

TRUCKEE TAHOE AIRPORT DISTRICT
BOARD OF DIRECTORS AGENDA ITEM SUMMARY

Topic: Engineering Related Project Activities

Purpose	Information: X Guidance: Decision: X
Recommendation	First five items for information only Adoption of updated Pavement Management Plan Rehabilitation Schedule
Discussion	<p><u>Utility Master Plan</u></p> <p>My office has started the preparation of as-built mapping (location, size, age, type of material) of all underground utility infrastructure (water, sewer, storm-drain, power, telephone and natural gas) using plans from previous projects (starting in 1970) up to and including last year's ramp projects. As the initial "paper" mapping is completed, the Operations Staff will be tasked with reviewing, correcting and in most cases adding information (based on their collective institutional knowledge) not shown on the drawings. After the mapping is completed in AutoCAD, the information will be converted to GIS format and available to staff either electronically (IPad), or in the form of a paper "Map Book", depending upon the user's preference.</p> <p>Once the mapping is complete, investigation of the condition of representative infrastructure will be completed through limited excavation(s) (water pipes), closed circuit TV (sanitary and storm-sewer) and discussions with the local utility providers (power and gas) to determine remaining life and replacement/upgrade suggestions.</p> <p><u>Replacement Plow Truck</u></p> <p>The 1990 Oshkosh Plow Truck has reached the end of its useful life and some repair parts (for the transfer case in particular) are no longer available. The recently submitted ACIP includes \$420,000 for a replacement and Staff is preparing the bidding and technical specifications for a new truck.</p> <p>The Operations Staff prepared a five-page single-spaced list of necessary and desired features including:</p> <ul style="list-style-type: none">• Four-wheel drive• Four-wheel steering• 18-foot wide main plow• 12-foot side mounted wing plow• Dump bed

TRUCKEE TAHOE AIRPORT DISTRICT
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- Tier 4 emission engine and automatic transmission

To ensure the specifications are as complete as possible, and that we don't end up with components that are not user friendly and/or not mechanically reliable, we have been in contact with the Town of Truckee fleet manager and have reviewed documents put together by Reinard Brandley's office for a plow truck for the Nervino Airport at Beckwourth.

The bid package should be distributed before the end of February with proposals due back in late March. Once the bids are reviewed, Staff will contact the FAA to determine if funding is available to purchase the truck and if so bring the contract award before the Board for consideration. Delivery could take as long as nine-months from the date the Supplier is given notice-to-proceed.

Tahoe City Helipad

Reinard Brandley's office has made good progress on the design of the helipad proposed at the Tahoe City Golf Course. I have been in contact with the Tahoe City Public Utility District (TCPUD) re: TRPA permitting; specifically land capability district boundary and existing impervious coverage mapping. Last summer/fall the TCPUD submitted a "land capability challenge" i.e. their proposed mapping of the soil types and development potential on the entire parcel as compared to mapping/designations previously used on the property. TRPA staff is recommending acceptance of the TCPUD's changes, and a hearing is scheduled for March 6th. Unfortunately, because the most appropriate and preferred site (adjacent to the fire station and good tree clearances) for the helipad is mapped as Stream Environment Zone (SEZ) and therefore the most environmentally sensitive, the time required to secure a grading permit is substantial and it is likely construction of the helipad will not occur until 2015. Once the updated mapping is approved in March, we will start work on the TRPA and Placer County permitting process and be able to report back to the Board on the anticipated construction timing.

Fuel Island and Tank Farm Corrections

Staff and the Electrical Engineer/Inspector met with the original tank installation contractor and a local electrical contractor and completed additional research including telephone conversation(s) with the National Electric Code (NEC) publisher in order to finalize the scope of the required corrections at the self-serve island and farm. Drawings have been prepared showing new circuit diagrams and relocated equipment (i.e. that cannot be located in a hazardous environment). Airport staff is fabricating signage mounting brackets (to move the required gallons/price signs on the light pole) and a

TRUCKEE TAHOE AIRPORT DISTRICT
BOARD OF DIRECTORS AGENDA ITEM SUMMARY

free-standing backboard to relocate the tank's electrical panels away from the tank. The farm corrections involve much less effort in the way of relocating equipment out of the classified area and more typically involve the installation of additional conduit seals and mounting hardware.

As mentioned last fall, the biggest challenge is finding an electrical contractor that knows the section(s) of the NEC that apply to fueling installations so that SA Engineering's inspector does not have to point out every required correction to the Contractor. We believe the local contractor we met with has sufficient knowledge/experience to do the work and are waiting on a proposal.

Americans with Disabilities Act Compliance

Staff contacted two firms that do ADA compliance inspections and selected ADA Consultant Services of Loomis, California, at a cost of \$2,690, to inventory the airport facilities and prepare a written report. Once the analysis is complete, Staff will update the Board on what is required and how to best to accomplish the upgrades.

Pavement Management Plan Update

As mentioned during the December 2013, meeting discussion re: submittal of the 2014 Airport Capital Improvement Program (ACIP), Reinard Brandley's office completed a field inspection and updated the Pavement Condition Index (PCI) score for the all of the District's paved facilities. The new PCI scores were used to update the rehabilitation schedule of the District's 2011 Pavement Management Plan (Plan). Not surprisingly, the new scores resulted in a re-prioritization of the timing of some work, the most notable being:

- Apron A-4's score decreased to 23 (very poor) from 37/40 (poor/fair) and reconstruction is planned for 2014
- The PCI scores for the South Jet Apron and taxi lanes l and m (hangar rows west G and G/H) decreased by 11 to 25 points and reconstruction is now proposed in 2015 as compared to the original schedule of 2022
- The eastern-most portion of taxiway A and the connectors also decreased, by up to 17 points, and reconstruction is now planned for 2016 as compared to 2018.

The recommended 2014-2031 Maintenance and Rehabilitation Program is shown graphically on attached Plates 4-1 through 4-5; Table 4-2 provides the same information along with the 2011 and 2013 PCI scores and a description of the type of distress (surface

