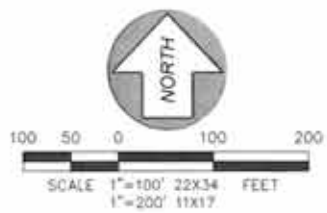
S-6  
 INSTALL 3 NEW SEGMENTS OF 6"  
 GRAVITY SEWER LINE (FAILING  
 CONDITION)  
 170 LF OF 6" PIPE  
 COST=\$10,000

STRUCTURES ANTICIPATED TO  
 BE DEMOLISHED. AREA NOT  
 INCLUDED IN CONDITION COST  
 ANALYSIS.

- LEGEND
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  - RATING 3-FAIR CONDITION
  - RATING 4-POOR
  - RATING 5-FAILING



KEYMAP



DWN: GHF CK'D: MAA	REVISIONS   	Taylor Engineering, Inc. Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	SHEET SA-8
	DATE: _____ DATE: _____		ESH INFRASTRUCTURE MASTER PLAN	SANITARY SEWER CADD FILE: _____



W-1  
PUMP HOUSE - WELL #1  
RECOMMENDATION-REPLACE PUMP  
HOUSE STRUCTURE  
SEE PHOTO-#5 AND #6  
COST=\$741,000

VALVE ON 16" PIPE  
NORMALLY OPERATING  
POSITION IS CLOSED

W-4  
PUMP HOUSE - WELL #2  
RECOMMENDATION-REPLACE  
PUMP HOUSE STRUCTURE  
SEE PHOTO-#7-#9  
COST=\$712,000

W-5  
PUMP HOUSE - WELL #2  
RECOMMENDATION-REPLACE WELL  
COST=\$161,000







W-2  
PUMP HOUSE - BOOSTER PUMP  
RECOMMENDATION-ABANDON  
SEE PHOTO-#1-#4  
COST=\$167,000  
OR  
W-3  
PUMP HOUSE - BOOSTER PUMP  
RECOMMENDATION-REPLACE PUMP  
COST=\$243,000

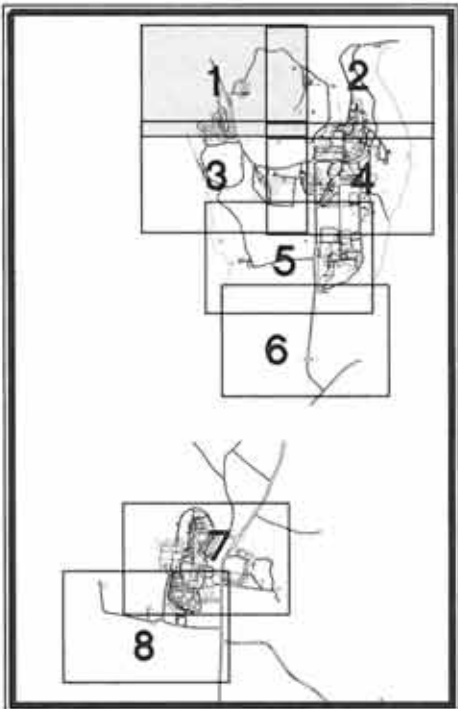
**WATER PUMP STATIONS AND BOOSTER PUMP**  
NOT TO SCALE

TO PUMP HOUSE-BOOSTER PUMP  
SEE WATER PUMP STATION AND  
BOOSTER PUMP DETAIL TO THE  
LEFT

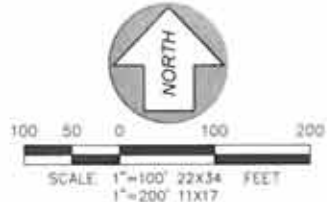
TO EASTERN  
STATE HOSPITAL  
RESERVOIR

STRUCTURES ANTICIPATED TO  
BE DEMOLISHED. AREA NOT  
INCLUDED IN CONDITION COST  
ANALYSIS.

- LEGEND**
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**KEYMAP**



REVISIONS    	 <b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	SHEET <b>WA-1</b>
		ESH INFRASTRUCTURE MASTER PLAN	POTABLE WATER
DWN: SHF CK'D: MAB	DATE: _____ DATE: _____	SAID FILE: _____	





PHOTO #1

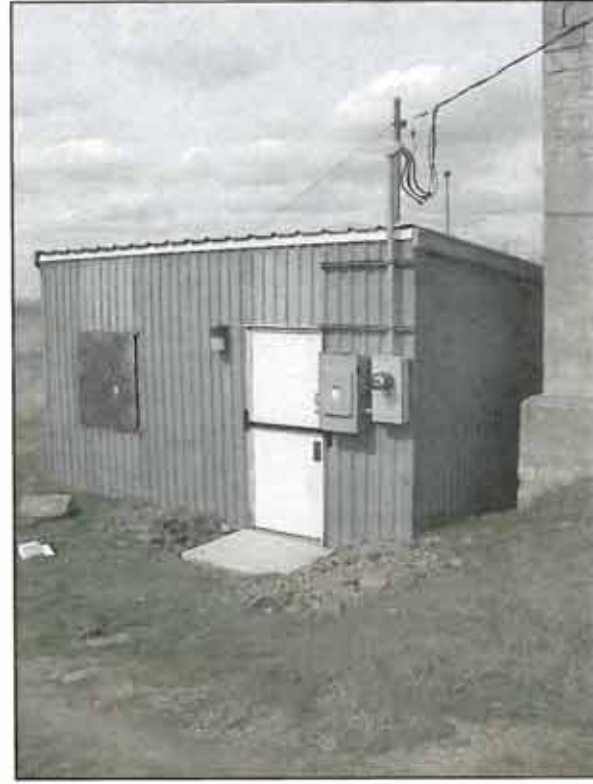


PHOTO #2



PHOTO #3

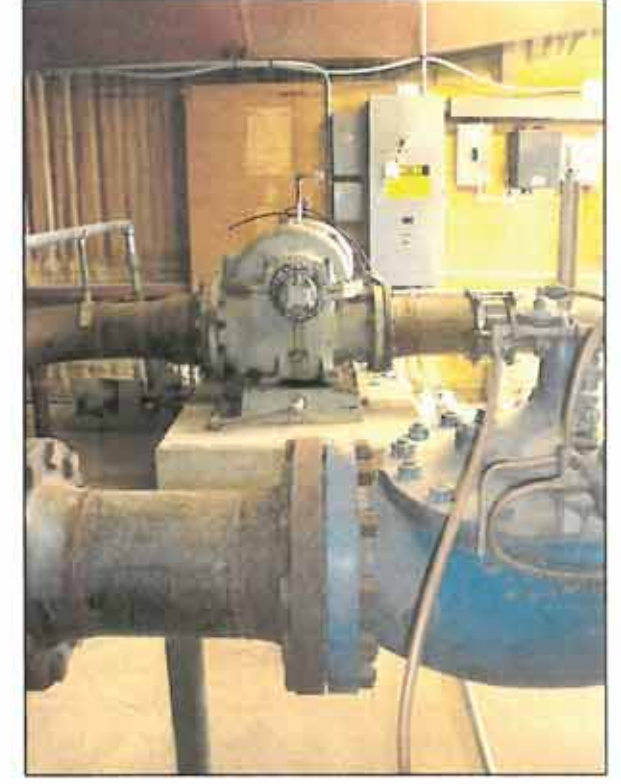


PHOTO #4



PHOTO #5



PHOTO #6



PHOTO #7

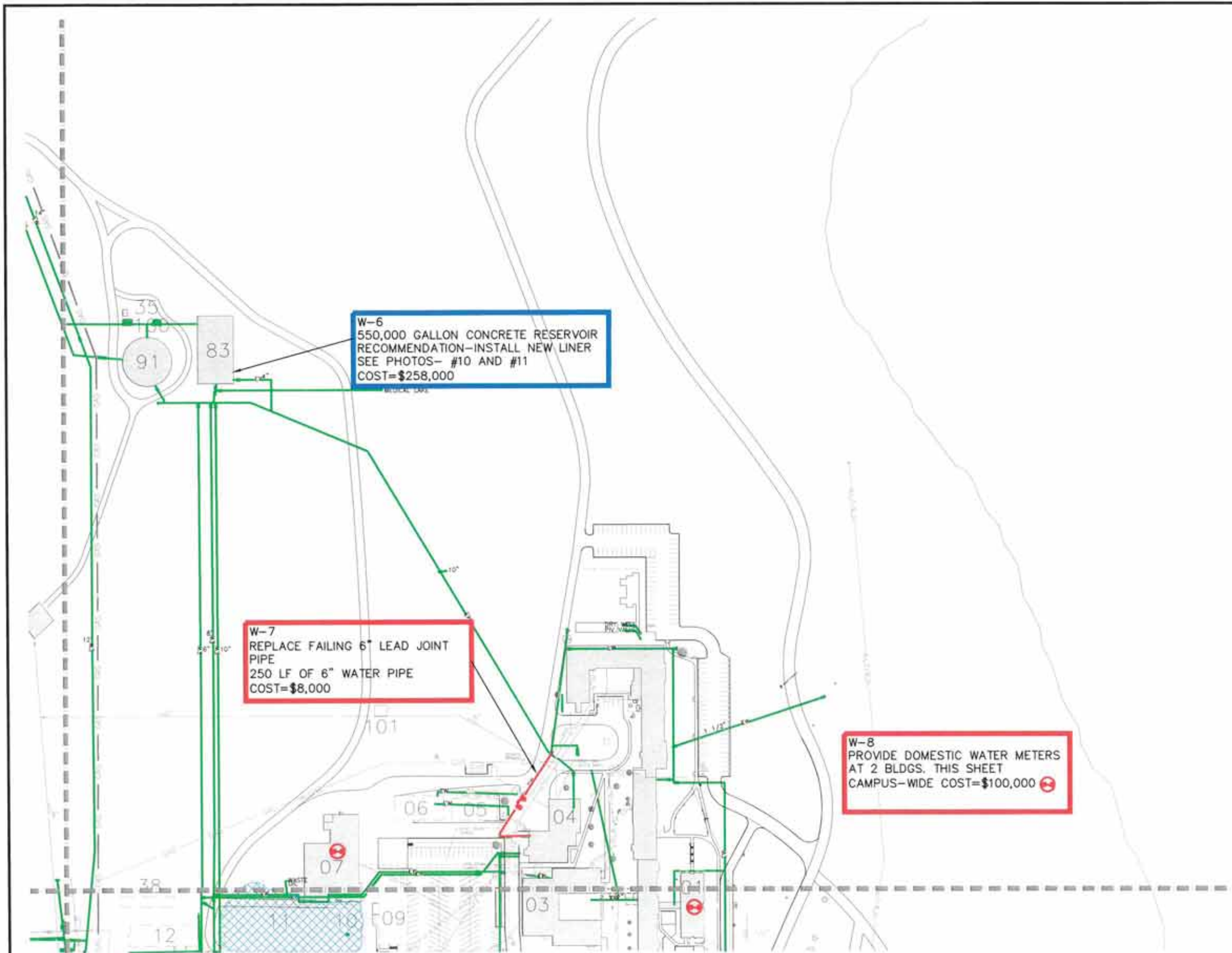


PHOTO #8





PHOTO #9

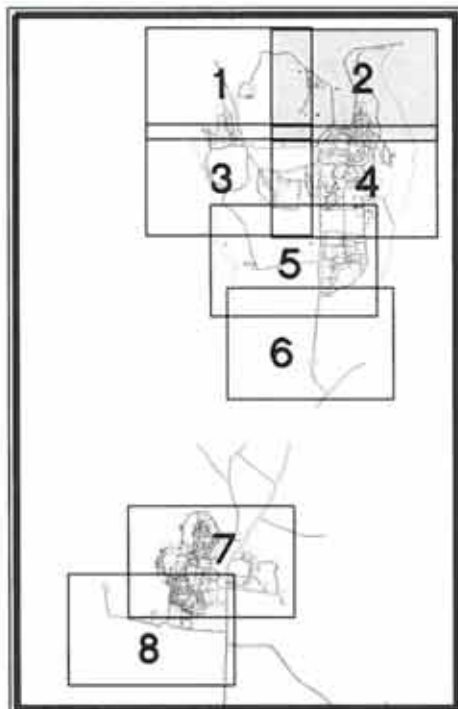


**W-6**  
 550,000 GALLON CONCRETE RESERVOIR  
 RECOMMENDATION-INSTALL NEW LINER  
 SEE PHOTOS- #10 AND #11  
 COST=\$258,000

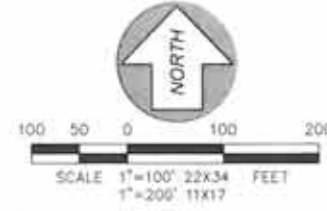
**W-7**  
 REPLACE FAILING 6" LEAD JOINT  
 PIPE  
 250 LF OF 6" WATER PIPE  
 COST=\$8,000

**W-8**  
 PROVIDE DOMESTIC WATER METERS  
 AT 2 BLDGS. THIS SHEET  
 CAMPUS-WIDE COST=\$100,000

- LEGEND**
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  - RATING 5-FAILING



**KEYMAP**



REVISIONS   	Taylor Engineering, Inc. Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3171 FAX (509) 328-R224	SCALE:	SHEET
		1"=100'	WA-2
DWN: DIF CK'D: MAA	DATE: _____ DATE: _____	ESH INFRASTRUCTURE MASTER PLAN	
		POTABLE WATER	



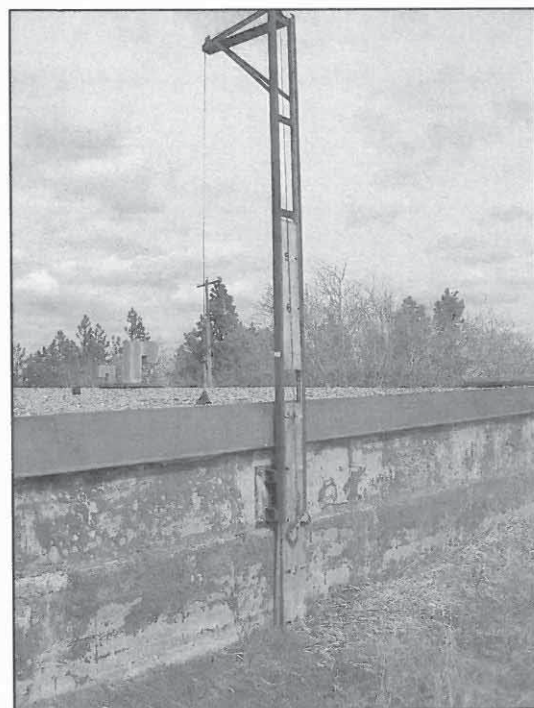


PHOTO #10

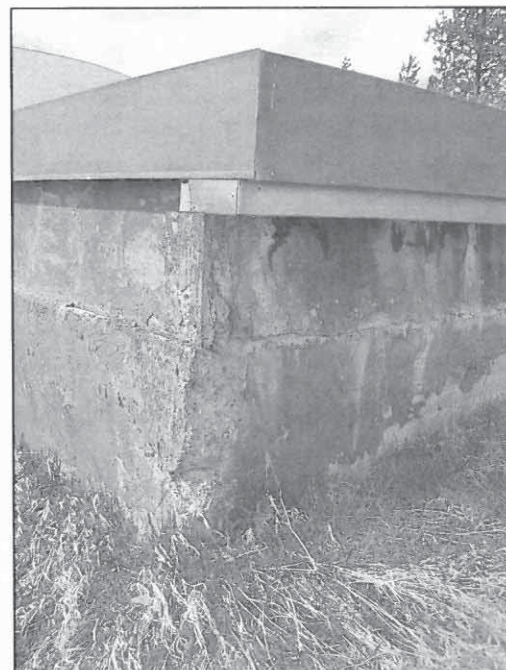






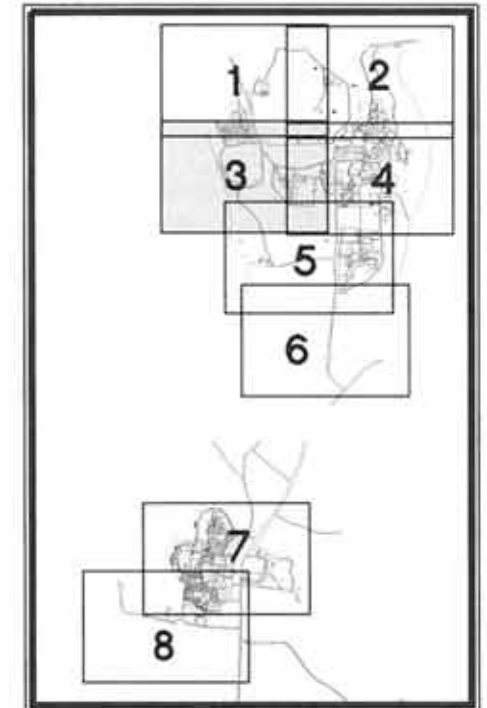


PHOTO #11

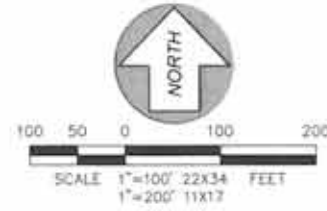


LEGEND

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-  RATING 1—NEW CONDITION
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-  RATING 3—FAIR CONDITION
-  RATING 4—POOR
-  RATING 5—FAILING

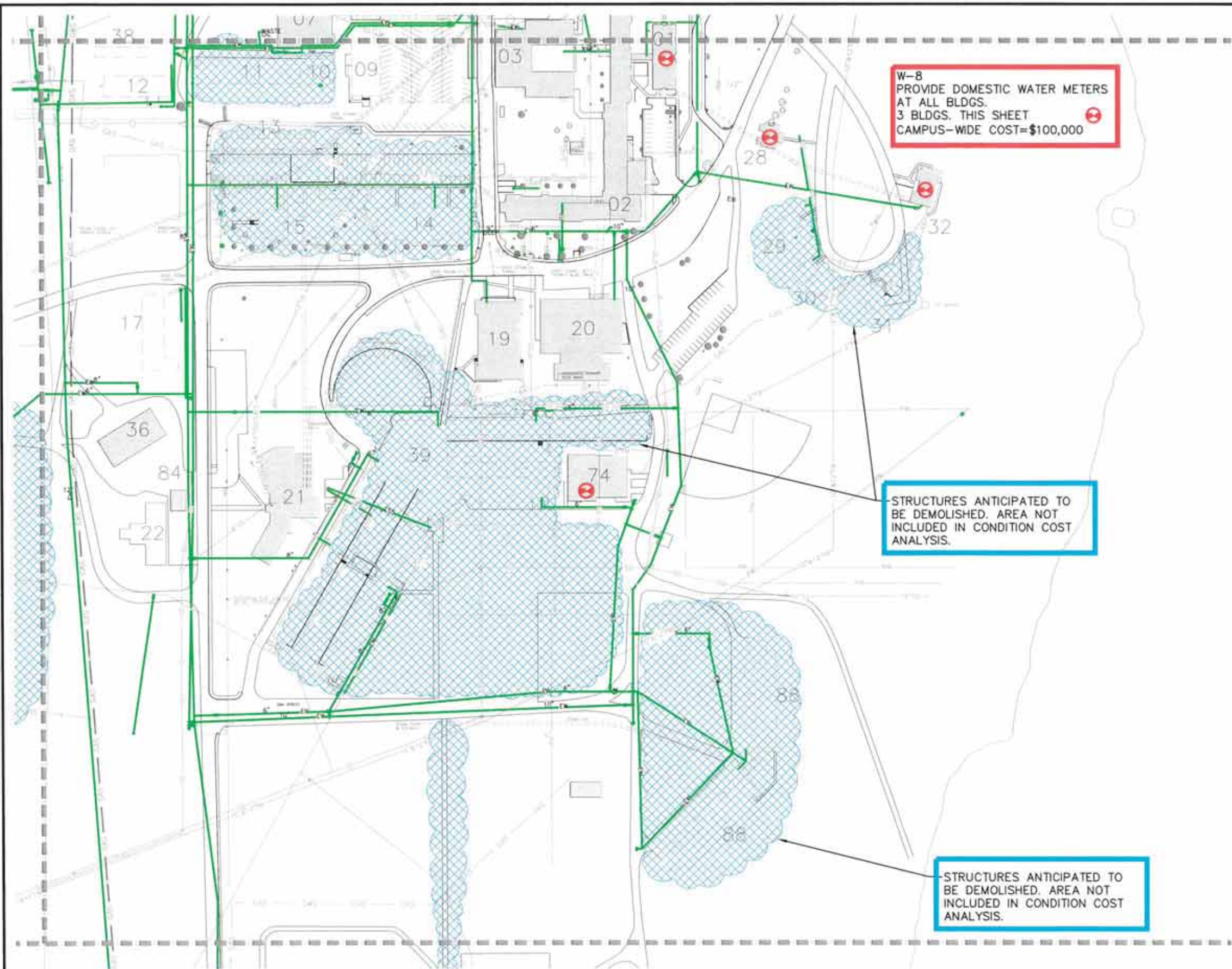


KEYMAP



REVISIONS    DWG: GHF CK'D: MAA	DATE: _____ DATE: _____	 <b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-0271 FAX (509) 328-8224	SCALE: 1"=100'	SHEET <b>WA-3</b>
			ESH INFRASTRUCTURE MASTER PLAN	POTABLE WATER CADW FILE: _____



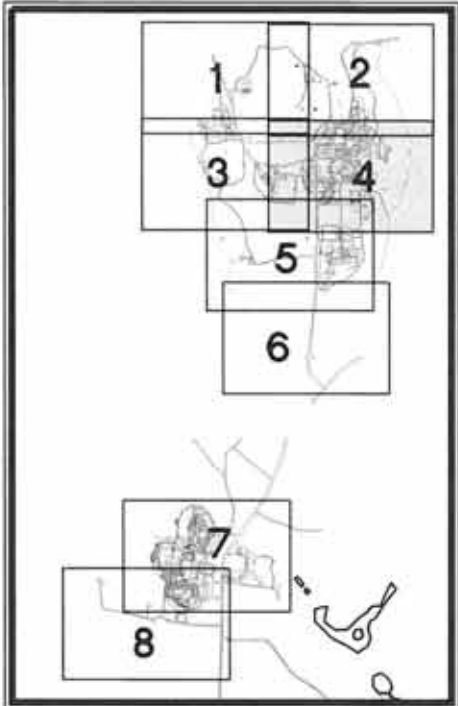


W-8  
 PROVIDE DOMESTIC WATER METERS  
 AT ALL BLDGS.  
 3 BLDGS. THIS SHEET  
 CAMPUS-WIDE COST=\$100,000

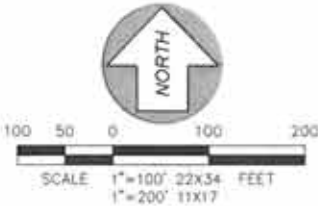
STRUCTURES ANTICIPATED TO  
 BE DEMOLISHED. AREA NOT  
 INCLUDED IN CONDITION COST  
 ANALYSIS.