TRUCKEE TAHOE AIRPORT DISTRICT
BOARD OF DIRECTORS AGENDA ITEM SUMMARY

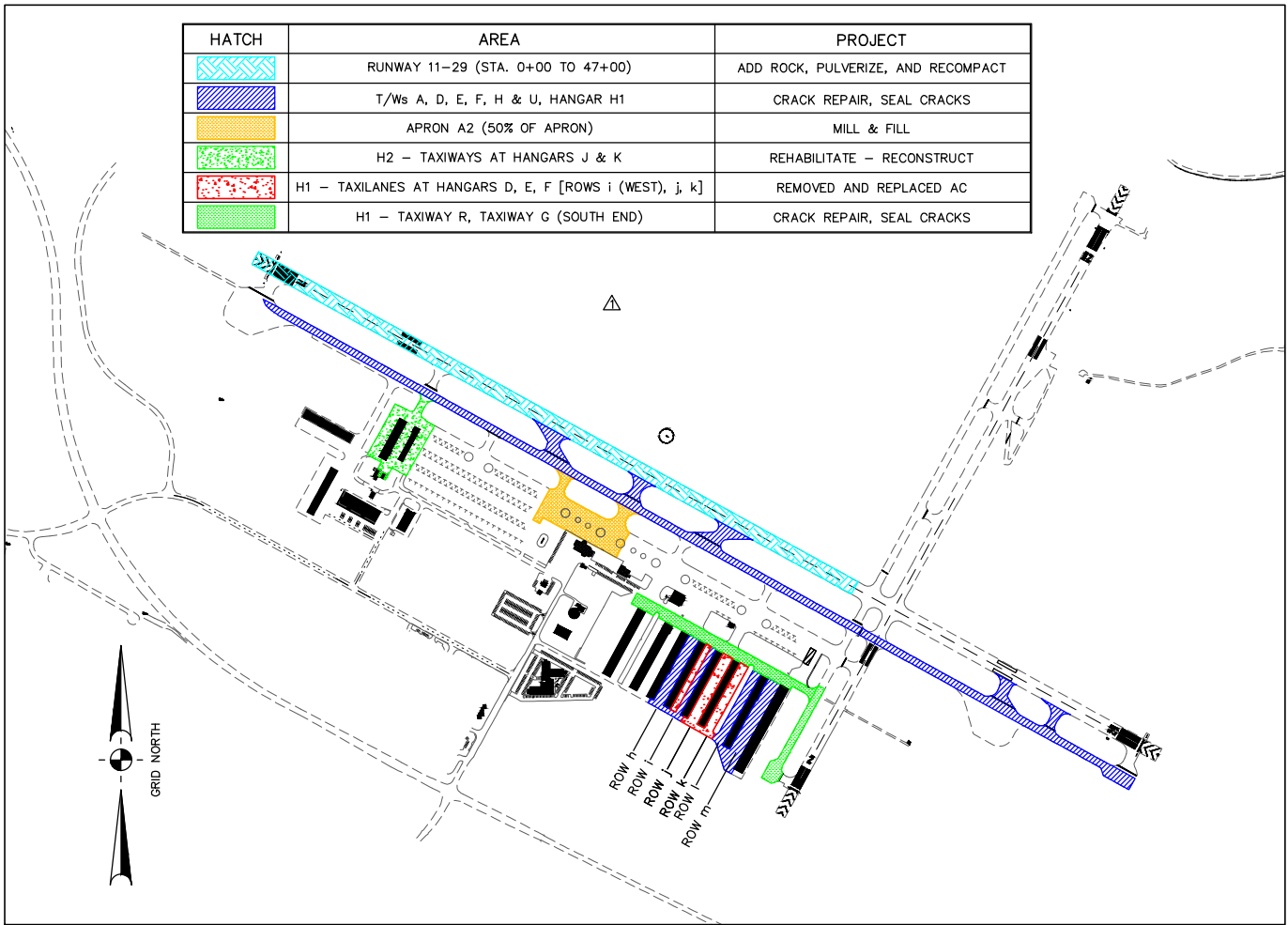
or deep-seated) creating the need for reconstruction. The work planned beyond 2018 or 2019 is a best estimate of what will be required but in all likelihood the timing and priority of improvements will change when the next PCI inventory is completed. While some amount of pavement maintenance will always be required, the magnitude of the areas requiring total reconstruction continues to decrease and projects slated for 2020 and beyond are based more on engineering projections than current condition. Plates 2-1a and 2-1b compare the 2011 and 2013 PCI scores and show the significant improvement in pavement quality.

Fiscal Impact

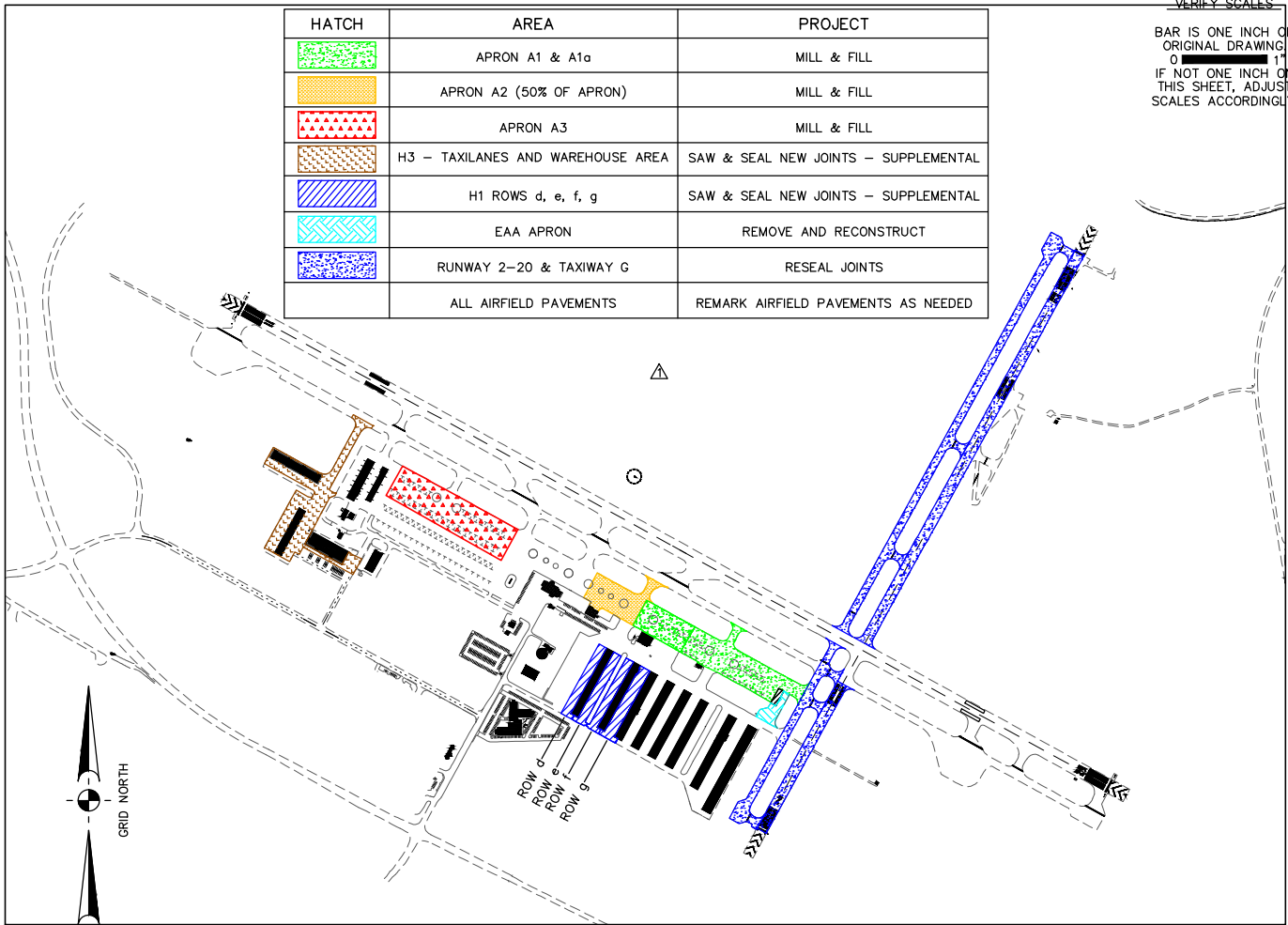
Utility Master Plan – \$30,000 estimated
Replacement Plow Truck – \$420,000 budget (95% FAA funding)
Helipad Construction – \$270,000 budget
Fuel Island/Farm Corrections - \$65,000 budget
ADA Compliance Report - \$ 6,500 budget
Pavement Management Plan Update – As shown on Table 4-2

Attachments

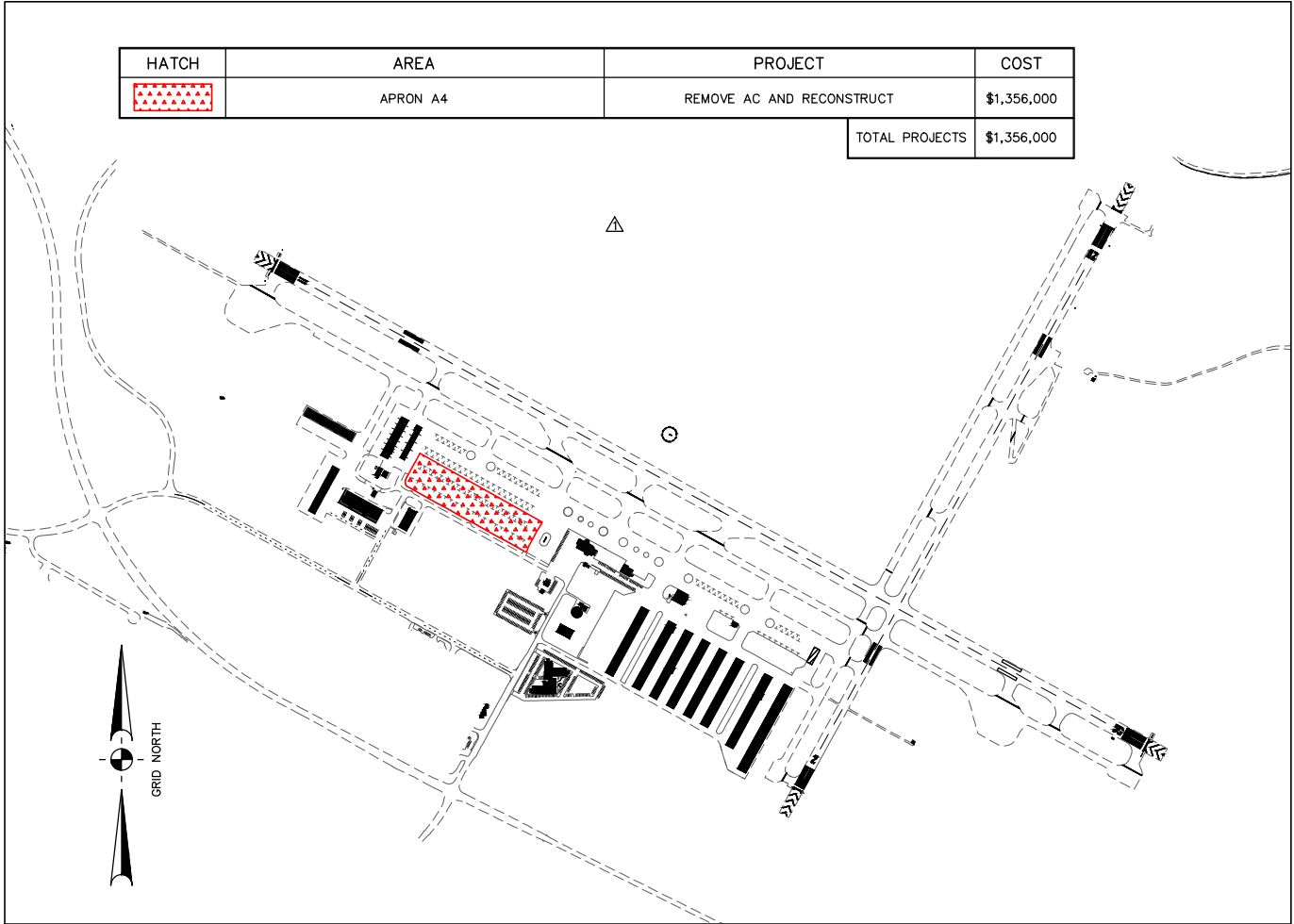
Pavement Management Plan Plates 4-1 through 4-5
Pavement Management Plan Table 4-2
Pavement Management Plan Plates 2-1a and 2-1b