STRUCTURES ANTICIPATED TO  
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  - RATING 4-POOR
  - RATING 5-FAILING

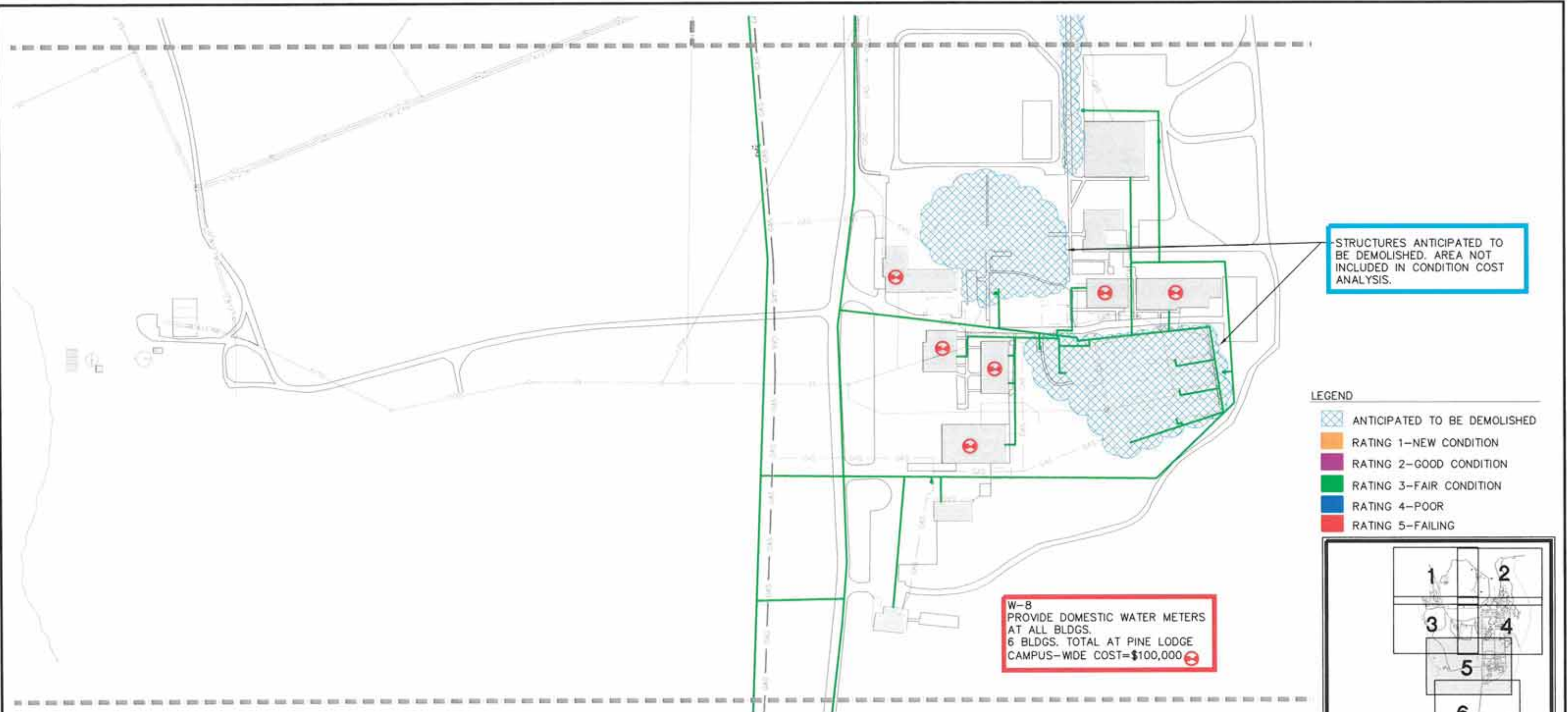


KEYMAP

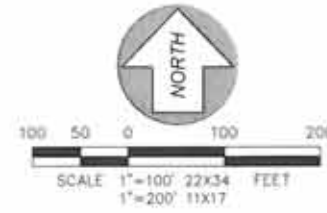
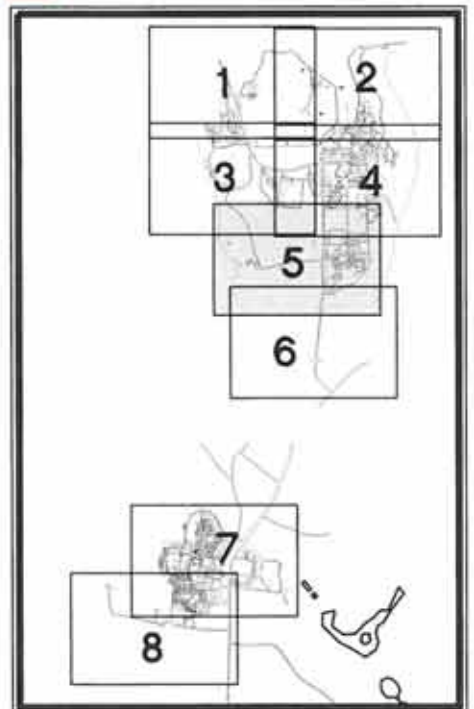


REVISIONS    	Taylor Engineering, Inc. Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	SHEET WA-4
		ESH INFRASTRUCTURE MASTER PLAN	
DWN: Gdf CK'D: MAA	DATE: _____ DATE: _____	GASS FILE: _____	







- LEGEND**
- ANTICIPATED TO BE DEMOLISHED
  - RATING 1-NEW CONDITION
  - RATING 2-GOOD CONDITION
  - RATING 3-FAIR CONDITION
  - RATING 4-POOR
  - RATING 5-FAILING

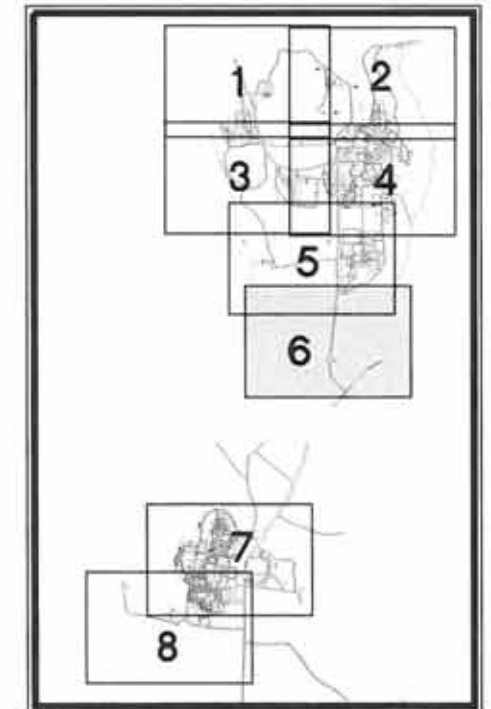


	REVISIONS		<p>Taylor Engineering, Inc. Civil Design and Land Planning W. 100 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224</p>	SCALE: 1"=100'	SHEET WA-5
	D/W: GHF	DATE: _____		ESH INFRASTRUCTURE MASTER PLAN	
	C/K'D: MAA	DATE: _____			CADD FILE: _____

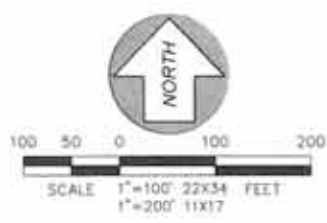




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  -  RATING 3-FAIR CONDITION
  -  RATING 4-POOR
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**KEYMAP**



	REVISIONS		 <b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 100 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE	<i>SHEET</i>
				1"=100'	<b>WA-6</b>
D/W: DLF C/K: MAA			<b>ESH INFRASTRUCTURE MASTER PLAN</b>		POTABLE WATER
DATE: _____ DATE: _____					CADD FILE: _____

W-10  
 REPLACE HOT WATER EXPANSION COUPLINGS IN WALK-THROUGH TUNNELS (COND. 4)  
 ESTIMATED 16 COUPLINGS (ALL OF LAKELAND VILLAGE)  
 COST=\$8,000

W-10  
 REPLACE HOT WATER EXPANSION COUPLINGS IN NON-ACCESSIBLE TUNNELS ON AS-NEEDED BASIS (COND. 3)  
 COST ON CASE-BY-CASE BASIS

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

W-13  
 REPLACE ± 90 LF OF LEAKY 12" WATER LINE, COST=\$4,000  
 INSTALL FLOW CONTROL VALVE  
 COST=\$12,000






W-14  
 RELOCATE 6" WATER LINE FROM UNDER AUTO SHOP  
 120 LF OF 6" PIPE  
 COST=\$5,000

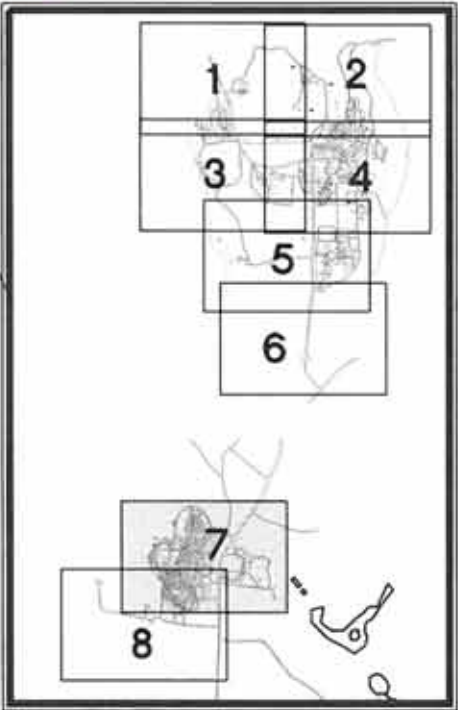
W-8  
 PROVIDE DOMESTIC WATER METERS AT ALL BLDGS.  
 40 BLDGS. TOTAL AT LV  
 CAMPUS-WIDE COST=\$100,000

W-12  
 ADD 8" WATER LINE LOOP AND HYDRANT  
 620 LF 8" WATER & HYDRANT  
 COST=\$28,000

W-9  
 REPLACE HOT WATER MAKE-UP HEATERS IN COTTAGES  
 POOR CONDITION  
 SEE PHOTO #  
 12 LOCATIONS  
 COST=\$500/HEATER = \$6,000

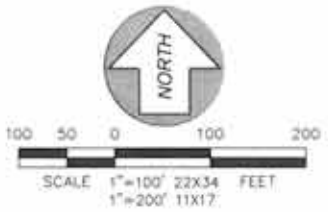
W-11  
 INSTALL PRESSURE REDUCING VALVE ON 8" LINE  
 COST=\$12,000

- LEGEND
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KEYMAP

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.



DWN: GHF CK'D: MAA	REVISIONS   	Taylor Engineering, Inc. Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	SHEET WA-7
	DATE: _____ DATE: _____		ESH INFRASTRUCTURE MASTER PLAN	POTABLE WATER



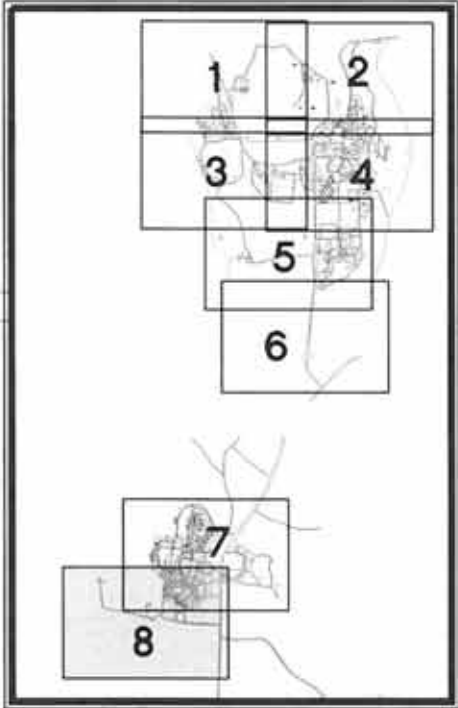
W-10 REPLACE HOT WATER EXPANSION COUPLINGS IN NON-ACCESSIBLE TUNNELS ON AS-NEEDED BASIS (COND. 3)  
COST ON CASE-BY-CASE BASIS

W-15 ADD 8" WATER LINE LOOP ACROSS HIGHWAY TO APARTMENTS  
610 LF OF 8" WATER PIPE  
COST=\$29,000

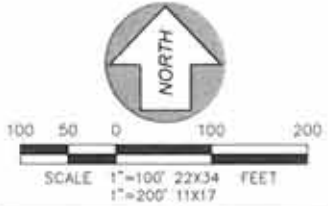
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

W-10 REPLACE HOT WATER EXPANSION COUPLINGS IN WALK-THROUGH TUNNELS (COND. 4)  
ESTIMATED 16 COUPLINGS (ALL OF LAKELAND VILLAGE)  
COST=\$8,000

W-8 PROVIDE DOMESTIC WATER METERS AT ALL BLDGS.  
40 BLDGS. TOTAL AT LV  
CAMPUS-WIDE COST=\$100,000









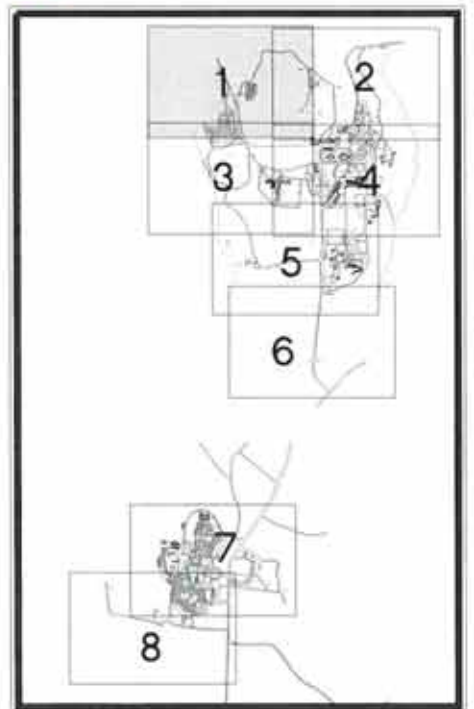
- LEGEND**
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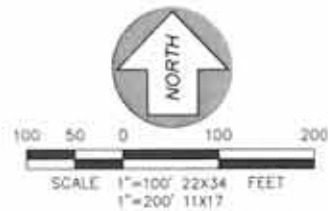
DW: GHF CK: MAA	REVISIONS   	<b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 325-3371 FAX (509) 325-8224	SCALE: 1"=100'	SHEET <b>WA-8</b>
	DATE: _____ DATE: _____		<b>ESH INFRASTRUCTURE MASTER PLAN</b>	POTABLE WATER



- LEGEND**
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KEYMAP









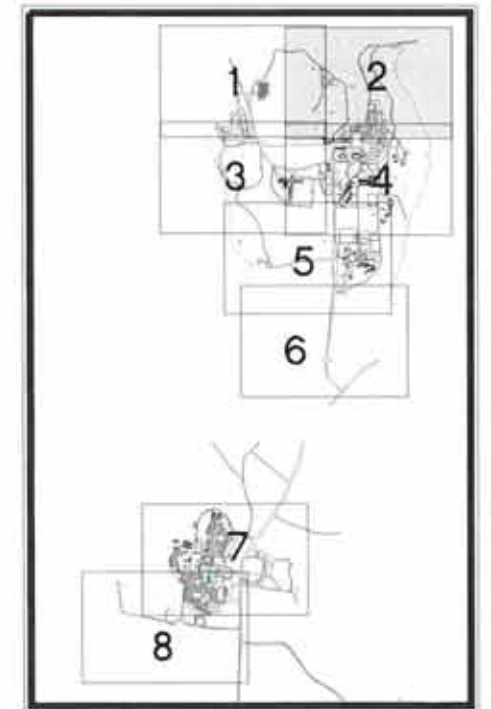
	REVISIONS		 Taylor Engineering, Inc. Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	SHEET SD-1
	DWN: Gmf CHK'D: MAA	DATE: _____ DATE: _____		ESH INFRASTRUCTURE MASTER PLAN	STORM WATER



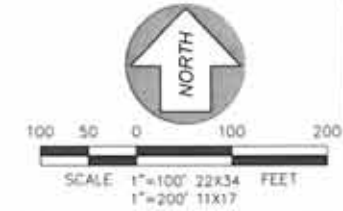


**LEGEND**

-  ANTICIPATED TO BE DEMOLISHED
-  RATING 1—NEW CONDITION
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-  RATING 4—POOR
-  RATING 5—FAILING



**KEYMAP**



REVISIONS	

**Taylor Engineering, Inc.**  
 Civil Design and Land Planning  
 W. 106 Mission Ave.  
 Spokane, Washington 99201  
 (509) 328-3371 FAX (509) 328-8224

SCALE:  
 1"=100'  
**SD-2**







**ESH INFRASTRUCTURE  
 MASTER PLAN**

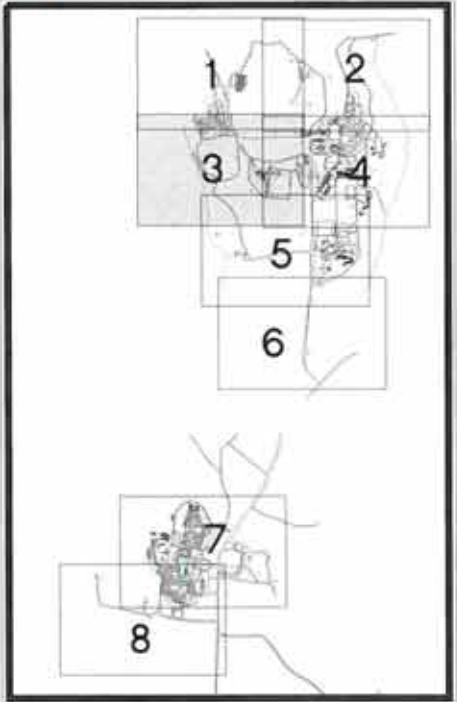
STORM WATER  
 (EASD FILE: -----)