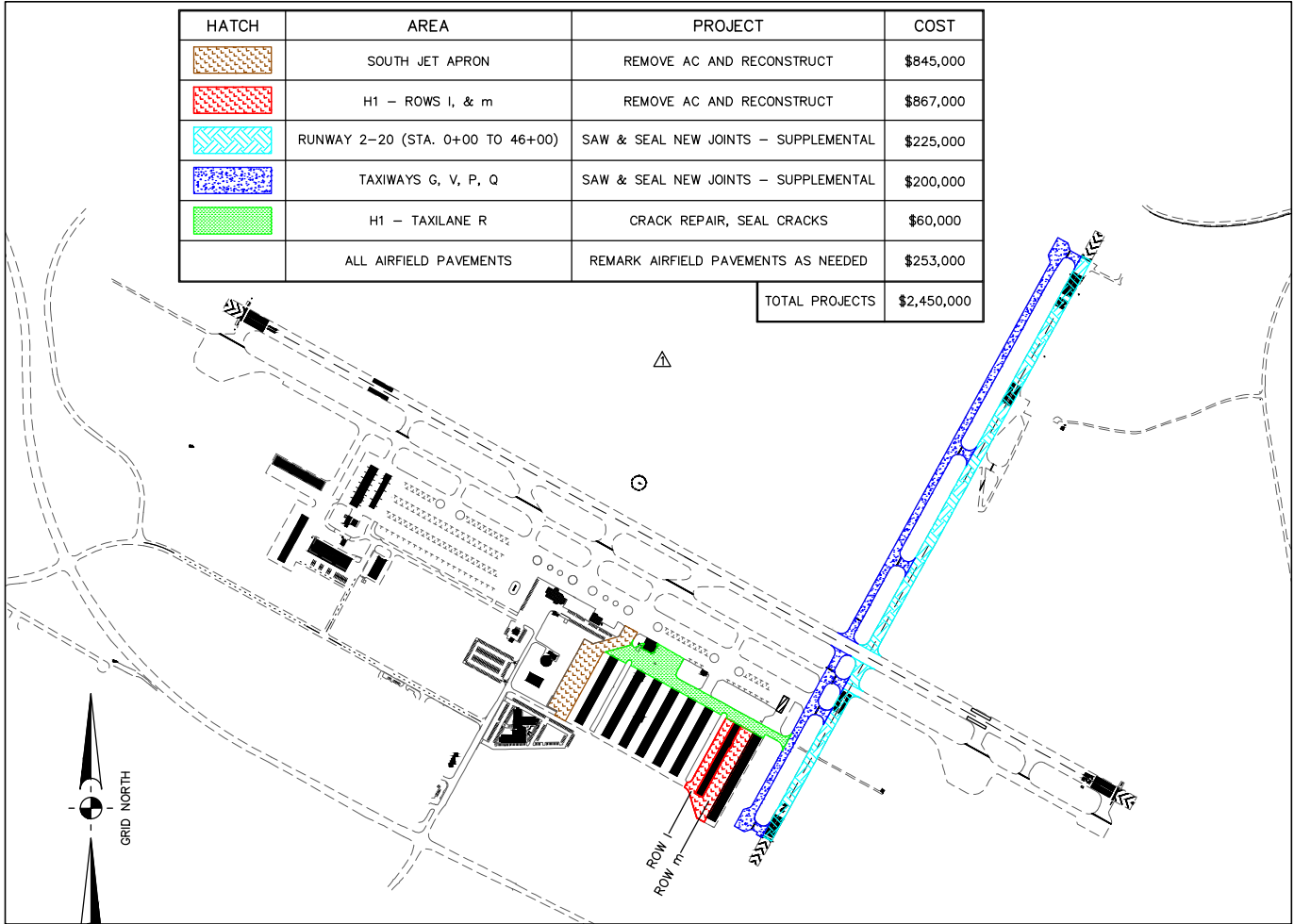
2012 MAINTENANCE AND REHABILITATION COMPLETED PROJECTS



2013 MAINTENANCE AND REHABILITATION COMPLETED PROJECTS



2014 MAINTENANCE AND REHABILITATION SCHEDULE



2015 MAINTENANCE AND REHABILITATION SCHEDULE

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1'
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REINHOLD W. BRANDLEY
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Exp. 9-30-2014
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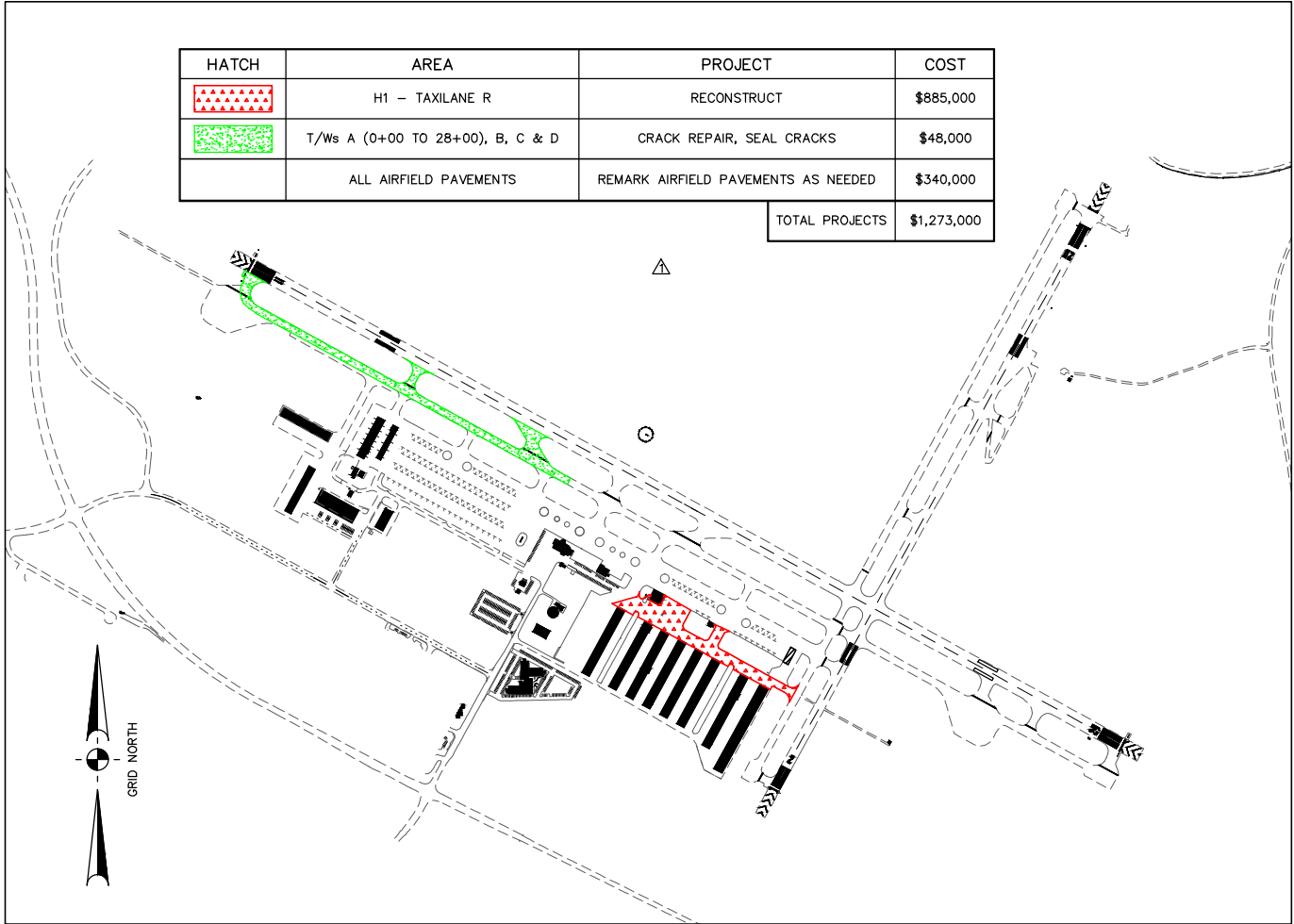
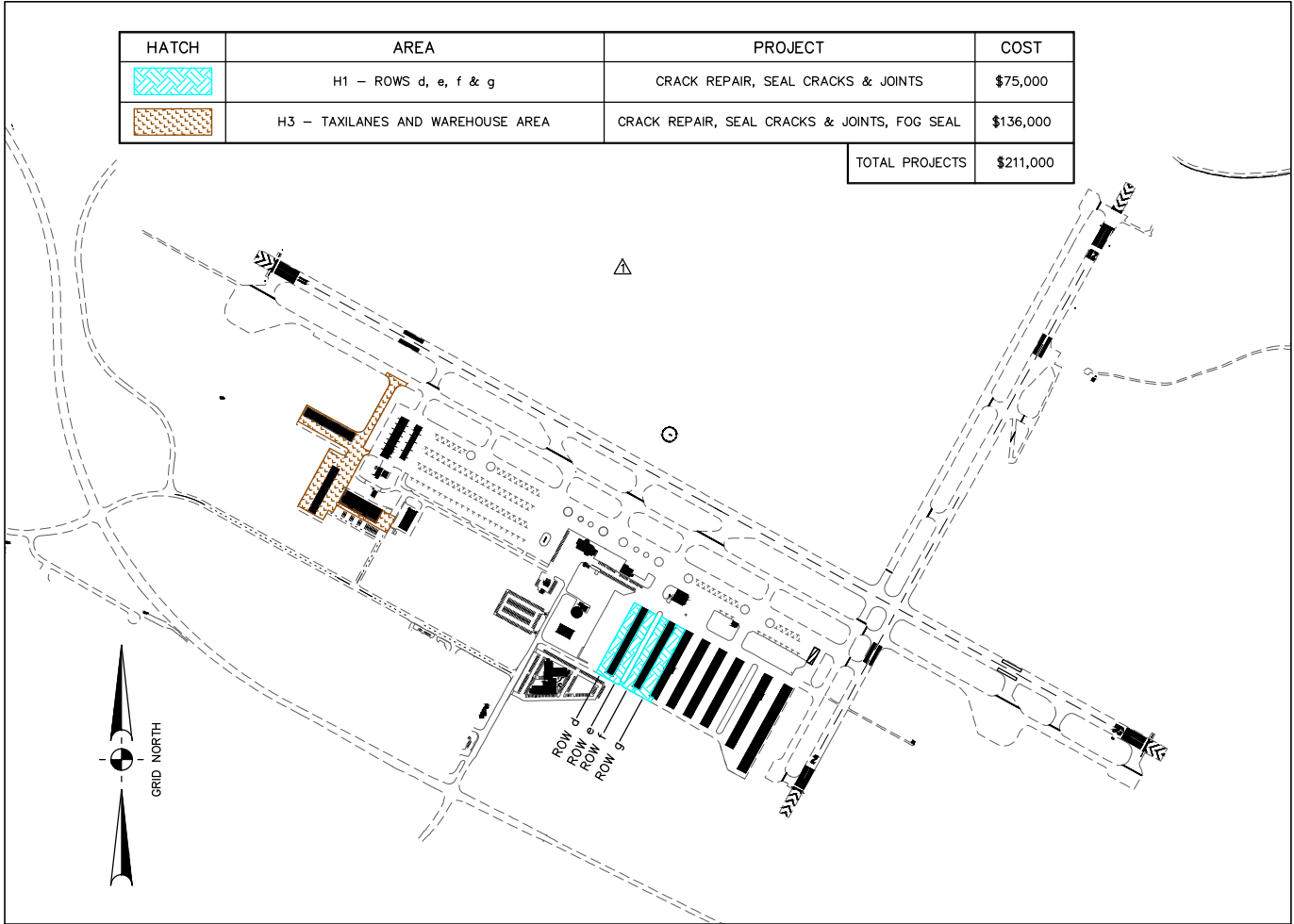
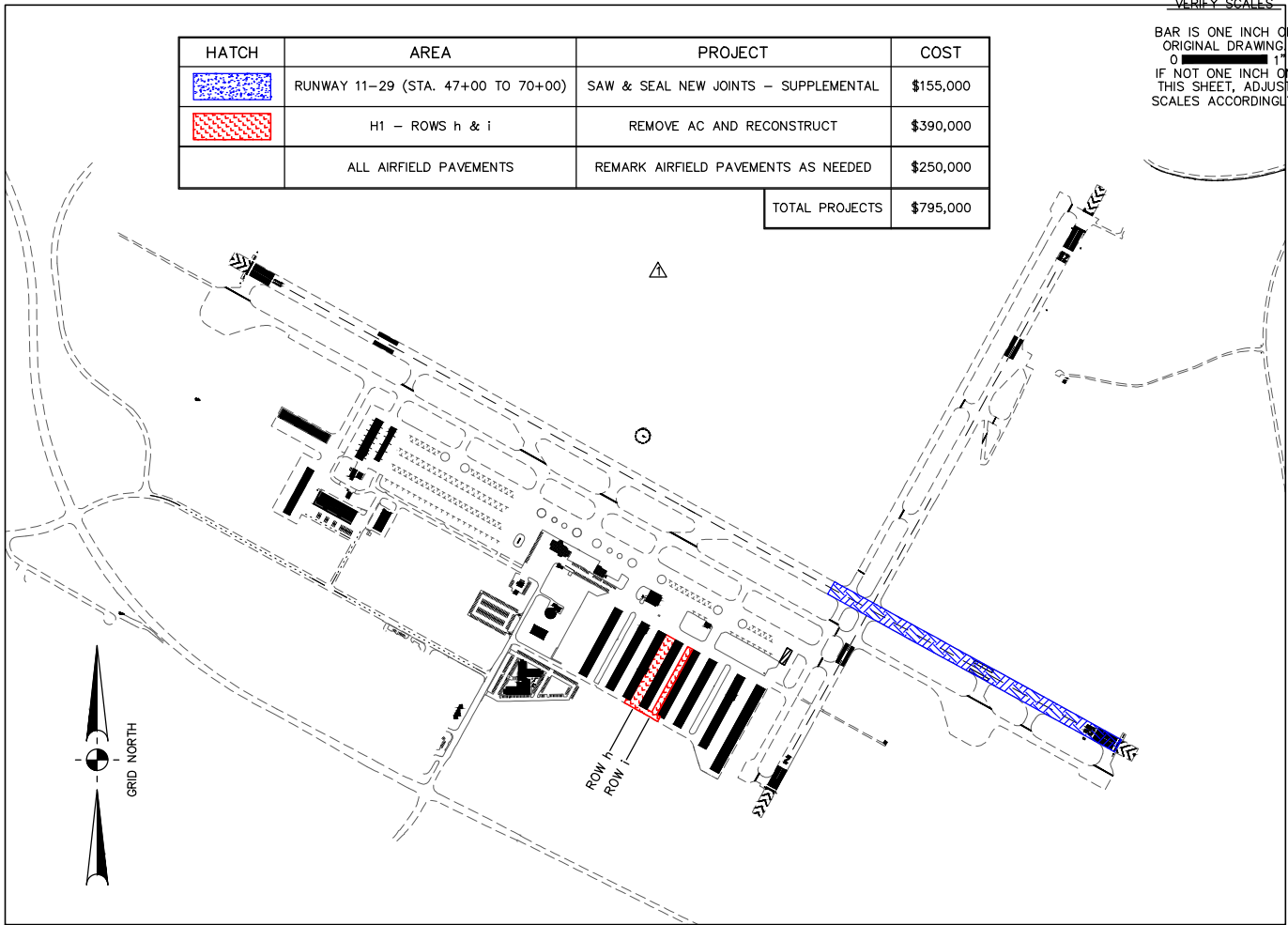
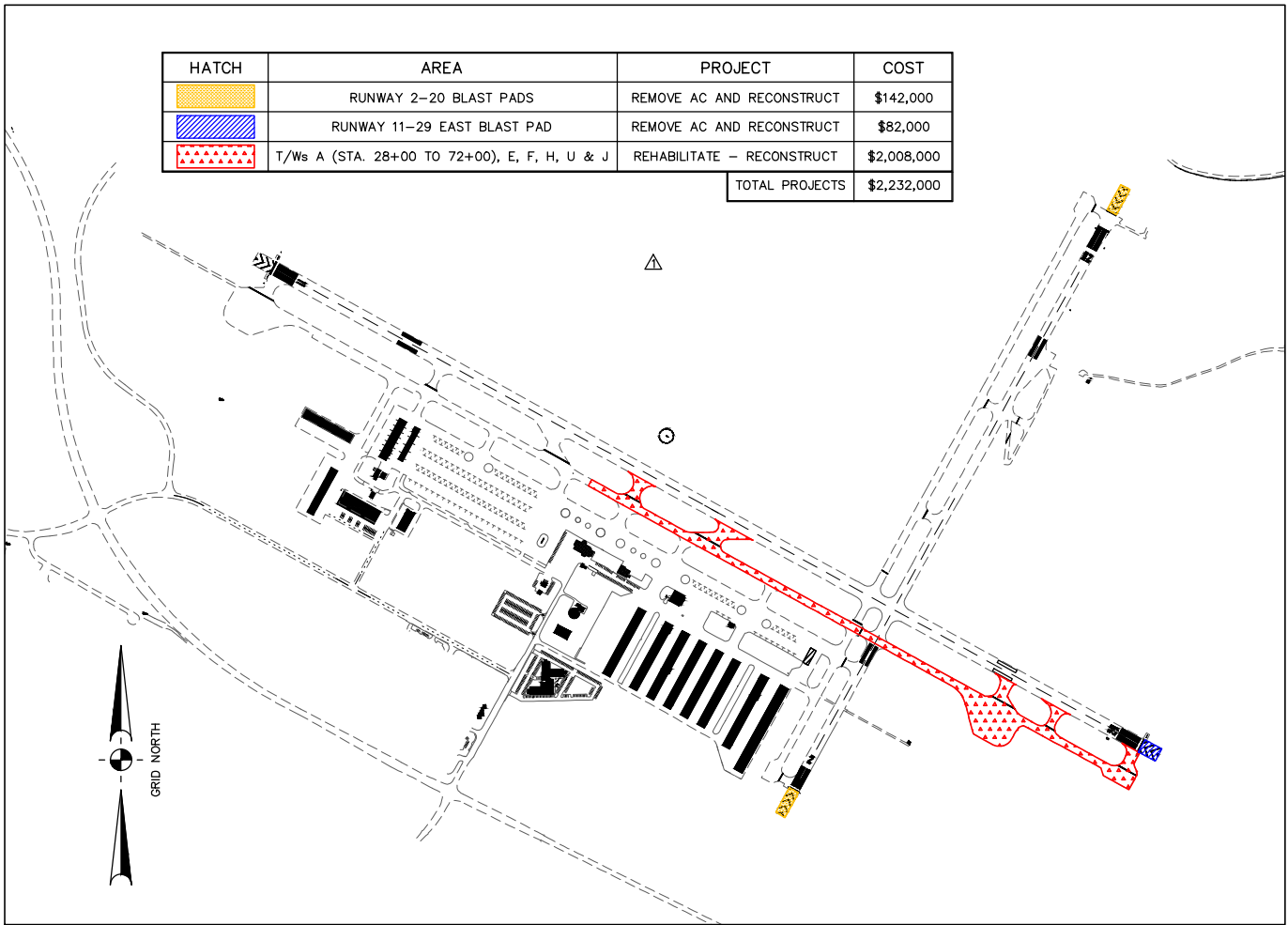
ENGINEER OF RECORD
BY DATE
RWB 1/14
RDB
2013 PMP UPDATE
NO. 1