DWN: *ghf* DATE: -----  
 CK'D: *MAA* DATE: -----



STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

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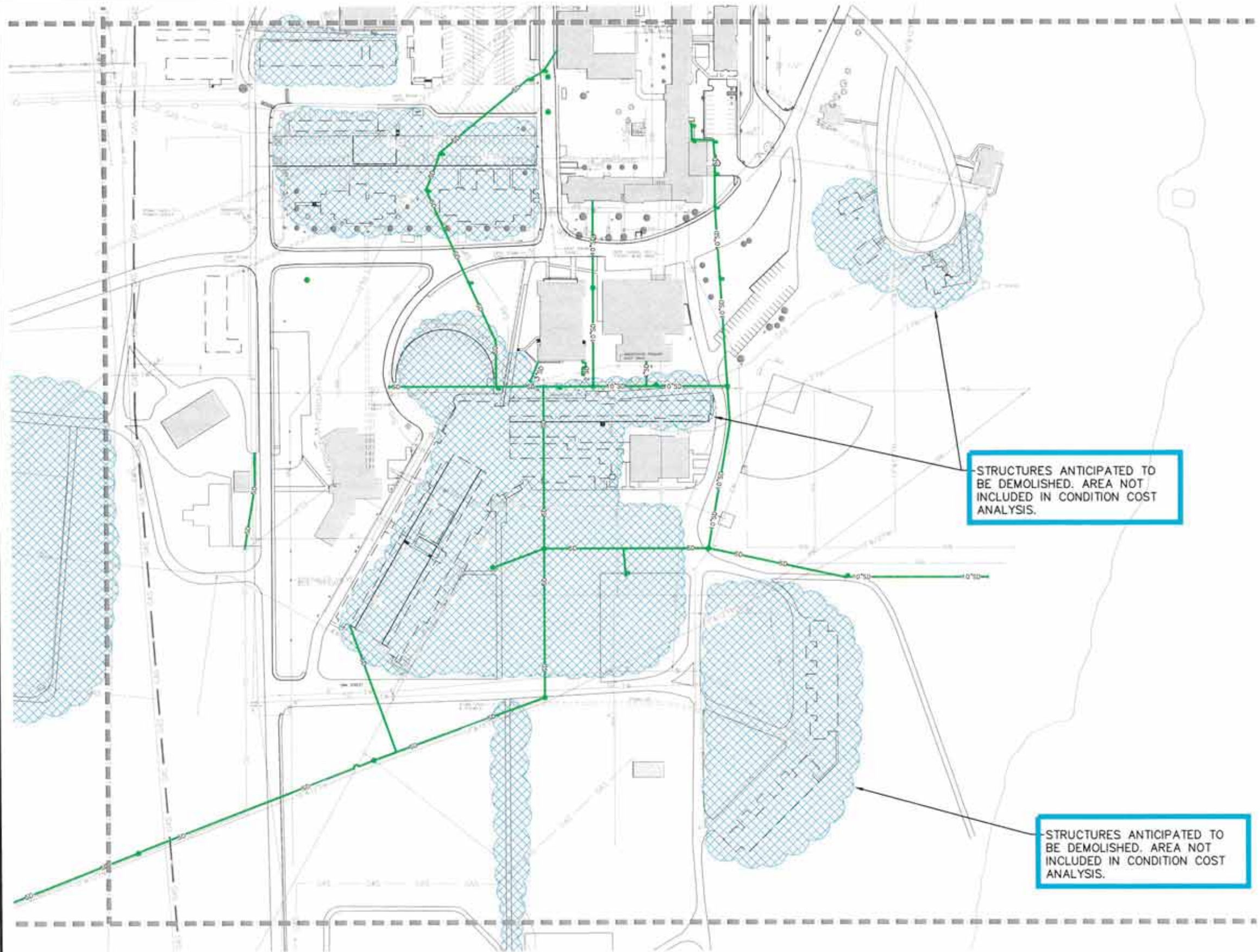


KEYMAP



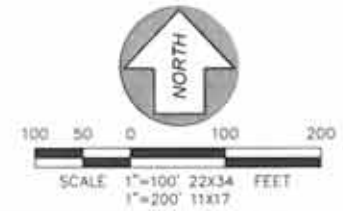
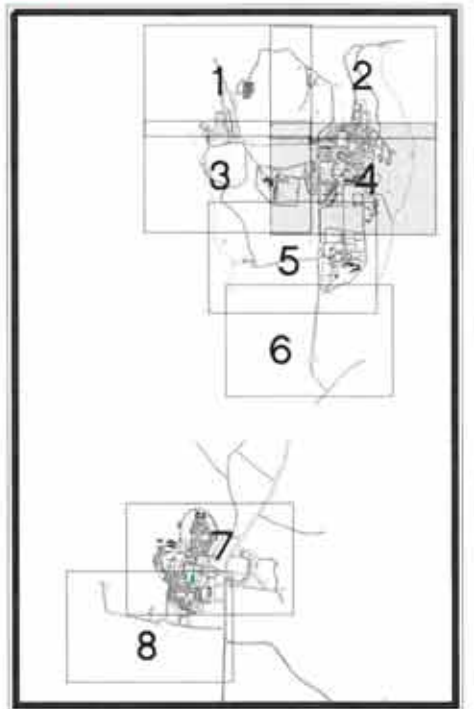
	REVISIONS		 Taylor Engineering, Inc. Civil Design and Land Planning W. 100 Mission Ave. Spokane, Washington 99201 (509) 328-3271 FAX (509) 328-8224	SCALE:	SHEET
				1"=100'	SD-3
DWN: GHF CK'D: MAA		DATE: _____	ESH INFRASTRUCTURE MASTER PLAN		STORM WATER
		DATE: _____			DWG FILE: _____





**LEGEND**

	ANTICIPATED TO BE DEMOLISHED
	RATING 1-NEW CONDITION
	RATING 2-GOOD CONDITION
	RATING 3-FAIR CONDITION
	RATING 4-POOR
	RATING 5-FAILING









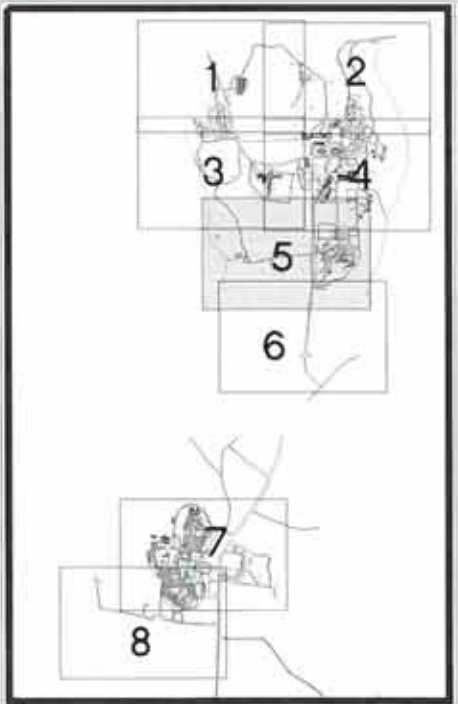
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	DATE: _____ DATE: _____		<b>ESH INFRASTRUCTURE          MASTER PLAN</b>	STORM WATER



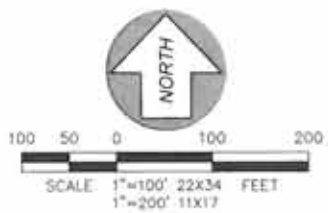


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KEYMAP









	REVISIONS		 <b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 108 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	SHEET <b>SD-5</b>
	DWN OK'D	DATE: _____ DATE: _____		<b>ESH INFRASTRUCTURE MASTER PLAN</b>	

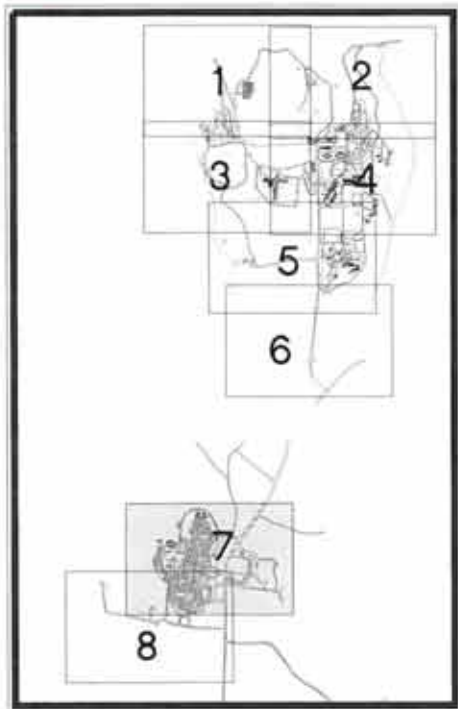


STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

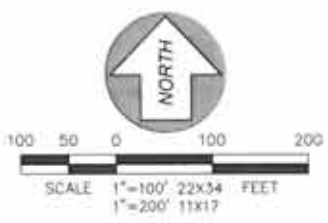
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

- LEGEND**
-  ANTICIPATED TO BE DEMOLISHED
  -  RATING 1—NEW CONDITION
  -  RATING 2—GOOD CONDITION
  -  RATING 3—FAIR CONDITION
  -  RATING 4—POOR
  -  RATING 5—FAILING









KEYMAP

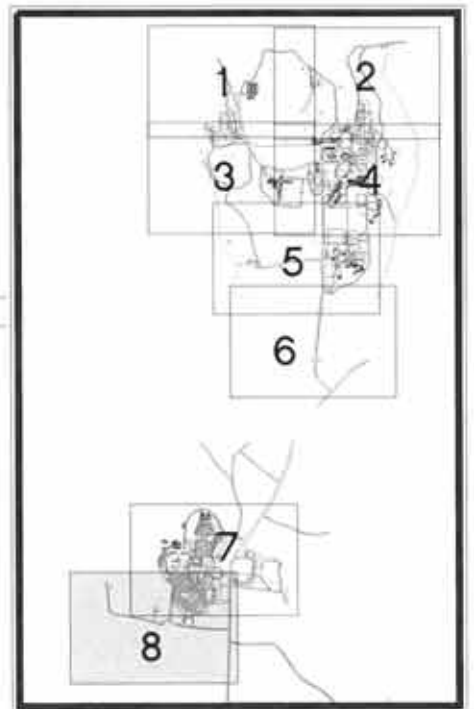


REVISIONS   	Taylor Engineering, Inc. Civil Design and Land Planning W. 100 Mission Ave. Spokane, Washington 99201 (509) 328-3374 FAX (509) 328-8224	SCALE:	SHEET
		1"=100'	SD-7
DWN: GHF CK'D: MAA	DATE: _____ DATE: _____	ESH INFRASTRUCTURE MASTER PLAN	
		STORM WATER	

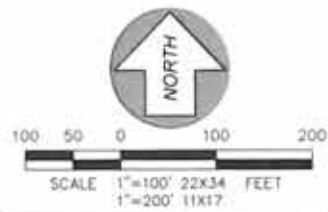



STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

- LEGEND**
-  ANTICIPATED TO BE DEMOLISHED
  -  RATING 1—NEW CONDITION
  -  RATING 2—GOOD CONDITION
  -  RATING 3—FAIR CONDITION
  -  RATING 4—POOR
  -  RATING 5—FAILING

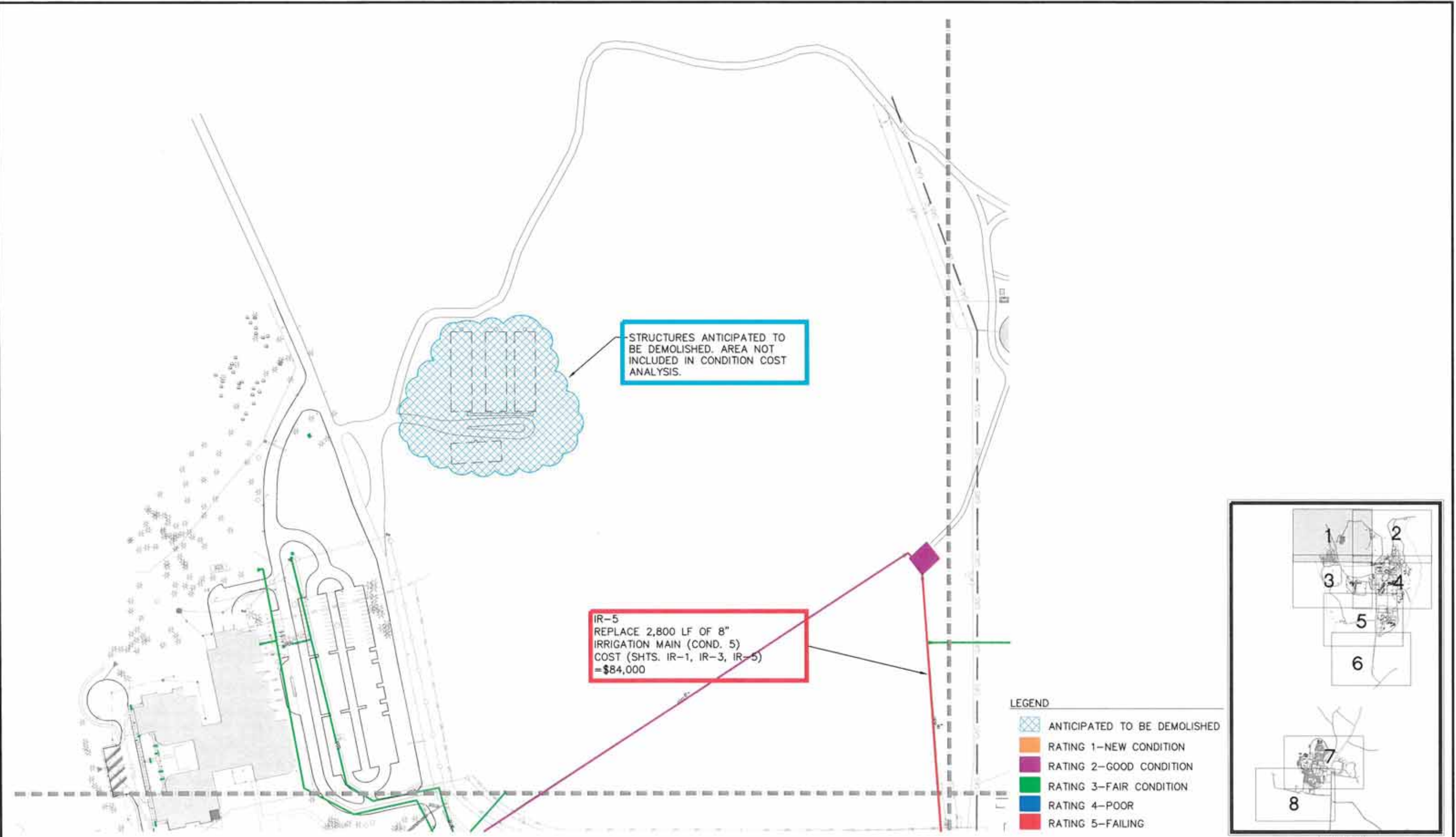


KEYMAP





	REVISIONS		 Taylor Engineering, Inc. Civil Design and Land Planning W. 100 Mission Ave. Spokane, Washington 99201 (509) 328-1571 FAX (509) 328-8224	SCALE	SHEET
	DWG: GHF	DATE: -----		1"=100'	SD-8
CK'D: MAA	DATE: -----	ESH INFRASTRUCTURE MASTER PLAN		STORM WATER	
				CADD FILE: -----	

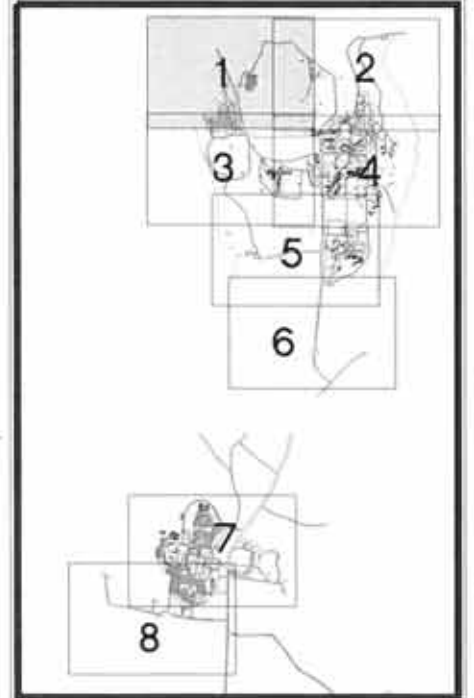




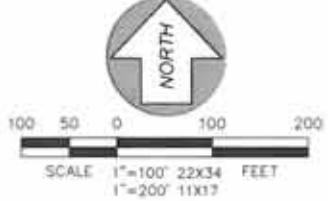
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

IR-5  
 REPLACE 2,800 LF OF 8"  
 IRRIGATION MAIN (COND. 5)  
 COST (SHTS. IR-1, IR-3, IR-5)  
 = \$84,000

- LEGEND**
-  ANTICIPATED TO BE DEMOLISHED
  -  RATING 1-NEW CONDITION
  -  RATING 2-GOOD CONDITION
  -  RATING 3-FAIR CONDITION
  -  RATING 4-POOR
  -  RATING 5-FAILING









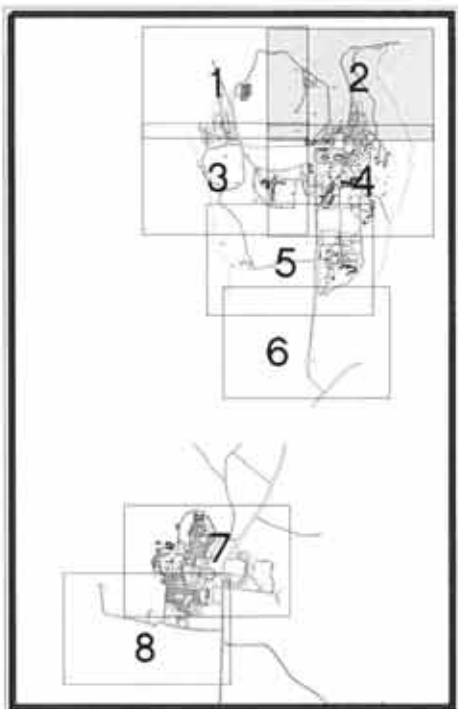
KEYMAP



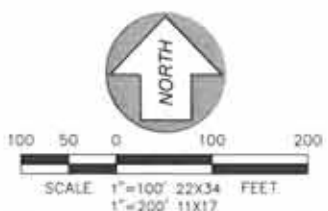
	REVISIONS		 <b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3171 FAX (509) 328-8224	SCALE:	<b>SHEET</b>
				1"=100'	<b>L-1</b>
DWN: GHF CK'D: VAA			DATE: _____ DATE: _____		<b>ESH INFRASTRUCTURE          MASTER PLAN</b>
					IRRIGATION SYSTEM



- LEGEND**
-  ANTICIPATED TO BE DEMOLISHED
  -  RATING 1-NEW CONDITION
  -  RATING 2-GOOD CONDITION
  -  RATING 3-FAIR CONDITION
  -  RATING 4-POOR
  -  RATING 5-FAILING

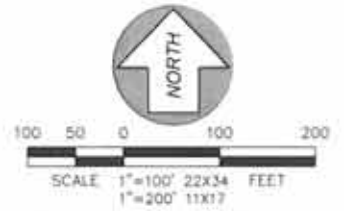
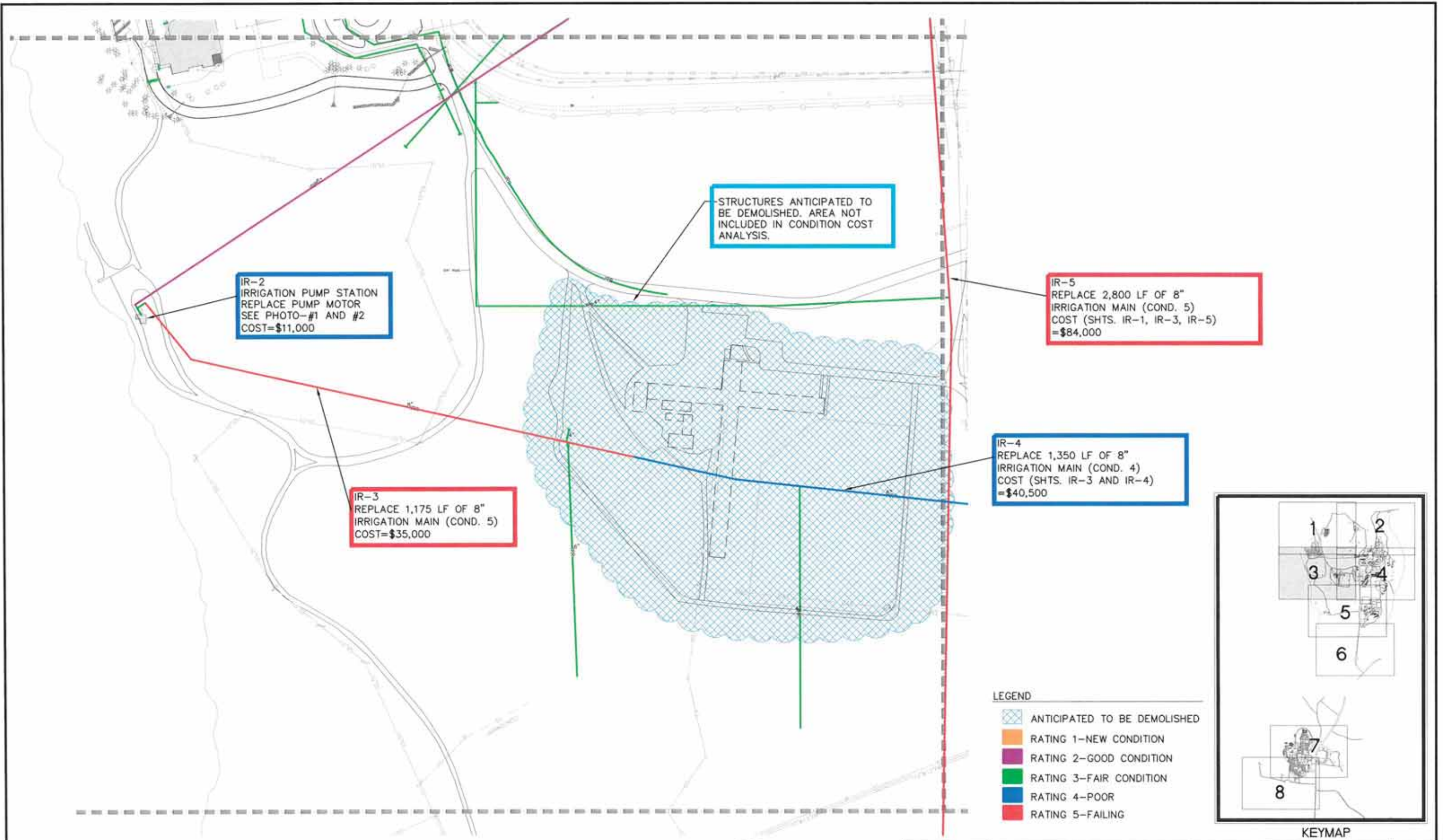