TRUCKEE TAHOE AIRPORT
TRUCKEE, CALIFORNIA

PAVEMENT EVALUATION
REHABILITATION SCHEDULE 2012-2015

DESIGN BY: RWB
DRAWN BY: DMB
CHK'D BY: RWB
DATE: SEPT. 7, 2011
CONTRACT No. -
PROJECT NO: 40
DWG FILE: MAINTENANCE SCHEDULE
DRAWING SCALE: 1"=600'

SHEET
NUMBER
PLATE NO. 4-1



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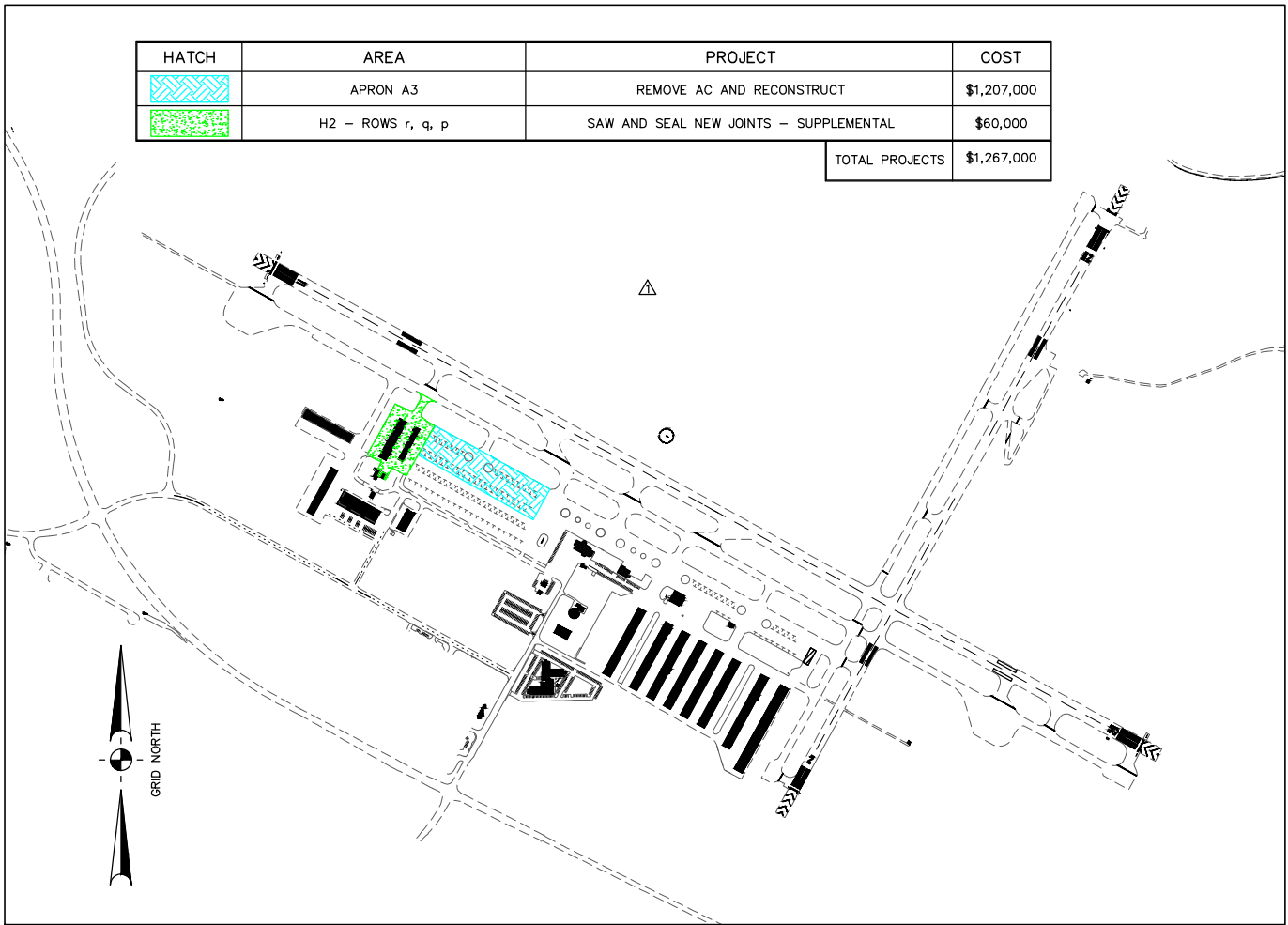
BY DATE
RWB 1/14
RDB
2013 PMPM UPDATE
NO. 1

REVISIONS
2013 PMPM UPDATE
NO. 1

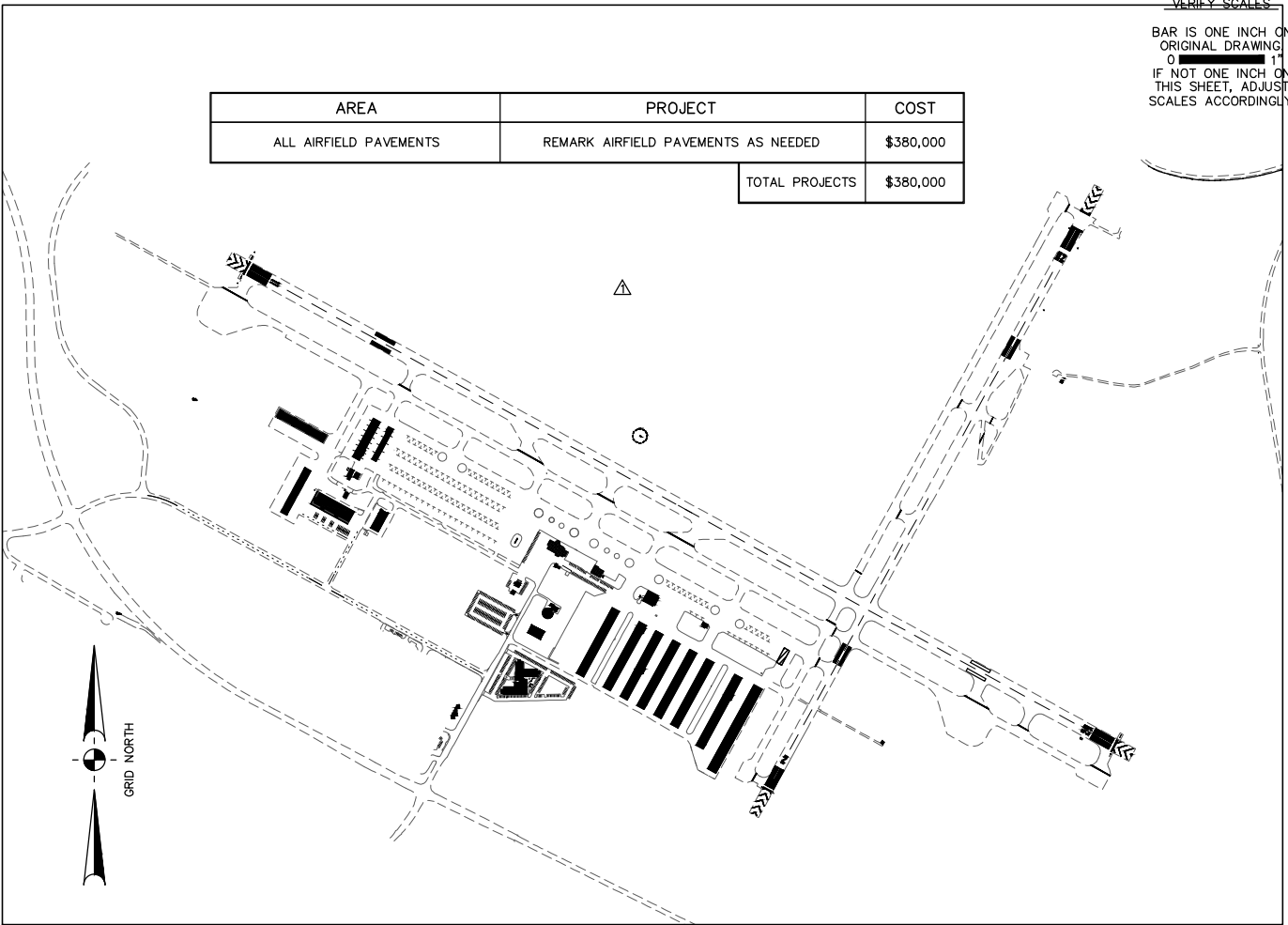
TRUCKEE, CALIFORNIA
PAVEMENT EVALUATION
REHABILITATION SCHEDULE 2016-2019

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CHK'D BY: RWB
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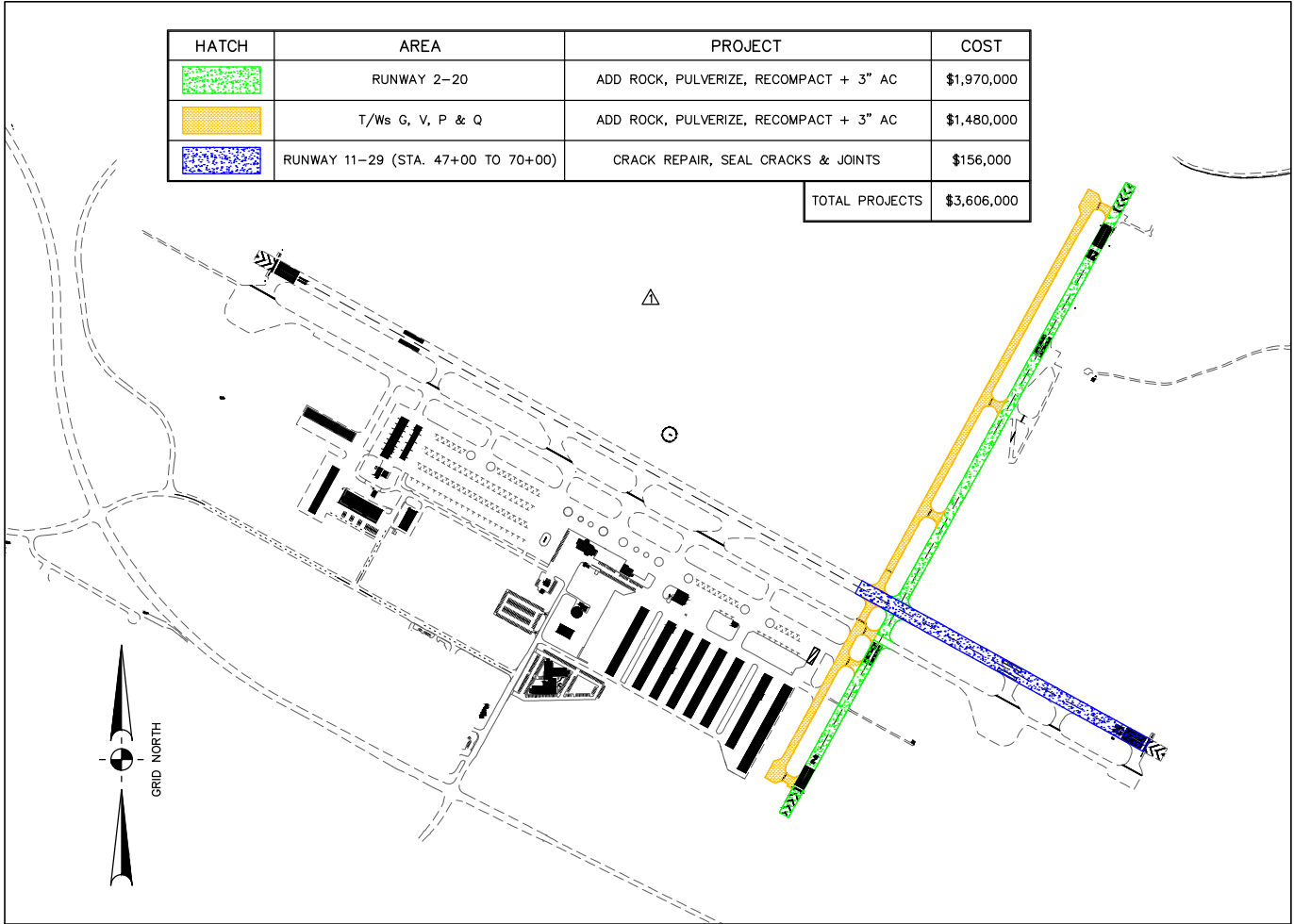
SHEET NUMBER
PLATE NO. 4-2