KEYMAP



REVISIONS    	 <b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE:	<i>SHEET</i>
		1"=100'	L-2
DWN: GHF CK'D: MAA	DATE: _____ DATE: _____	<b>ESH INFRASTRUCTURE MASTER PLAN</b>	
		IRRIGATION SYSTEM <small>CADD FILE</small>	





REVISIONS		<p>Taylor Engineering, Inc. Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224</p>	SCALE: 1"=100'	SHEET L-3
DWN: GEF	DATE: _____		<p>ESH INFRASTRUCTURE MASTER PLAN</p>	IRRIGATION SYSTEM
CHK'D: MAA	DATE: _____	CADD FILE: _____		



PHOTO #1

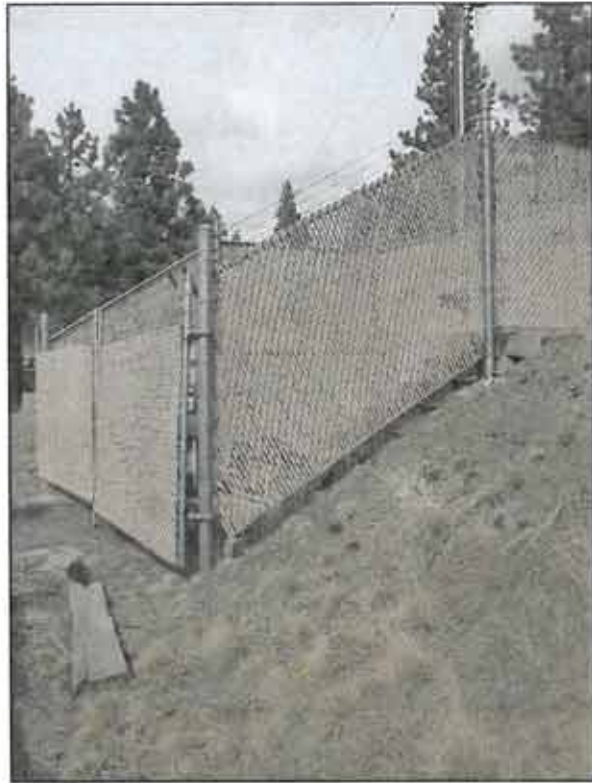
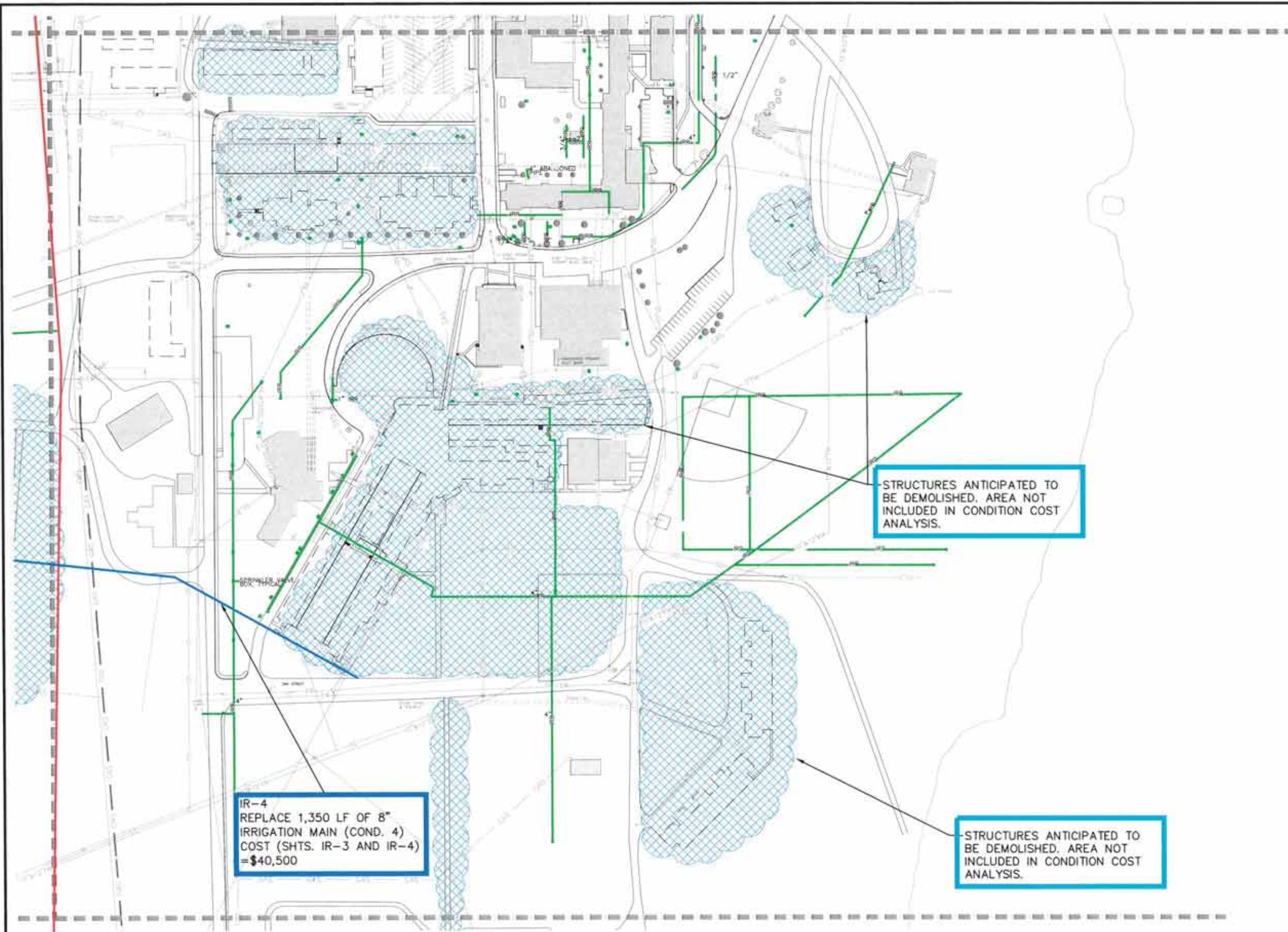








PHOTO #2



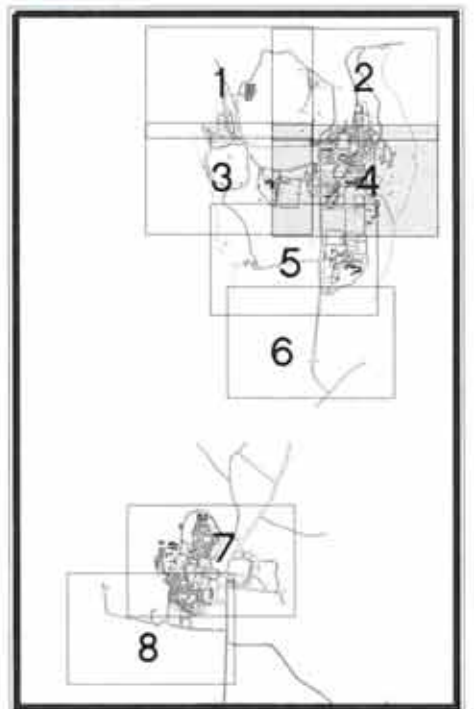


- LEGEND**
-  ANTICIPATED TO BE DEMOLISHED
  -  RATING 1—NEW CONDITION
  -  RATING 2—GOOD CONDITION
  -  RATING 3—FAIR CONDITION
  -  RATING 4—POOR
  -  RATING 5—FAILING

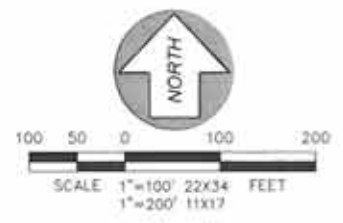
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

IR-4  
REPLACE 1,350 LF OF 8"  
IRRIGATION MAIN (COND. 4)  
COST (SHTS. IR-3 AND IR-4)  
=\$40,500



KEYMAP



DWN: GHF CK'D: MAA	REVISIONS	 <b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 106 Winston Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	<b>SHEET</b> <b>L-4</b>
	DATE: _____ DATE: _____		<b>ESH INFRASTRUCTURE          MASTER PLAN</b>	IRRIGATION SYSTEM

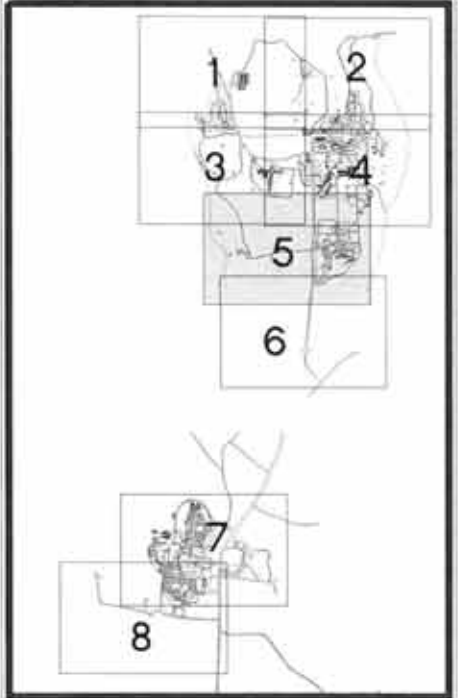




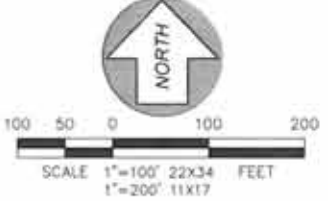
IR-5  
 REPLACE 2,800 LF OF 8"  
 IRRIGATION MAIN (COND. 5)  
 COST (SHTS. IR-1, IR-3, IR-5)  
 =\$84,000

STRUCTURES ANTICIPATED TO  
 BE DEMOLISHED. AREA NOT  
 INCLUDED IN CONDITION COST  
 ANALYSIS.

- LEGEND**
- ANTICIPATED TO BE DEMOLISHED
  - RATING 1-NEW CONDITION
  - RATING 2-GOOD CONDITION
  - RATING 3-FAIR CONDITION
  - RATING 4-POOR
  - RATING 5-FAILING



KEYMAP









DWN: GHF CK'D: MAA	REVISIONS   		Taylor Engineering, Inc. Civil Design and Land Planning N. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	SHEET L-5
	DATE: _____ DATE: _____			ESH INFRASTRUCTURE MASTER PLAN	IRRIGATION SYSTEM

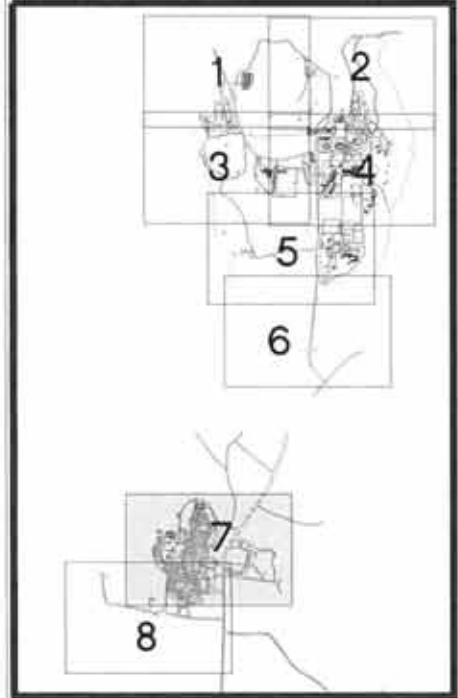


STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

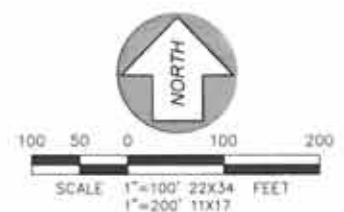
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

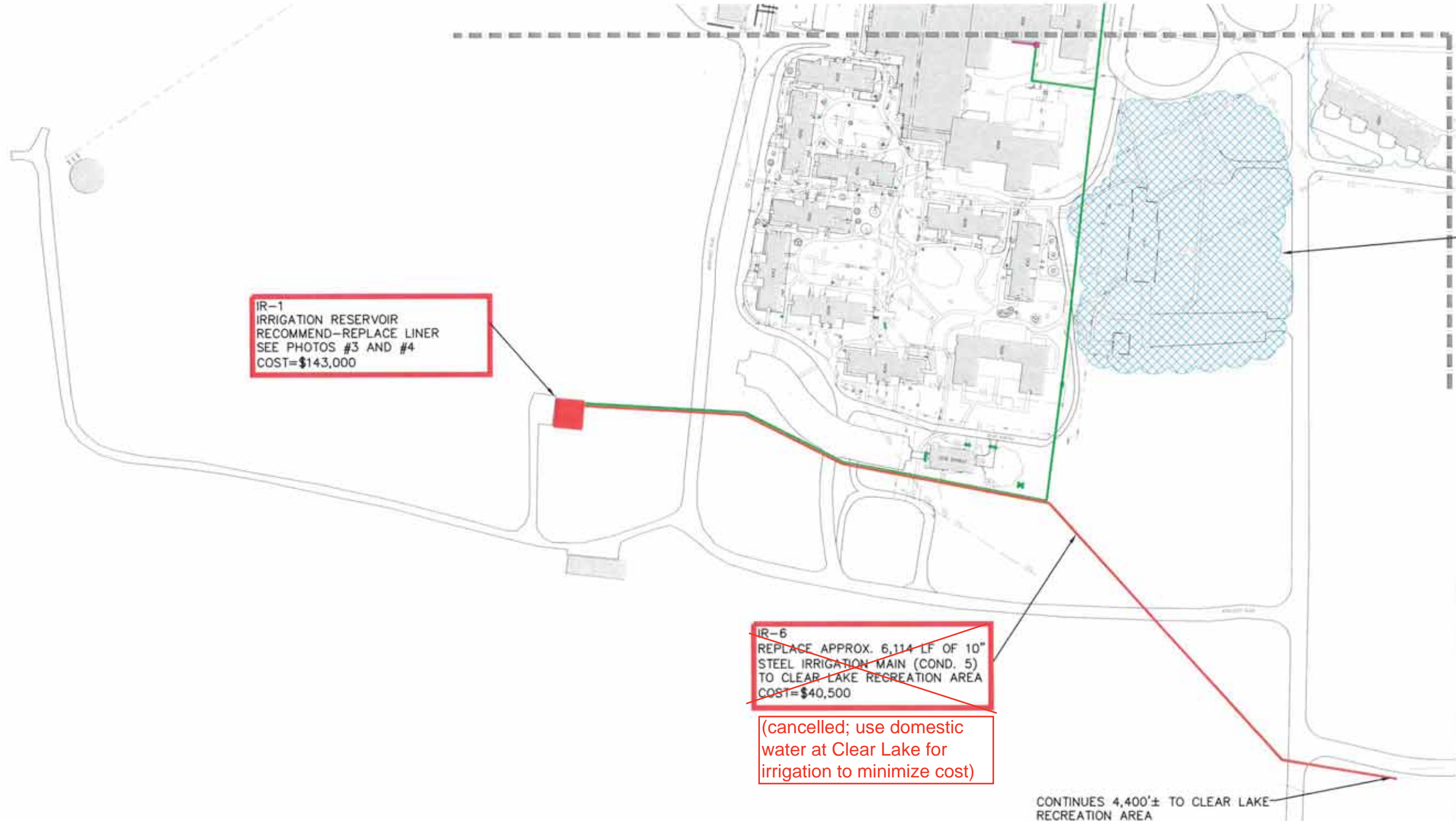
- LEGEND**
-  ANTICIPATED TO BE DEMOLISHED
  -  RATING 1—NEW CONDITION
  -  RATING 2—GOOD CONDITION
  -  RATING 3—FAIR CONDITION
  -  RATING 4—POOR
  -  RATING 5—FAILING



KEYMAP



REVISIONS   	Taylor Engineering, Inc. Civil Design and Land Planning W. 100 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE:	SHEET
		1"=100'	L-7
DWN: Gdf CK'D: MAA	DATE: _____ DATE: _____	ESH INFRASTRUCTURE MASTER PLAN IRRIGATION SYSTEM	



IR-1  
IRRIGATION RESERVOIR  
RECOMMEND-REPLACE LINER  
SEE PHOTOS #3 AND #4  
COST=\$143,000

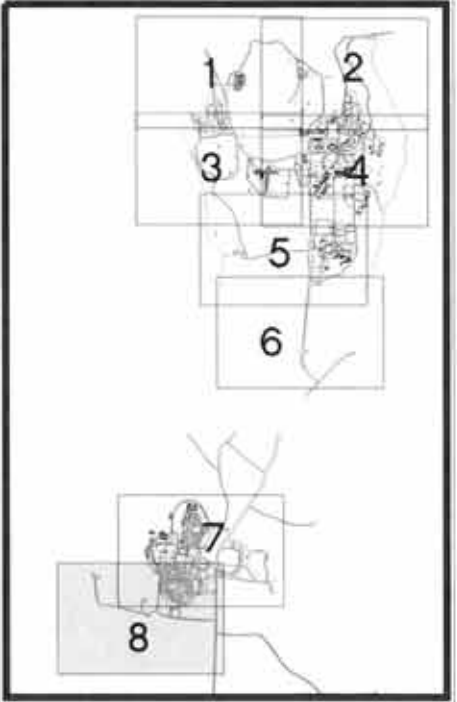
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

~~IR-6  
REPLACE APPROX. 6,114 LF OF 10"  
STEEL IRRIGATION MAIN (COND. 5)  
TO CLEAR LAKE RECREATION AREA  
COST=\$40,500~~

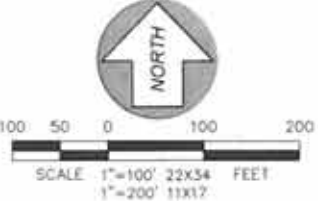
(cancelled; use domestic water at Clear Lake for irrigation to minimize cost)

CONTINUES 4,400'± TO CLEAR LAKE RECREATION AREA

- LEGEND
- ANTICIPATED TO BE DEMOLISHED
  - RATING 1-NEW CONDITION
  - RATING 2-GOOD CONDITION
  - RATING 3-FAIR CONDITION
  - RATING 4-POOR
  - RATING 5-FAILING



KEYMAP



REVISIONS  _____ _____ _____ _____ _____	 <b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 100 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE:	SHEET
		1"=100'	L-8
OWN: GHF CK'D: MAA	DATE: _____ DATE: _____	<b>ESH INFRASTRUCTURE MASTER PLAN</b> IRRIGATION SYSTEM CADD FILE: _____	



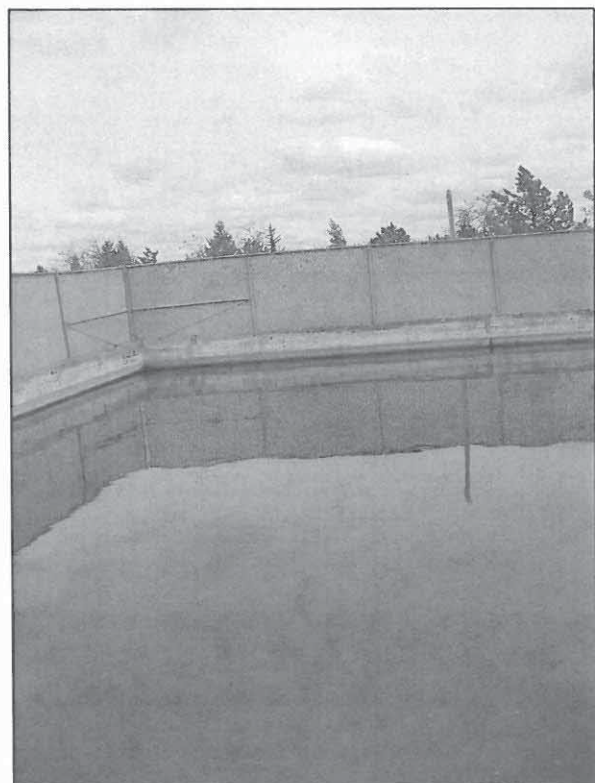


PHOTO #3

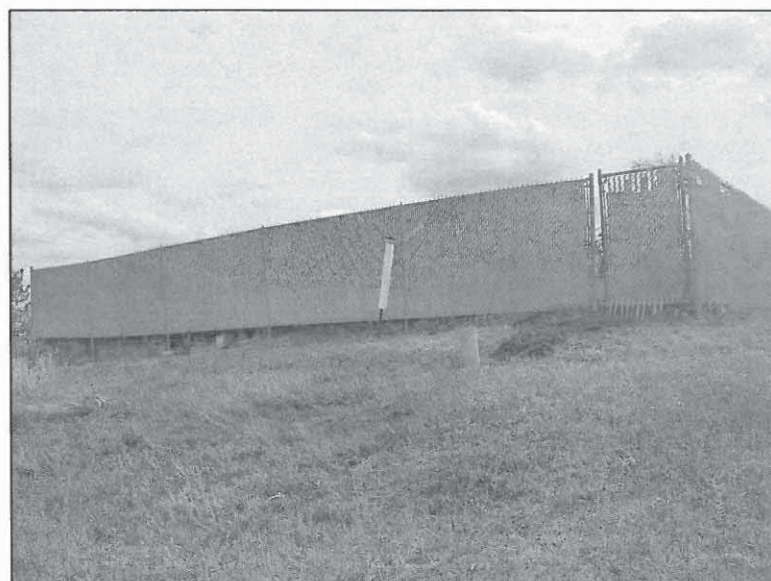
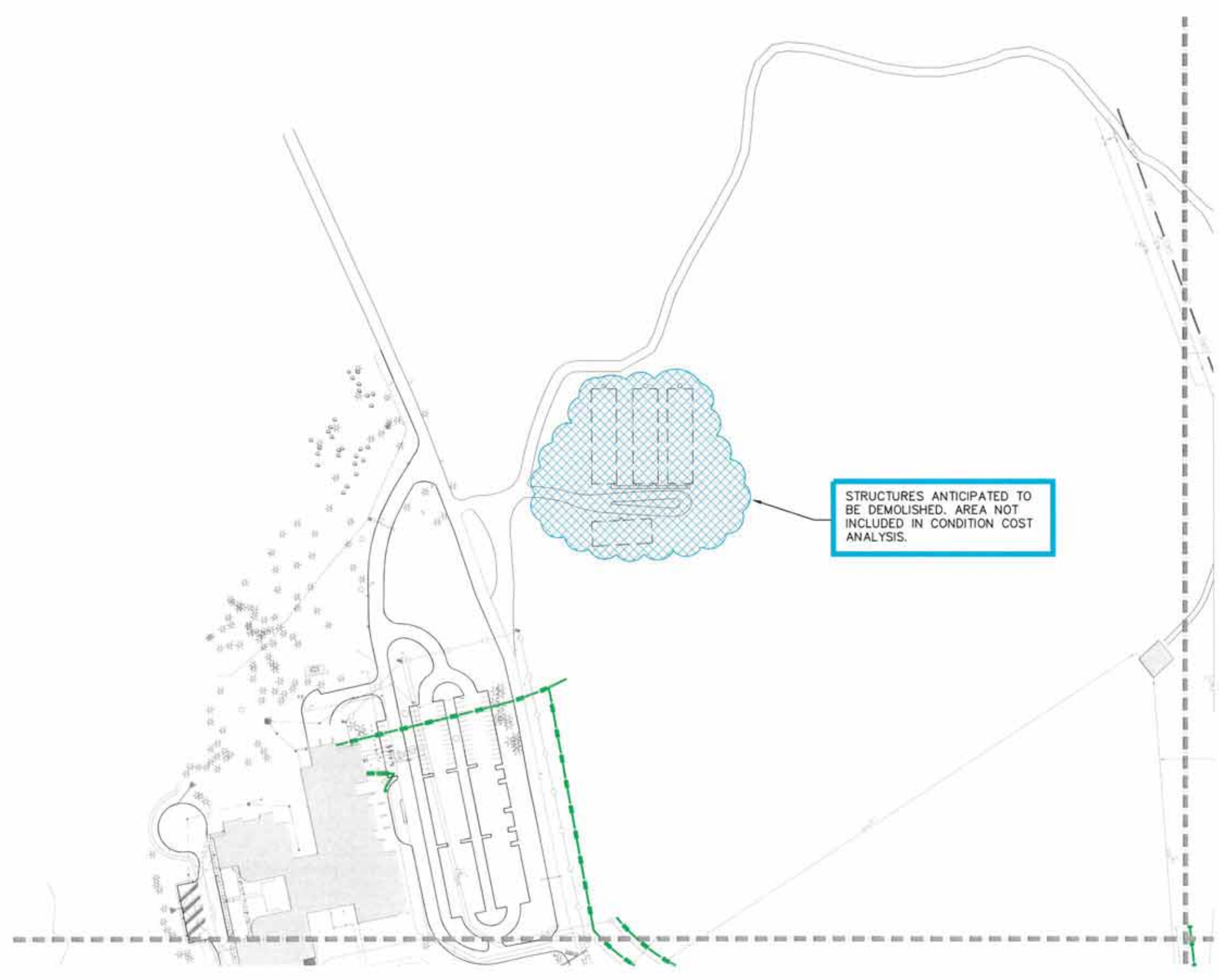






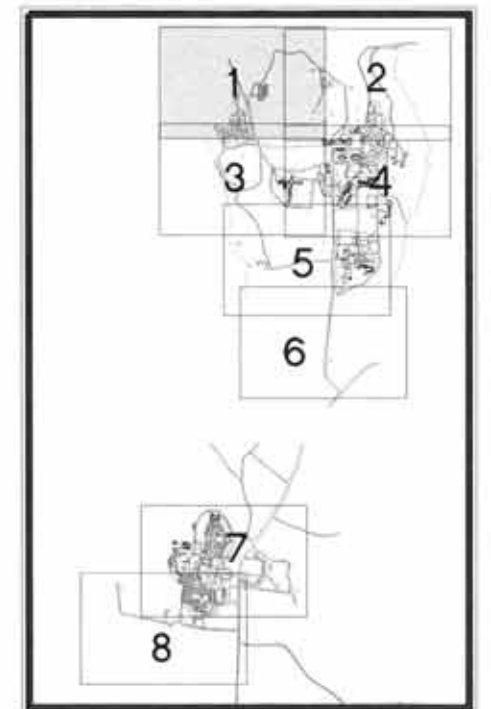


PHOTO #4

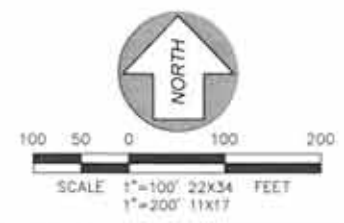


**LEGEND**

-  ANTICIPATED TO BE DEMOLISHED
-  RATING 1—NEW CONDITION
-  RATING 2—GOOD CONDITION
-  RATING 3—FAIR CONDITION
-  RATING 4—POOR
-  RATING 5—FAILING

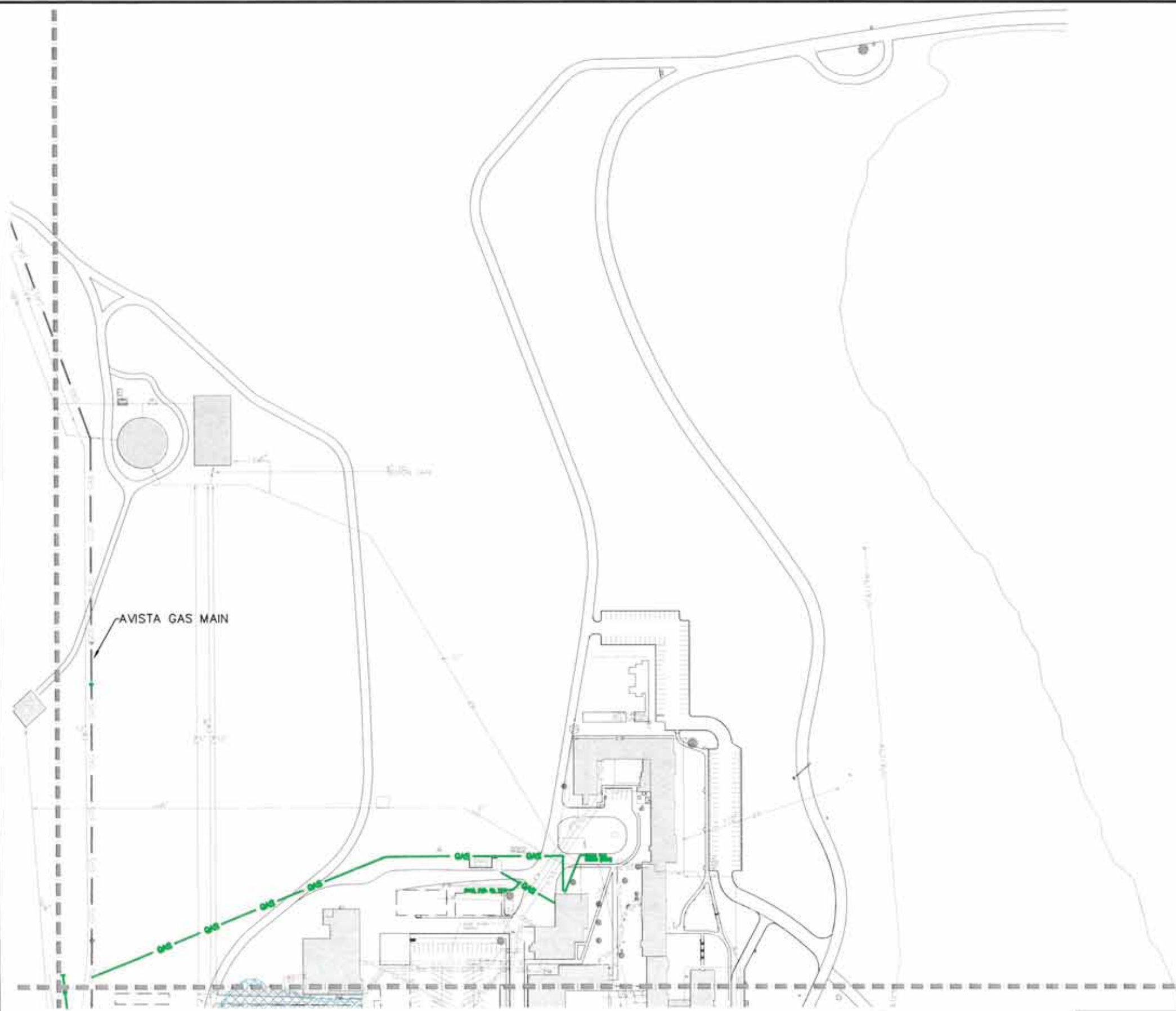


**KEYMAP**









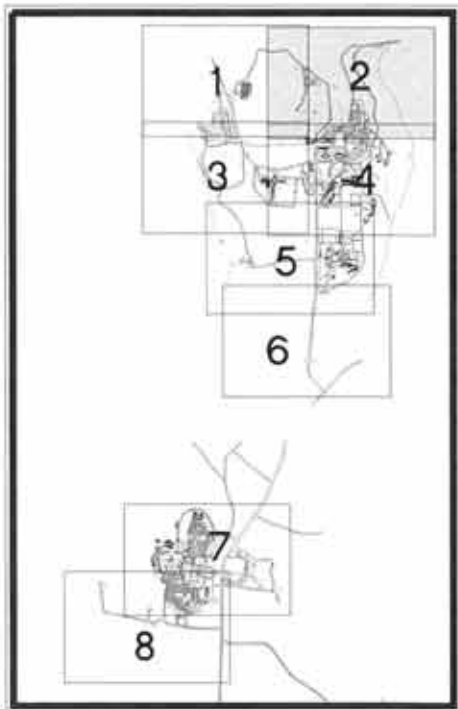
	REVISIONS		 <b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	SHEET <b>NG-1</b>
	DWN: GHF CK'D: MAA	DATE: _____ DATE: _____		<b>ESH INFRASTRUCTURE MASTER PLAN</b>	NATURAL GAS



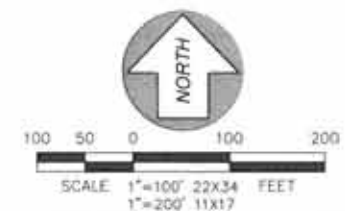


**LEGEND**

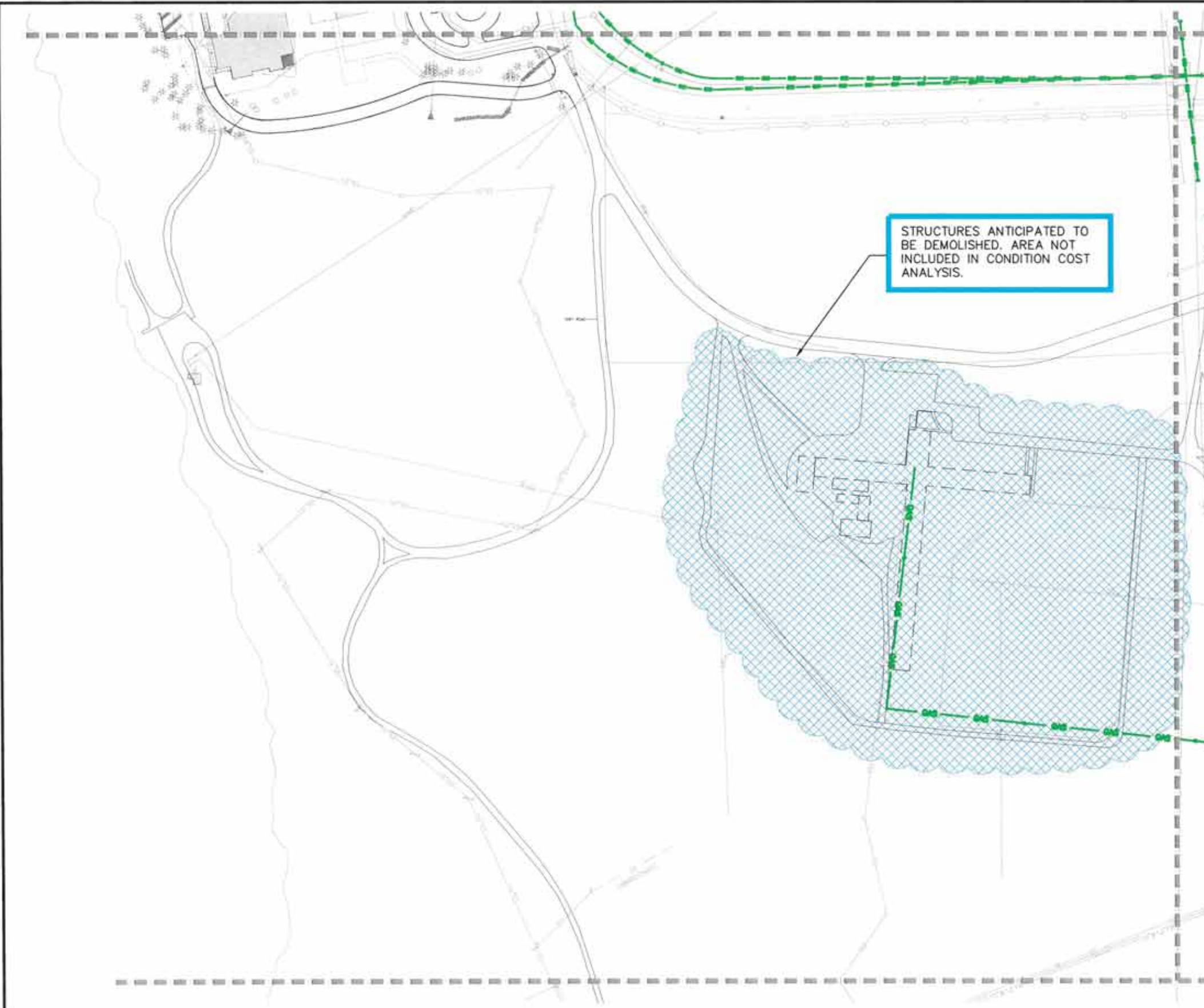
-  ANTICIPATED TO BE DEMOLISHED
-  RATING 1-NEW CONDITION
-  RATING 2-GOOD CONDITION
-  RATING 3-FAIR CONDITION
-  RATING 4-POOR
-  RATING 5-FAILING



**KEYMAP**









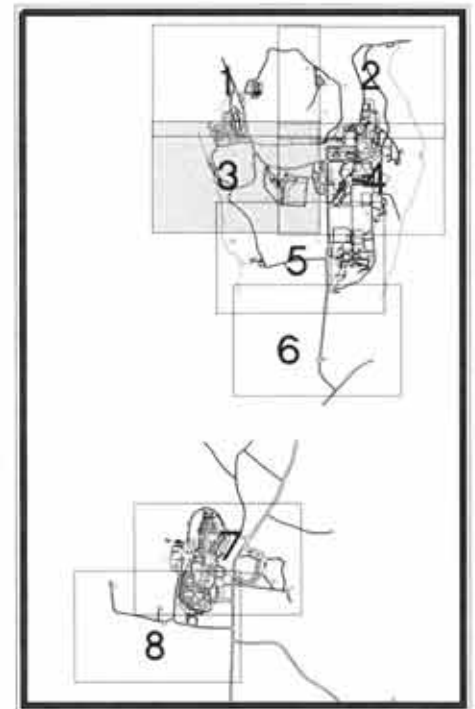
REVISIONS    	 <b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 100 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-R224	SCALE: 1"=100'	SHEET <b>NG-2</b>
		<b>ESH INFRASTRUCTURE          MASTER PLAN</b>	NATURAL GAS
Dwn: <u>Shf</u> CK'D: <u>MAA</u>	DATE: _____ DATE: _____	DATE FILE: _____	



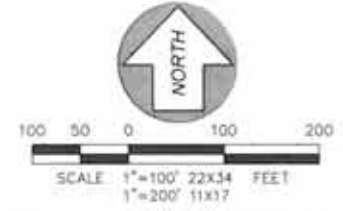
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

**LEGEND**

-  ANTICIPATED TO BE DEMOLISHED
-  RATING 1-NEW CONDITION
-  RATING 2-GOOD CONDITION
-  RATING 3-FAIR CONDITION
-  RATING 4-POOR
-  RATING 5-FAILING

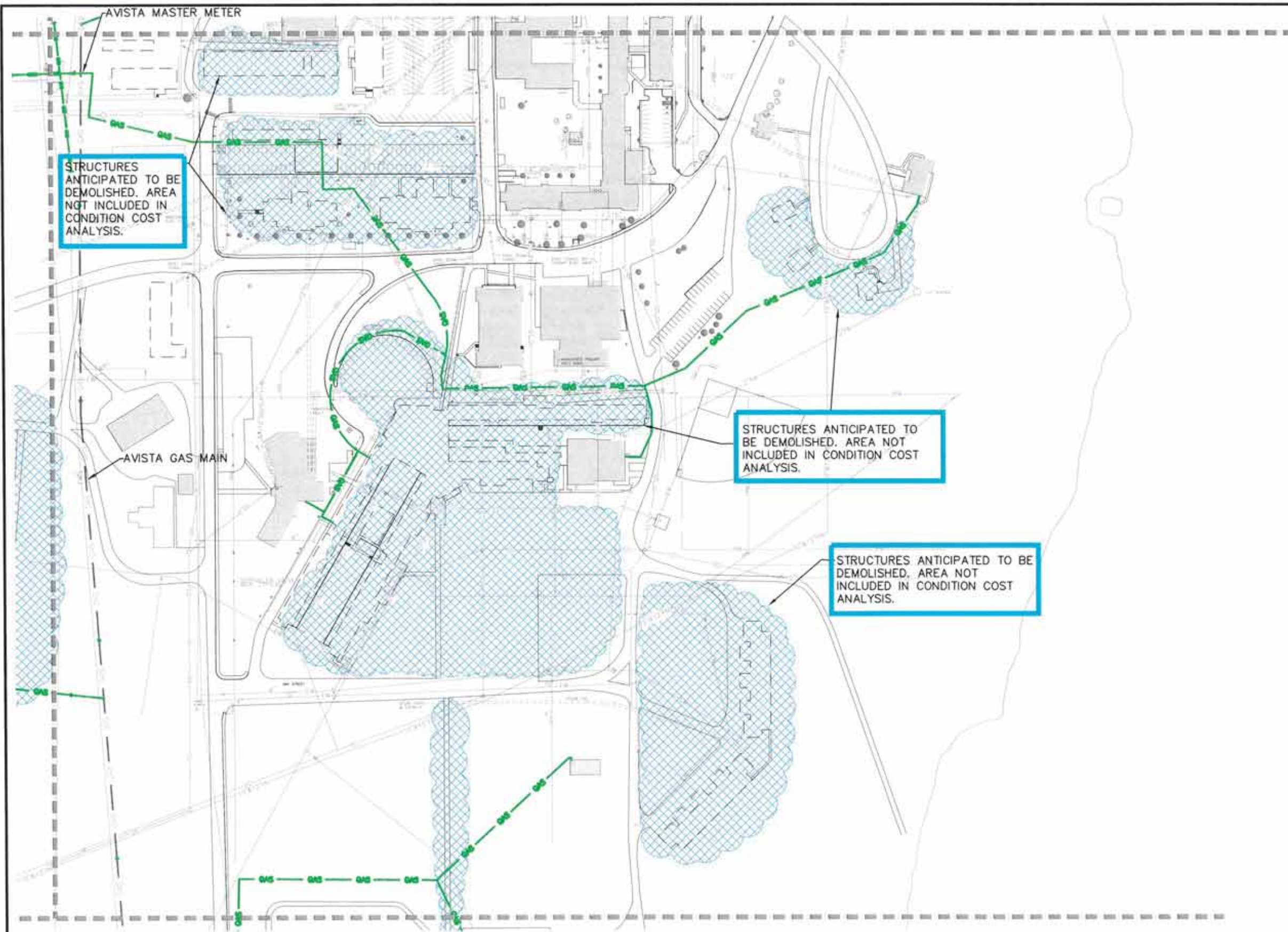


KEYMAP

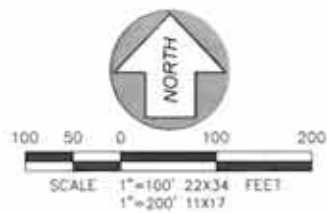
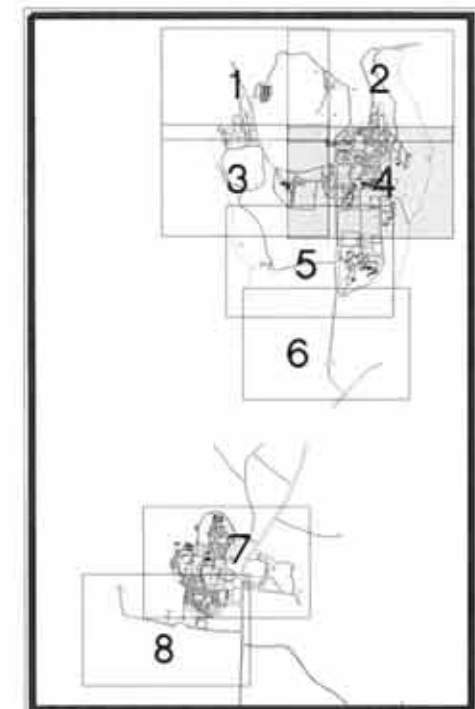


	REVISIONS		 <b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 105 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	<b>SHEET</b> NG-3
	D/WN: GHF	DATE: _____		<b>ESH INFRASTRUCTURE</b> <b>MASTER PLAN</b>	NATURAL GAS
C/K'D: MAA	DATE: _____	<b>ESH INFRASTRUCTURE</b> <b>MASTER PLAN</b>			





- LEGEND**
- ANTICIPATED TO BE DEMOLISHED
  - RATING 1-NEW CONDITION
  - RATING 2-GOOD CONDITION
  - RATING 3-FAIR CONDITION
  - RATING 4-POOR
  - RATING 5-FAILING



DWN: <i>ghf</i> CK'D: <i>MAA</i>	REVISIONS	<b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	SHEET <b>NG-4</b>
	DATE: _____ DATE: _____		ESH INFRASTRUCTURE MASTER PLAN	NATURAL GAS









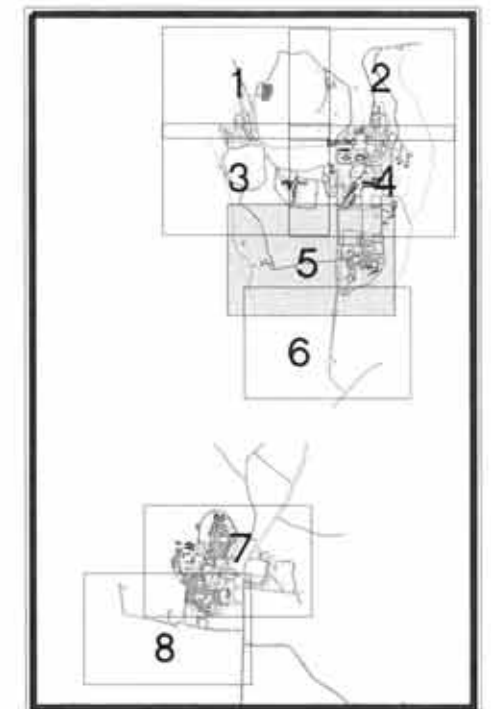


STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

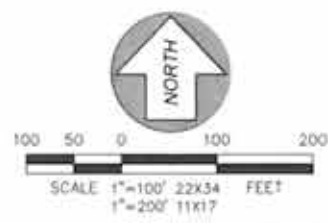
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

**LEGEND**

-  ANTICIPATED TO BE DEMOLISHED
-  RATING 1-NEW CONDITION
-  RATING 2-GOOD CONDITION
-  RATING 3-FAIR CONDITION
-  RATING 4-POOR
-  RATING 5-FAILING



KEYMAP



	REVISIONS		 Taylor Engineering, Inc. Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE:	SHEET
				1"=100'	NG-5
DWN: GHF CK'D: MAA			ESH INFRASTRUCTURE MASTER PLAN		NATURAL GAS
DATE: _____ DATE: _____					CADD FILE: _____











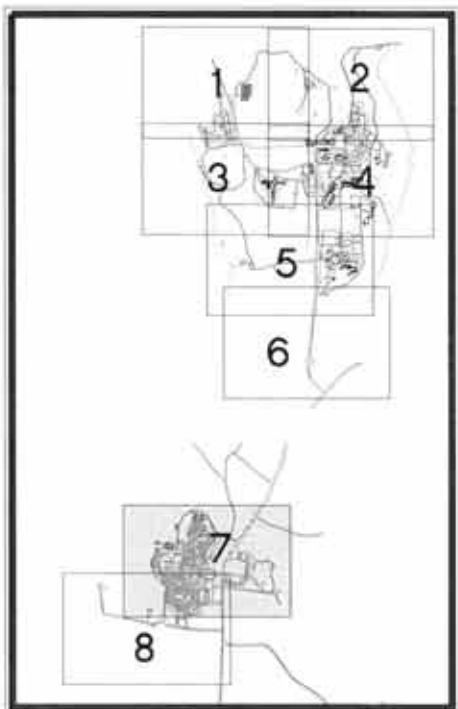
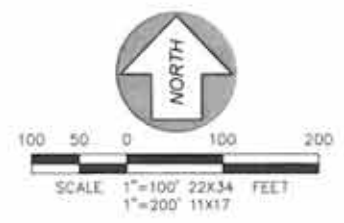
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

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STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

**LEGEND**

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-  RATING 1—NEW CONDITION
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-  RATING 3—FAIR CONDITION
-  RATING 4—POOR
-  RATING 5—FAILING




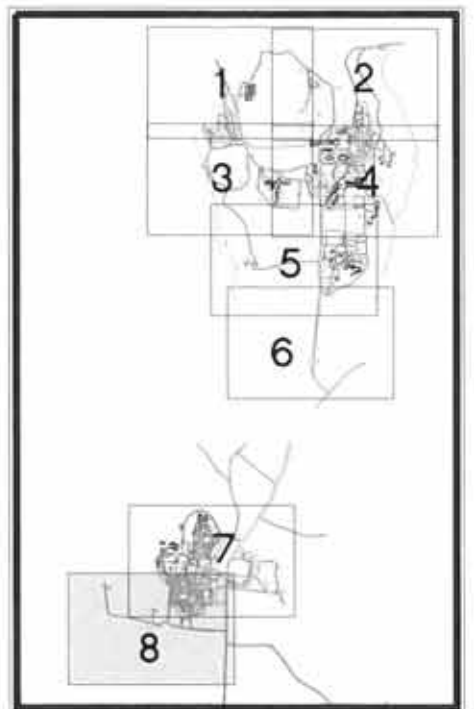
KEYMAP

REVISIONS		 Taylor Engineering, Inc. Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	SHEET NG-7
DWN: GHF	DATE: _____		<b>ESH INFRASTRUCTURE MASTER PLAN</b>	NATURAL GAS
CK'D: MAA	DATE: _____	CADD FILE: _____		

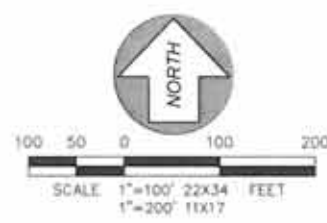


STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

- LEGEND**
-  ANTICIPATED TO BE DEMOLISHED
  -  RATING 1—NEW CONDITION
  -  RATING 2—GOOD CONDITION
  -  RATING 3—FAIR CONDITION
  -  RATING 4—POOR
  -  RATING 5—FAILING



KEYMAP



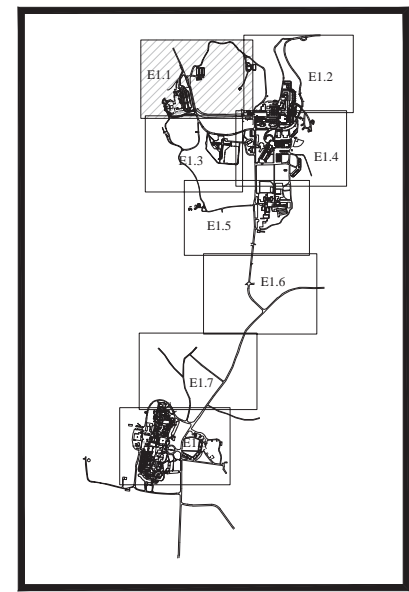
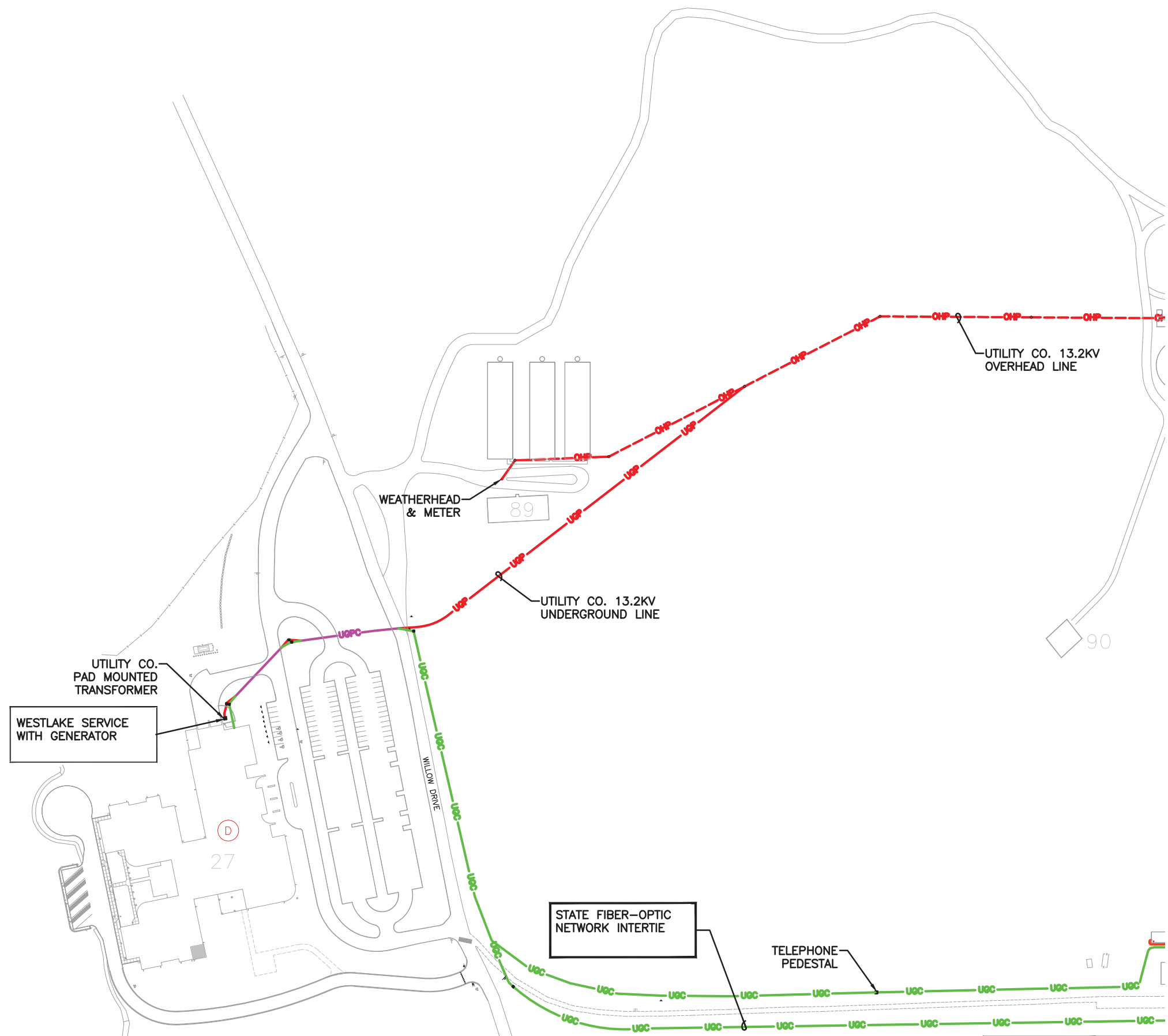
REVISIONS	
DWN: GNF	DATE:
CHK'D: MAA	DATE:

 <b>Taylor Engineering, Inc.</b> Civil Design and Land Planning W. 106 Mission Ave. Spokane, Washington 99201 (509) 328-3371 FAX (509) 328-8224	SCALE: 1"=100'	SHEET <b>NG-8</b>
	<b>ESH INFRASTRUCTURE MASTER PLAN</b> NATURAL GAS <small>CADD FILE:</small>	

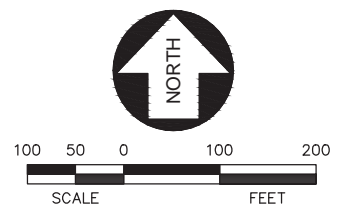


LEGEND – SHEETS E-1 THRU E-8

- PRIMARY POWER
- COMMUNICATIONS
- SECONDARY POWER
- POWER AND COMMUNICATIONS COMBINED
- BUILDINGS TO REMAIN ON CAMPUS BACK-UP POWER
- 2-2 TILTED PAD MOUNTED TRANSFORMERS
- (C) CALL SYSTEM PROPOSED (ASSISTED LIVING FACILITY)
- (D) PERSONAL DURESS ALARM SYSTEM
- (F) NEW FIRE ALARM SYSTEM PROPOSED
- (T) TENANT FIBER-OPTIC CONNECTION PROPOSED



KEYMAP



REVISIONS	
DWN: DAD	DATE: _____
CK'D: RCP	DATE: _____

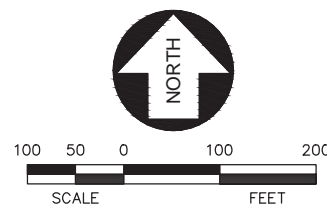
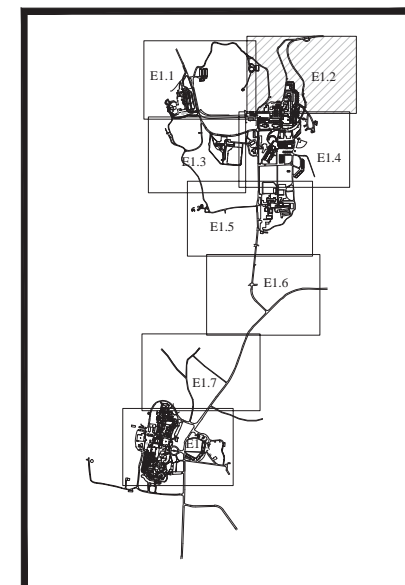
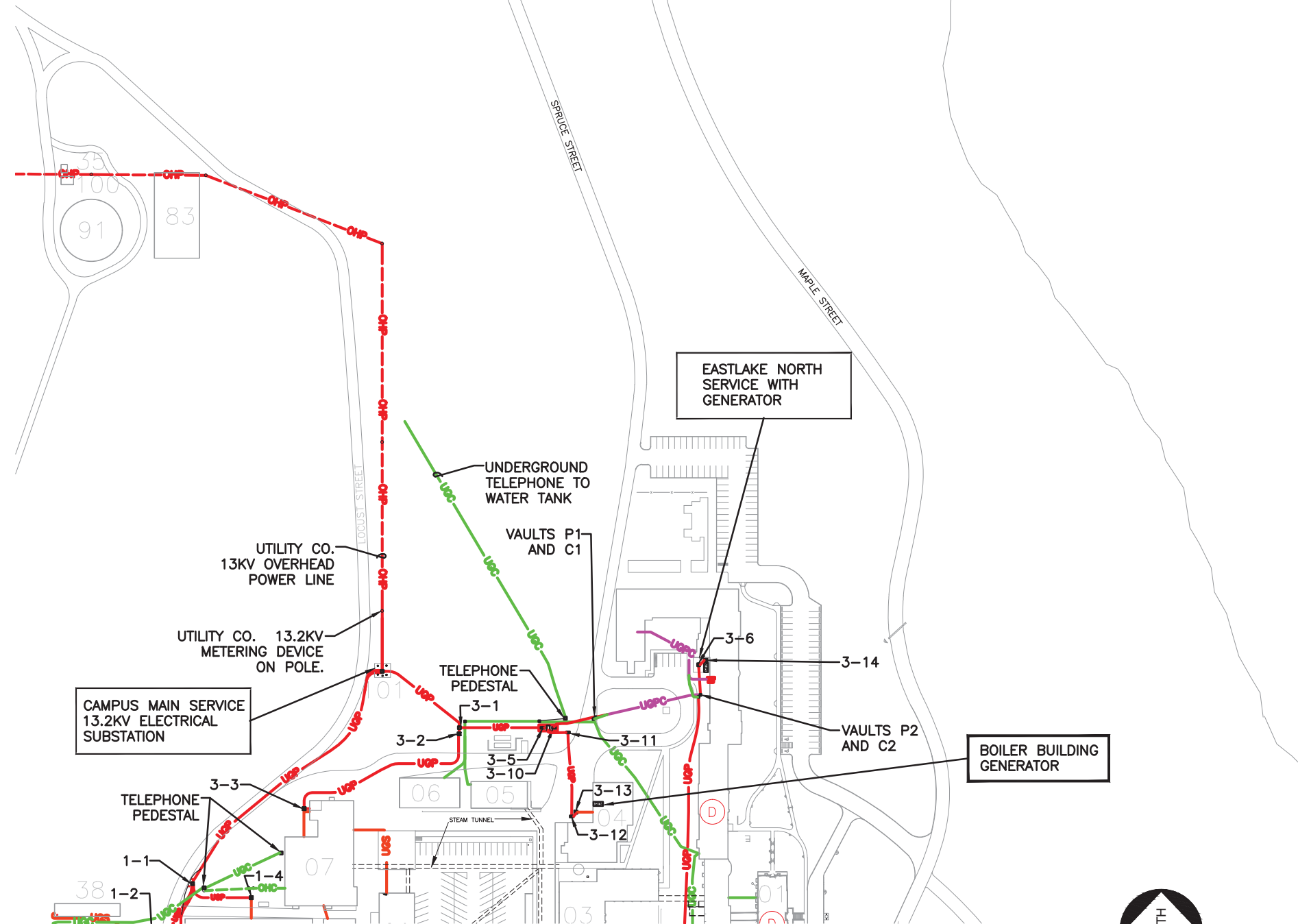
**PCI** Pennell Consulting Inc.  
 Electrical and Electronics  
 System Design  
 400 S. Jefferson, Suite 301  
 Spokane, WA 99204  
 (T) 509.747.1888 (F) 509.747.1872

**ESH INFRASTRUCTURE  
 MASTER PLAN**

**SHEET**  
 SCALE:  
 1" = 100'  
**E-1**  
 ELECTRICAL  
 CADD FILE:

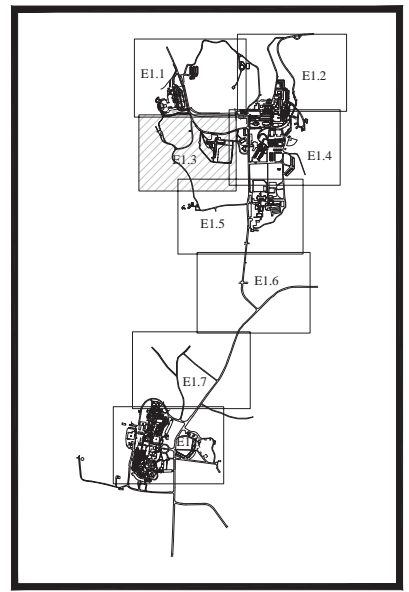
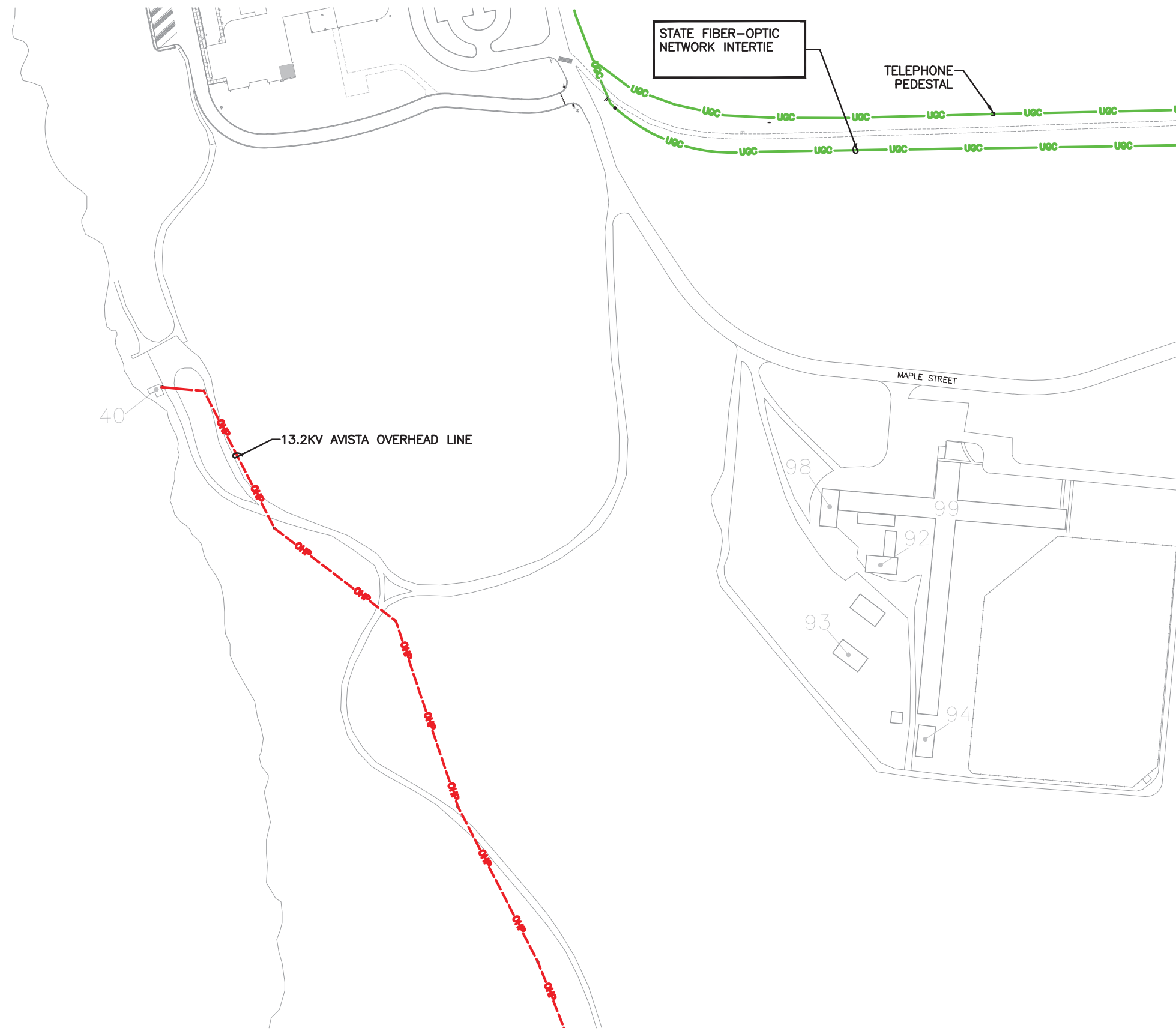
TO MEDICAL LAKE →

TRANSFORMER  
CONNECTED TO  
LIGHTING CIRCUIT

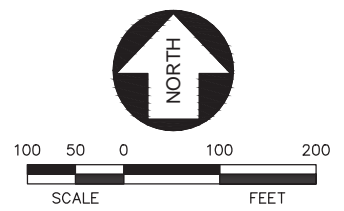


DWN: DAD CK'D: RCP	REVISIONS	<b>PCI</b> Pennell Consulting Inc. Electrical and Electronics System Design 400 S. Jefferson, Suite 301 Spokane, WA 99204 (T) 509.747.1888 (F) 509.747.1872	SHEET <b>E-2</b>
	DATE: _____ DATE: _____		SCALE: 1" = 100'
<b>ESH INFRASTRUCTURE          MASTER PLAN</b>		ELECTRICAL CADD FILE:	





KEYMAP

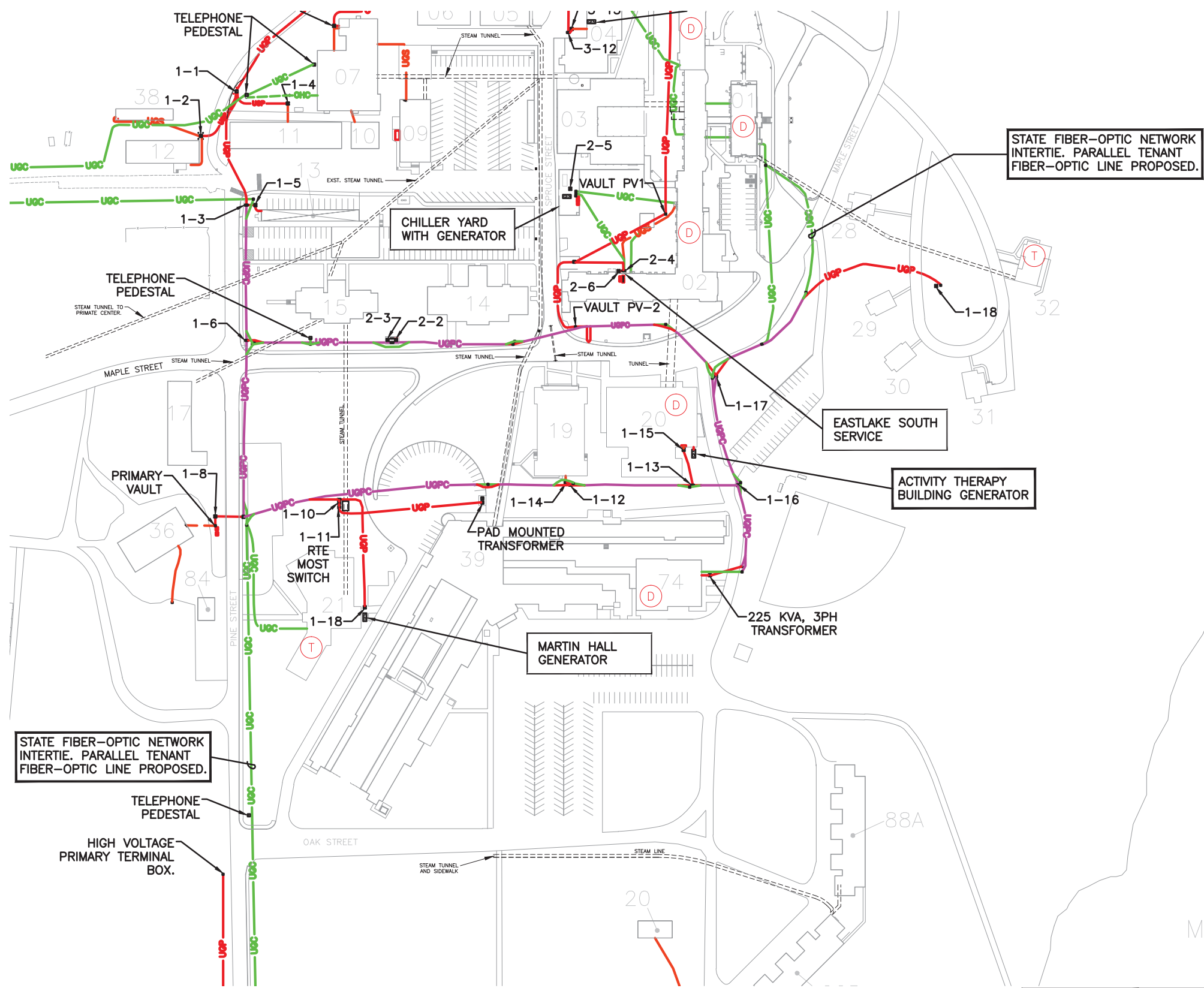


REVISIONS	
DWN: DAD	DATE: _____
CK'D: RCP	DATE: _____

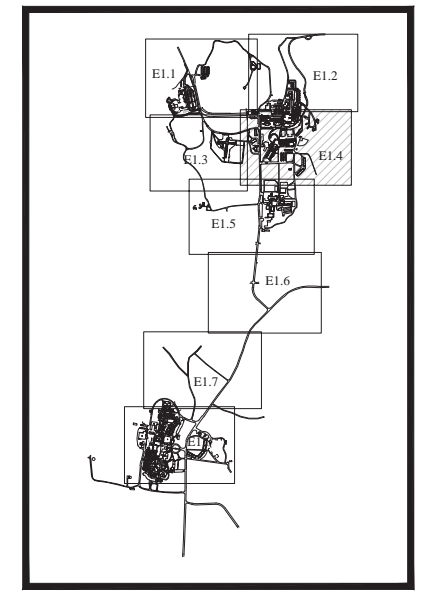
**PCI** Pennell Consulting Inc.  
 Electrical and Electronics  
 System Design  
 400 S. Jefferson, Suite 301  
 Spokane, WA 99204  
 (T) 509.747.1888 (F) 509.747.1872

**ESH INFRASTRUCTURE  
 MASTER PLAN**

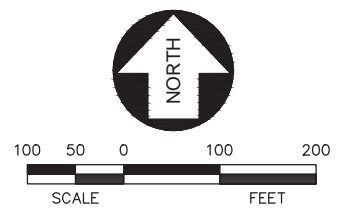
**SHEET**  
 SCALE:  
 1" = 100'  
**E-3**  
 ELECTRICAL  
 CADD FILE:



EASTERN STATE HOSPITAL ELECTRICAL SITE DEFICIENCIES	
RECOMMENDATION	COST
UPGRADE EASTERN STATE CAMPUS PERSONAL DURESS ALARM SYSTEM (PDAS)	\$3,412,000
PROVIDE TENANT FIBER-OPTIC NETWORK FROM EASTERN STATE TO LAKELAND VILLAGE	\$250,000
NOTE: OTHER ELECTRICAL OPTIONS / RECOMMENDATIONS FOR EASTERN STATE HOSPITAL ARE LIMITED TO INDIVIDUAL BUILDINGS	



KEYMAP



REVISIONS	
DWN: DAD	DATE: -----
CK'D: RCP	DATE: -----

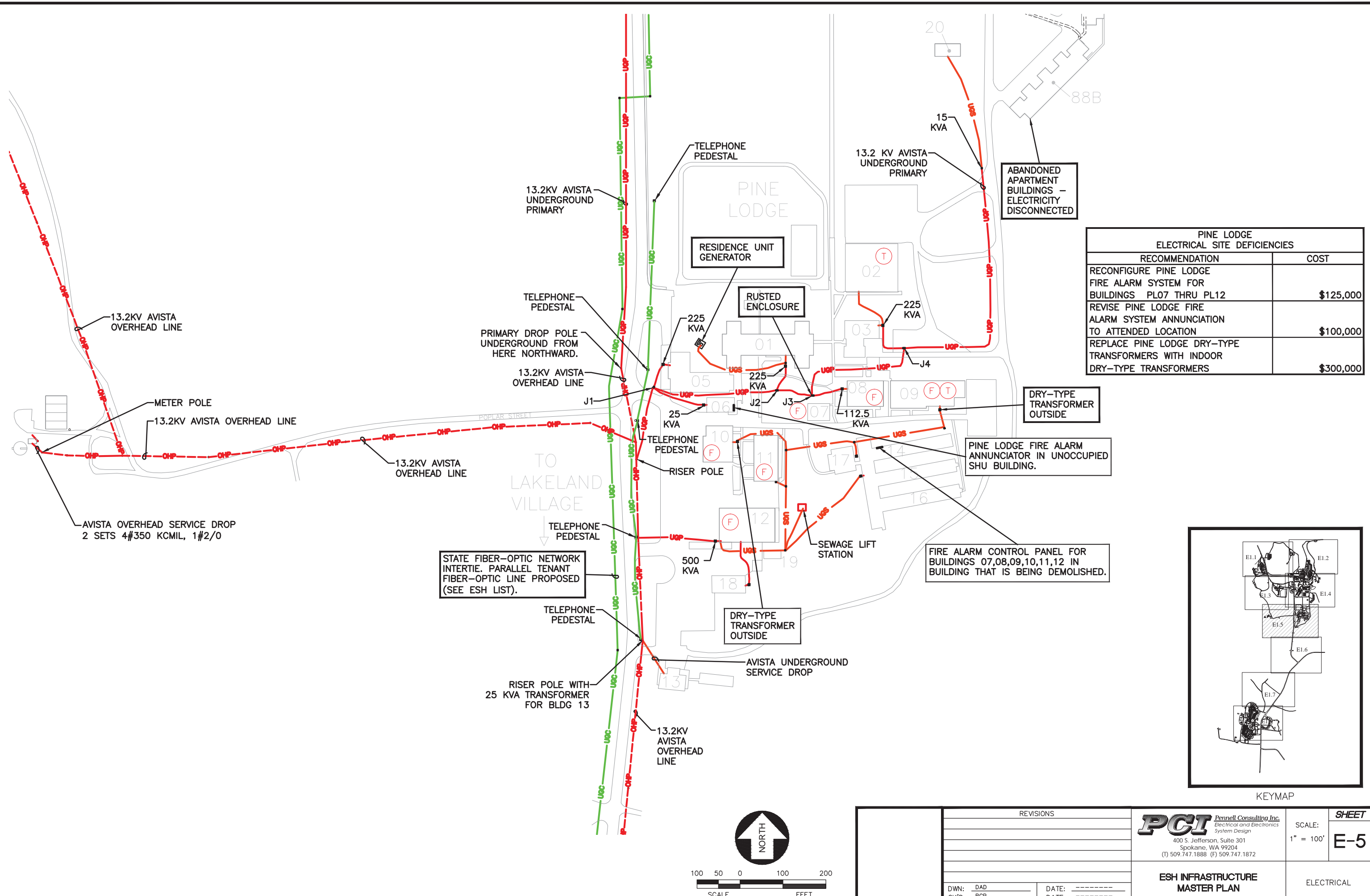
**PCI** Pennell Consulting Inc.  
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System Design  
400 S. Jefferson, Suite 301  
Spokane, WA 99204  
(T) 509.747.1888 (F) 509.747.1872

**SHEET**  
SCALE:  
1" = 100'  
**E-4**

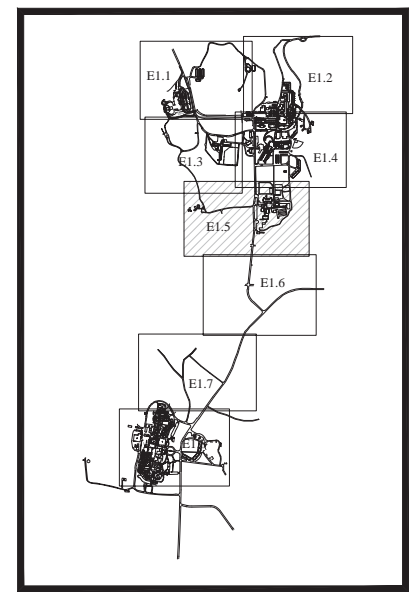
**ESH INFRASTRUCTURE  
MASTER PLAN**

ELECTRICAL  
CADD FILE:

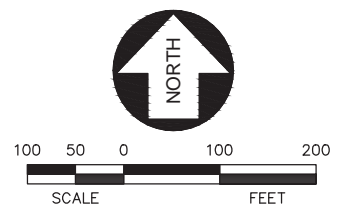




PINE LODGE ELECTRICAL SITE DEFICIENCIES	
RECOMMENDATION	COST
RECONFIGURE PINE LODGE FIRE ALARM SYSTEM FOR BUILDINGS PL07 THRU PL12	\$125,000
REVISE PINE LODGE FIRE ALARM SYSTEM ANNUNCIATION TO ATTENDED LOCATION	\$100,000
REPLACE PINE LODGE DRY-TYPE TRANSFORMERS WITH INDOOR DRY-TYPE TRANSFORMERS	\$300,000



KEYMAP



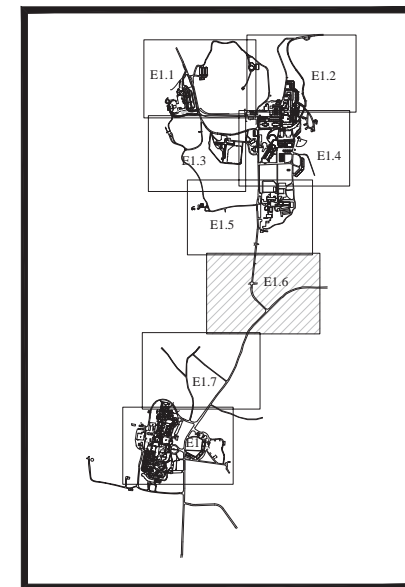
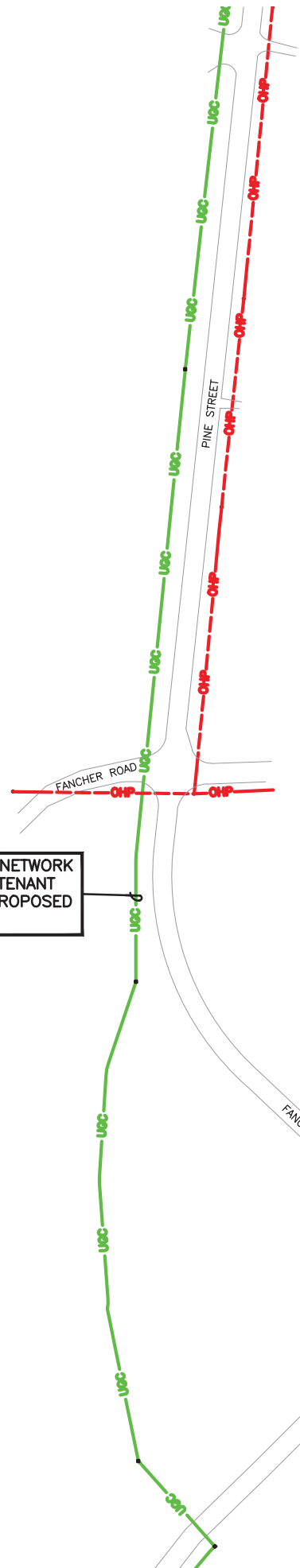
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**PCI** Pennell Consulting Inc.  
 Electrical and Electronics System Design  
 400 S. Jefferson, Suite 301  
 Spokane, WA 99204  
 (T) 509.747.1888 (F) 509.747.1872

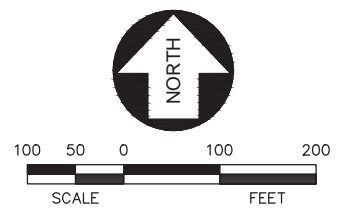
SHEET  
 SCALE:  
 1" = 100'  
**E-5**

**ESH INFRASTRUCTURE MASTER PLAN**  
 ELECTRICAL  
 CADD FILE:

STATE FIBER-OPTIC NETWORK  
 INTERTIE. PARALLEL TENANT  
 FIBER-OPTIC LINE PROPOSED  
 (SEE ESH LIST).



KEYMAP



REVISIONS	
DWN: DAD	DATE: _____
CK'D: RCP	DATE: _____

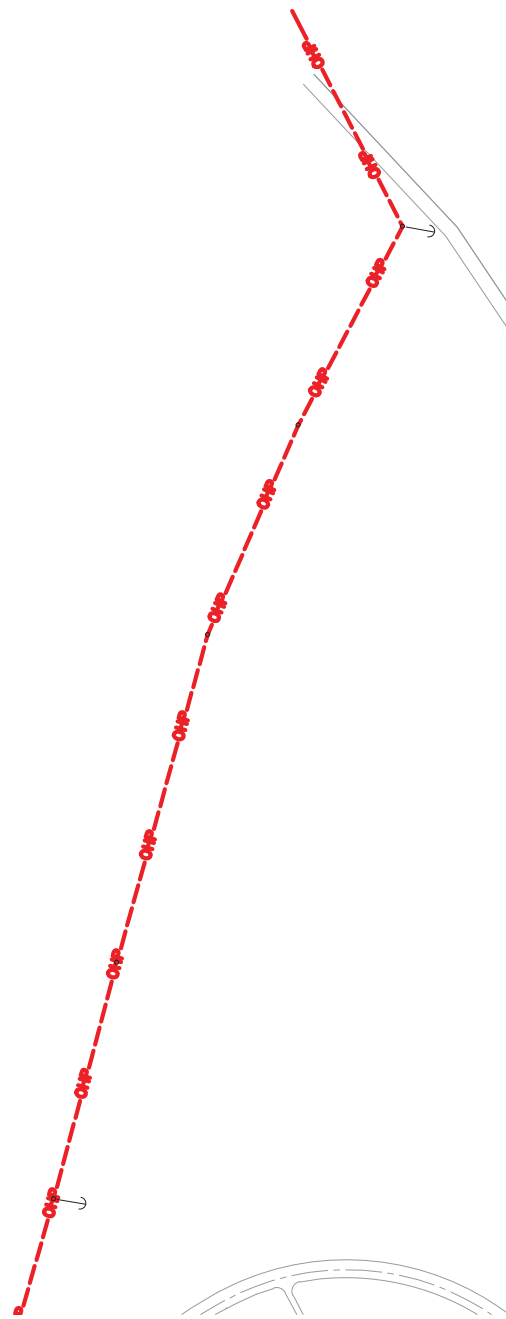
**PCI** Pennell Consulting Inc.  
 Electrical and Electronics  
 System Design  
 400 S. Jefferson, Suite 301  
 Spokane, WA 99204  
 (T) 509.747.1888 (F) 509.747.1872

**SHEET**  
 SCALE:  
 1" = 100'  
**E-6**

**ESH INFRASTRUCTURE  
 MASTER PLAN**

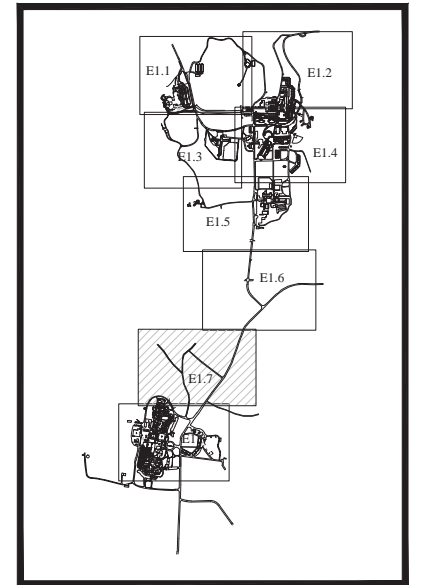
ELECTRICAL  
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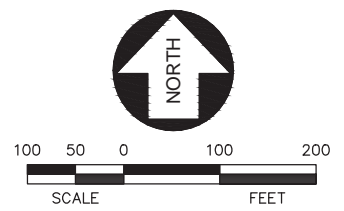


◇ BUILDING

STATE FIBER-OPTIC NETWORK  
 INTERTIE. PARALLEL TENANT  
 FIBER-OPTIC LINE PROPOSED  
 (SEE ESH LIST).



KEYMAP



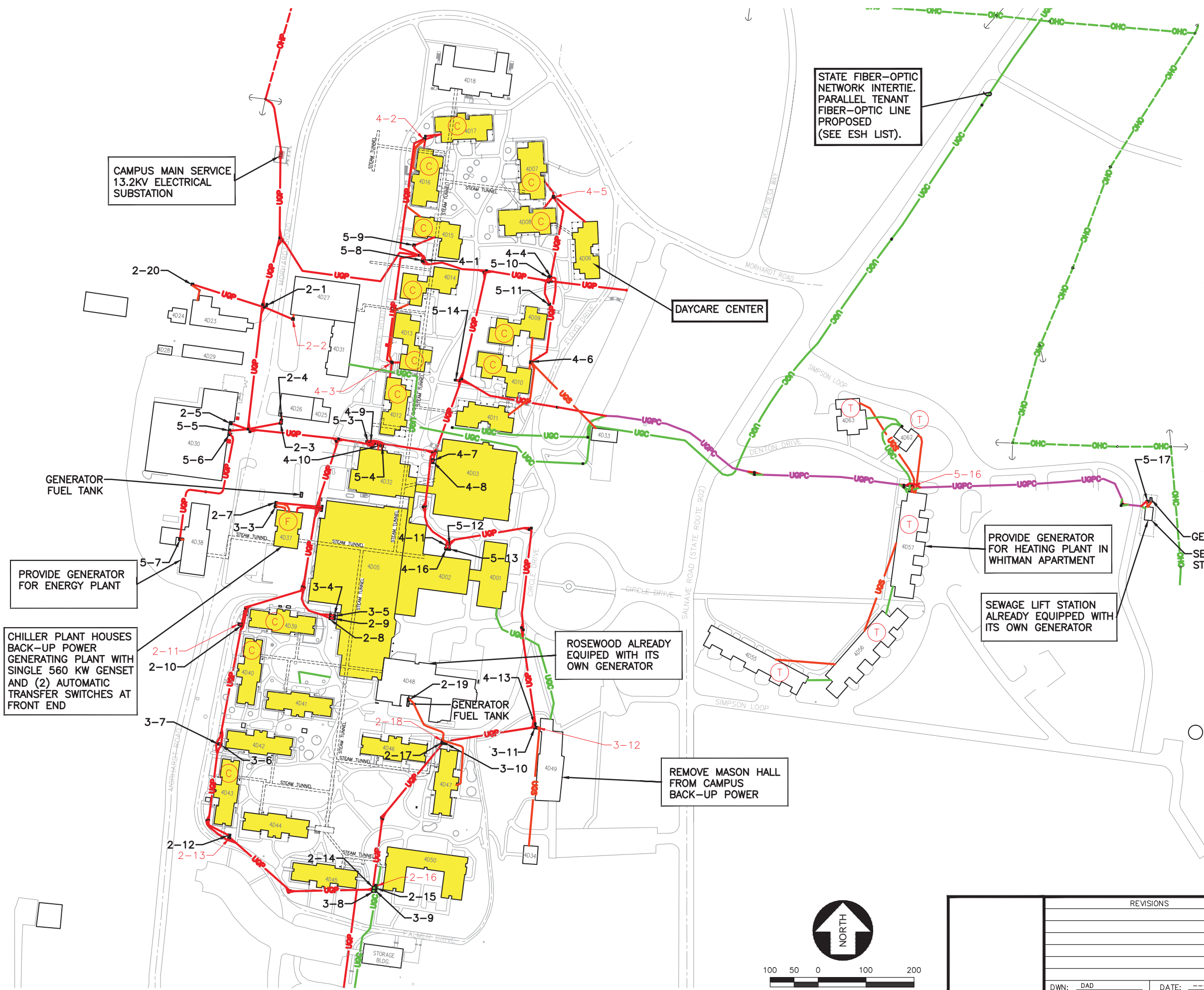
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CK'D: RCP	DATE: _____

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**SHEET**  
 SCALE:  
 1" = 100'  
**E-7**

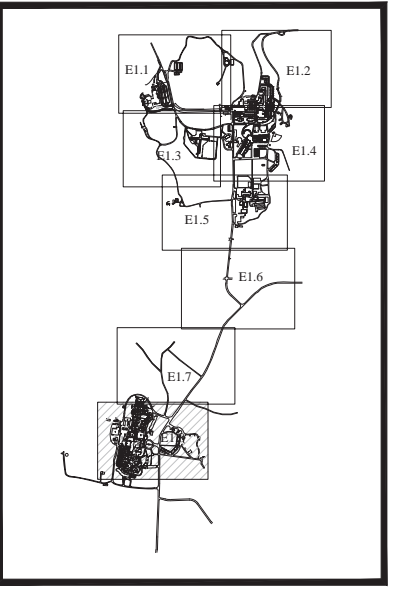
**ESH INFRASTRUCTURE  
 MASTER PLAN**

ELECTRICAL  
 CADD FILE: CADD



LAKELAND VILLAGE ELECTRICAL SITE DEFICIENCIES	
RECOMMENDATION	COST
UPGRADE/RECONFIGURE CAMPUS ESSENTIAL ELECTRICAL SYSTEM DISTRIBUTION ARRANGEMENT	\$10,000,000
UPGRADE/RECONFIGURE CAMPUS ESSENTIAL ELECTRICAL SYSTEM GENERATION PLANT	\$4,000,000
PROVIDE STAFF CALL SYSTEMS WITH EVENT REPORTING IN ASSISTED LIVING FACILITIES	\$1,300,000
REPLACE TRANSFORMER PADS FOR TILTED PAD-MOUNTED TRANSFORMERS	\$200,000
NOTE: OTHER ELECTRICAL OPTIONS / RECOMMENDATIONS FOR LAKELAND VILLAGE ARE LIMITED TO INDIVIDUAL BUILDINGS	

PAD-MOUNTED TRANSFORMERS THAT HAVE TILTED DUE TO SETTLING	
DESIGNATION	STATUS
2-02	TILTED
2-11	TILTED
2-13	TILTED
2-16	TILTED
2-18	TILTED
3-12	TILTED
4-02	TILTED
4-03	TILTED
4-05	TILTED
5-16	TILTED



KEYMAP



REVISIONS			

**PCI** Pennell Consulting Inc.  
 Electrical and Electronics  
 System Design  
 400 S. Jefferson, Suite 301  
 Spokane, WA 99204  
 (T) 509.747.1888 (F) 509.747.1872

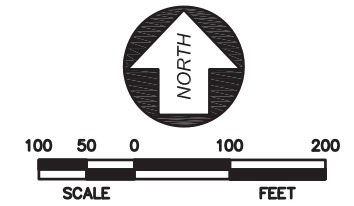
**ESH INFRASTRUCTURE  
MASTER PLAN**

**SHEET**  
**E-8**  
 SCALE:  
 1" = 100'  
 ELECTRICAL  
 CADD FILE:

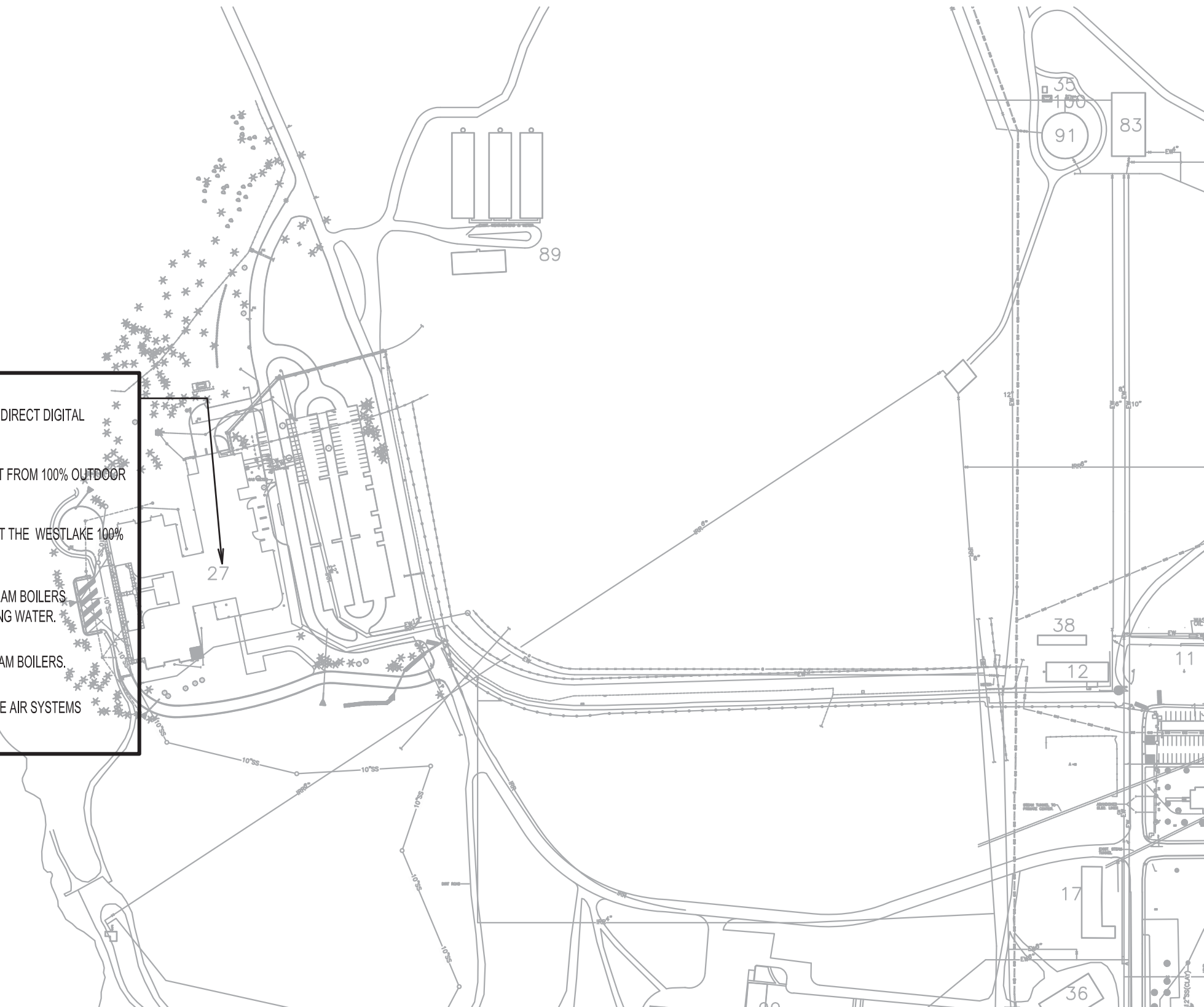
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DATE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

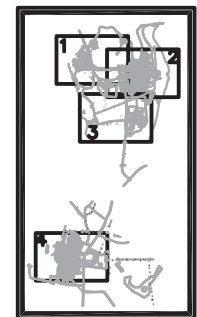




- ESH-1**  
OPTION: UPGRADE WESTLAKE BUILDING TO FULL DIRECT DIGITAL CONTROL (DDC) SYSTEM.
- ESH-4**  
OPTION: CONVERT WESTLAKE AIR HANDLING UNIT FROM 100% OUTDOOR AIR TO RECIRCULATING TYPE.
- ESH-5**  
OPTION: REPAIR THE HEAT RECOVERY SYSTEM AT THE WESTLAKE 100% OUTDOOR AIR AIR HANDLING UNIT.
- ESH-6**  
OPTION: CONVERT THE WESTLAKE HOSPITAL STEAM BOILERS AND STEAM HEATING SYSTEM TO HEATING WATER.
- ESH-7**  
OPTION: REPLACE THE WESTLAKE HOSPITAL STEAM BOILERS.
- ESH-8**  
OPTION: CONVERT WESTLAKE CONSTANT VOLUME AIR SYSTEMS TO VARIABLE AIR VOLUME.



**ESH INFRASTRUCTURE AREA 1 - MECHANICAL**  
SCALE: N.T.S.



<b>REVISIONS</b>   		<b>MW CONSULTING ENGINEERS</b> N. 222 Wall Street Suite 200 Spokane WA 99201 T: 509.838.3020 F: 509.838.1123	<b>SCALE:</b> AS NOTED	<b>SHEET</b> M-1
			<b>ESH INFRASTRUCTURE AREA 1 - MECHANICAL</b>	
<b>DWN:</b> KIMP <b>CK'D:</b> JTS	<b>DATE:</b> 5-12-2014			



**NORTH BOILER PLANT 3A-04**  
 ENERGY MANAGEMENT & CONTROL SYSTEM TERMINAL AT THIS LOCATION CAN MONITOR ALL POINTS OF THE SYSTEM BUT HAS NO ABILITY TO CHANGE VALUES SUCH AS TEMPERATURE, VALVE OR DAMPER POSITION, ETC.

**ESH-2**  
 OPTION: PROVIDE FLUE GAS HEAT RECOVERY FOR THE BOILER STACKS AT THE NORTH CAMPUS BOILER PLANT.

**ESH-3**  
 OPTION: REPLACE DEARATOR/MAKEUP WATER SYSTEM AT NORTH BOILER PLANT.

**ESH-9**  
 OPTION: RELOCATE EXISTING EASTLAKE DUAL-FUEL STEAM BOILERS TO NEW BOILER PLANT.

**ESH-10**  
 OPTION: SALVAGE EXISTING EASTLAKE GAS-FIRED HEATING WATER BOILERS.

**ESH-11**  
 OPTION: FINISH RENOVATION WORK AT THERAPY POOL.

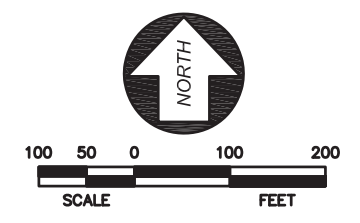
**ESH INFRASTRUCTURE AREA 2 - MECHANICAL**  
 SCALE: N.T.S.



KEYMAP

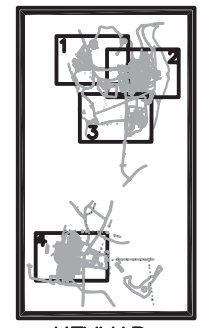
REVISIONS   		 <b>MW</b> CONSULTING ENGINEERS N. 222 Wall Street Suite 200 Spokane WA 99201 T: 509.838.3020 F: 509.838.1123	SCALE: AS NOTED	<b>SHEET</b> <b>M-2</b>
DWN: KIMP CK'D: JTS	DATE: 5-12-2014		<b>ESH INFRASTRUCTURE AREA 2 - MECHANICAL</b>	PROJECT NAME CADD FILE: 2014.225.01.M01





NO OPTIONS/ RECOMMENDATIONS  
IN THIS AREA

**ESH INFRASTRUCTURE AREA 3 - MECHANICAL**  
SCALE: N.T.S.



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REVISIONS																
DWN: <u>KIMP</u> CK'D: <u>JTS</u>	DATE: <u>5-12-2014</u> DATE: _____	<b>ESH INFRASTRUCTURE AREA 3 - MECHANICAL</b>														
PROJECT NAME		CADD FILE: <u>2014.225.01.M01</u>														



**CONSOLIDATED SUPPORT SERVICES - HVAC SHOP 4D-31**  
 ENERGY MANAGEMENT & CONTROL SYSTEM TERMINAL AT THIS LOCATION CAN BOTH MONITOR AND CHANGE VALUES OF ALL POINTS IN THE SYSTEM SUCH AS TEMPERATURE, VALVE OR DAMPER POSITION, ETC.

**LV-2**  
 OPTION: REPLACE PIPE EXPANSION JOINTS IN STEAM HEATING PIPING.

**LV-3**  
 OPTION: REPLACE EXISTING STEAM AND CONDENSATE PIPING REDUCING STATIONS

**LV-4**  
 OPTION: REPLACE EXISTING PIPE IN THE CHILLED WATER PIPING SYSTEM AT LAKELAND VILLAGE.

**LV-12**  
 OPTION: PROVIDE STANDALONE MECHANICAL SYSTEMS AT THE NORTH AND SOUTH CAMPUS COTTAGES.

**LV-9**  
 OPTION: CONVERT LAKELAND VILLAGE SCHOOL BUILDING CONSTANT VOLUME AIR SYSTEM TO VARIABLE AIR VOLUME.

**LV-10**  
 OPTION: CONVERT LAKELAND VILLAGE SCHOOL BUILDING TO DIRECT DIGITAL CONTROLS.

**LAKELAND VILLAGE ENERGY (STEAM) PLANT 4D-38**  
 ENERGY MANAGEMENT & CONTROL SYSTEM TERMINAL AT THIS LOCATION CAN MONITOR ALL POINTS OF THE SYSTEM BUT HAS NO ABILITY TO CHANGE VALUES SUCH AS TEMPERATURE, VALVE OR DAMPER POSITION, ETC.

**LV-7**  
 OPTION: REPLACE EXISTING NATURAL GAS BURNERS ON THE STEAM BOILERS AT LAKELAND VILLAGE.

**LV-11**  
 OPTION: PROVIDE VACUUM CONDENSATE RETURN PUMP AT THE LAKELAND VILLAGE STEAM PLANT.

**LV-12**  
 OPTION: PROVIDE STANDALONE MECHANICAL SYSTEMS AT THE NORTH AND SOUTH CAMPUS COTTAGES.

**LV-1**  
 OPTION: UPGRADE THE REMAINING HOUSING COTTAGES TO FULL DDC SYSTEM.

**ESH INFRASTRUCTURE AREA 4 - MECHANICAL**  
 SCALE: N.T.S.



<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>		REVISIONS												 <b>MW CONSULTING ENGINEERS</b> N. 222 Wall Street Suite 200 Spokane WA 99201 T: 509.838.9020 F: 509.838.1123	SCALE: AS NOTED	<b>SHEET</b> <b>M-4</b>
REVISIONS																
DWN: KIMP CK'D: JTS	DATE: 5-12-2014	<b>ESH INFRASTRUCTURE AREA 4 - MECHANICAL</b>	PROJECT NAME CADD FILE: 2014.225.01.M01													