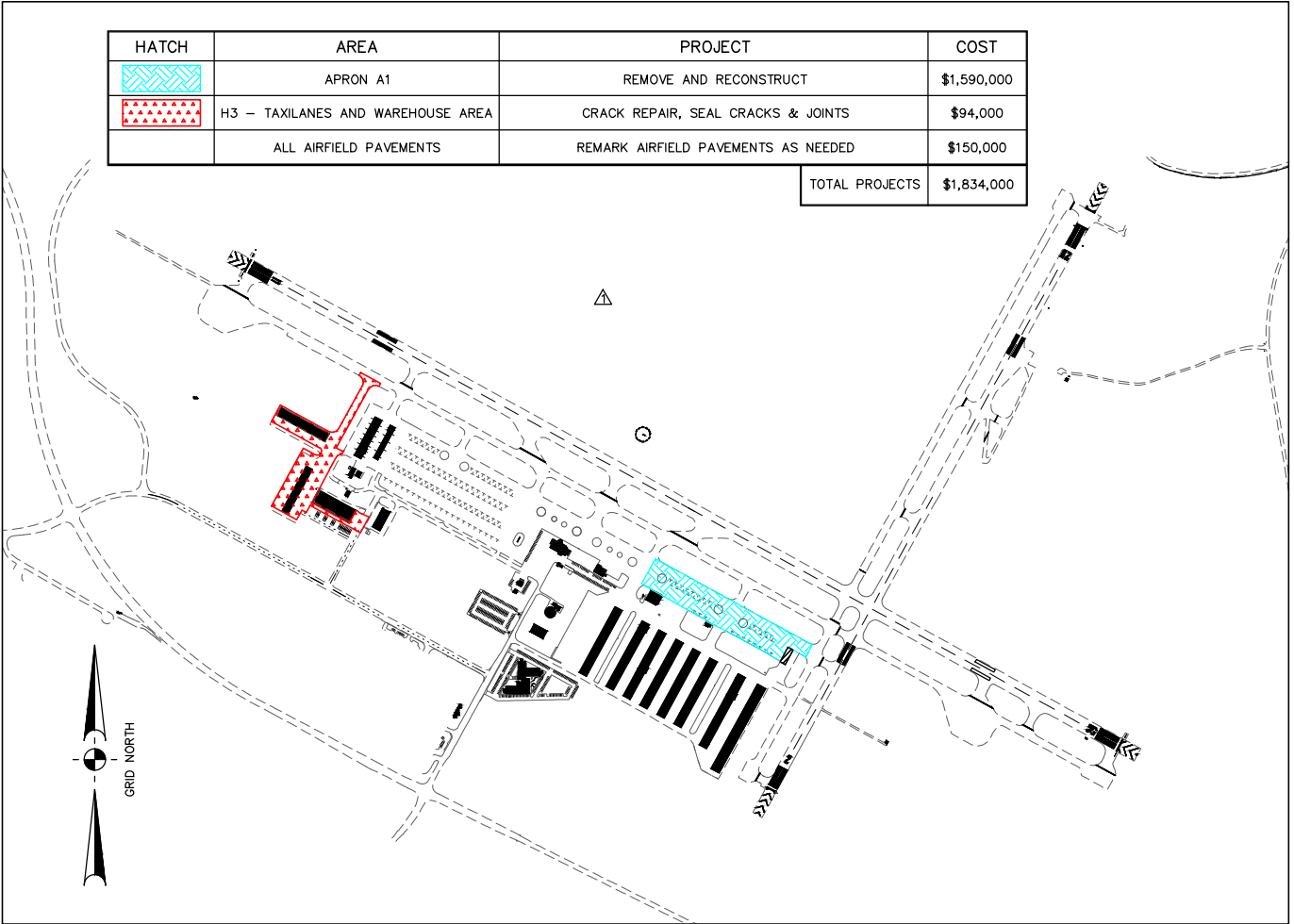
2020 MAINTENANCE AND REHABILITATION SCHEDULE



2021 MAINTENANCE AND REHABILITATION SCHEDULE



2022 MAINTENANCE AND REHABILITATION SCHEDULE



2023 MAINTENANCE AND REHABILITATION SCHEDULE

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GRID NORTH

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NO.	REVISIONS	BY	DATE	APPROVED
	2013 PMP UPDATE	RWB	1/14	

TRUCKEE, CALIFORNIA

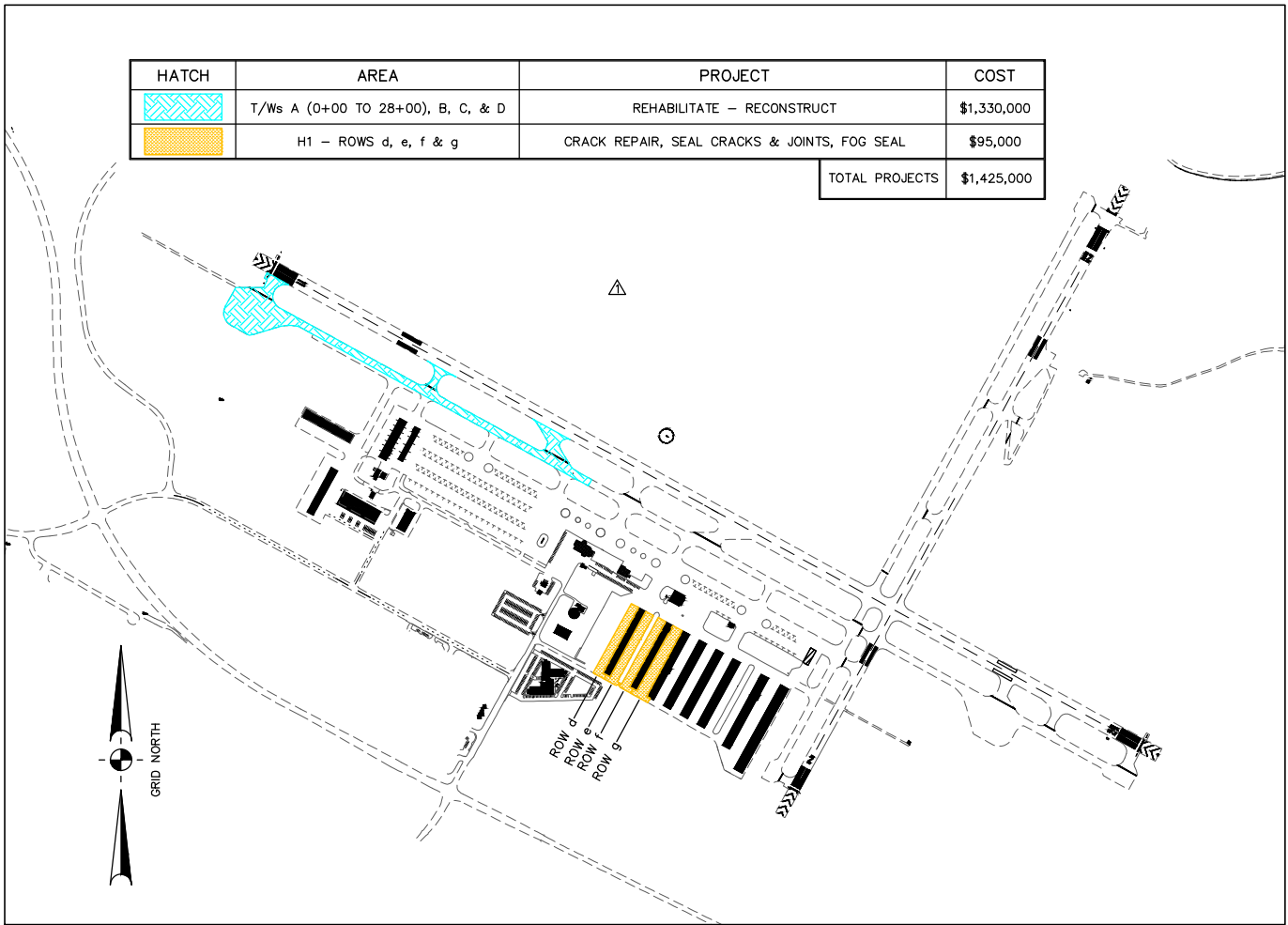
TRUCKEE TAHOE AIRPORT

PAVEMENT EVALUATION

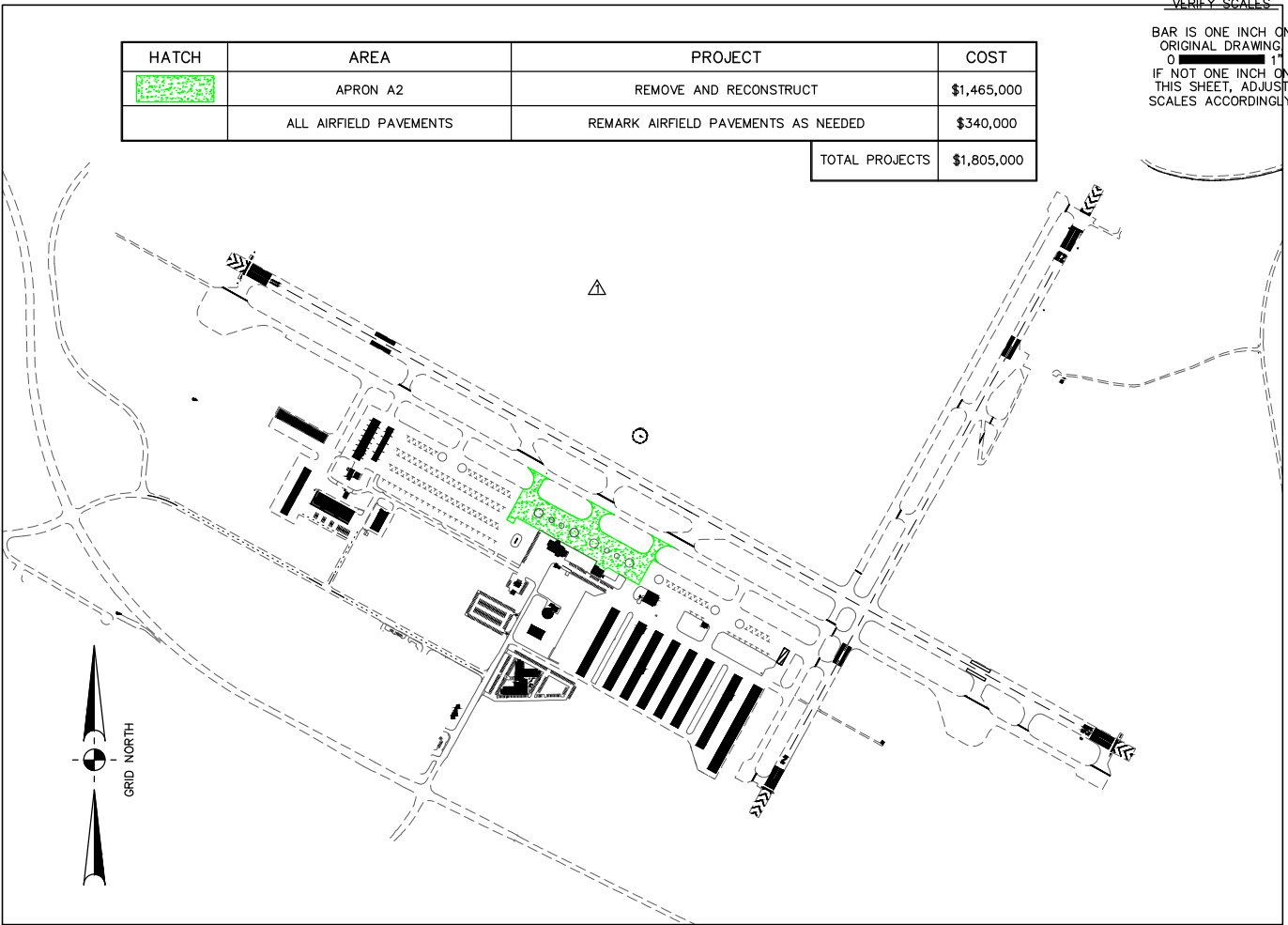
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CHK'D BY: RWB
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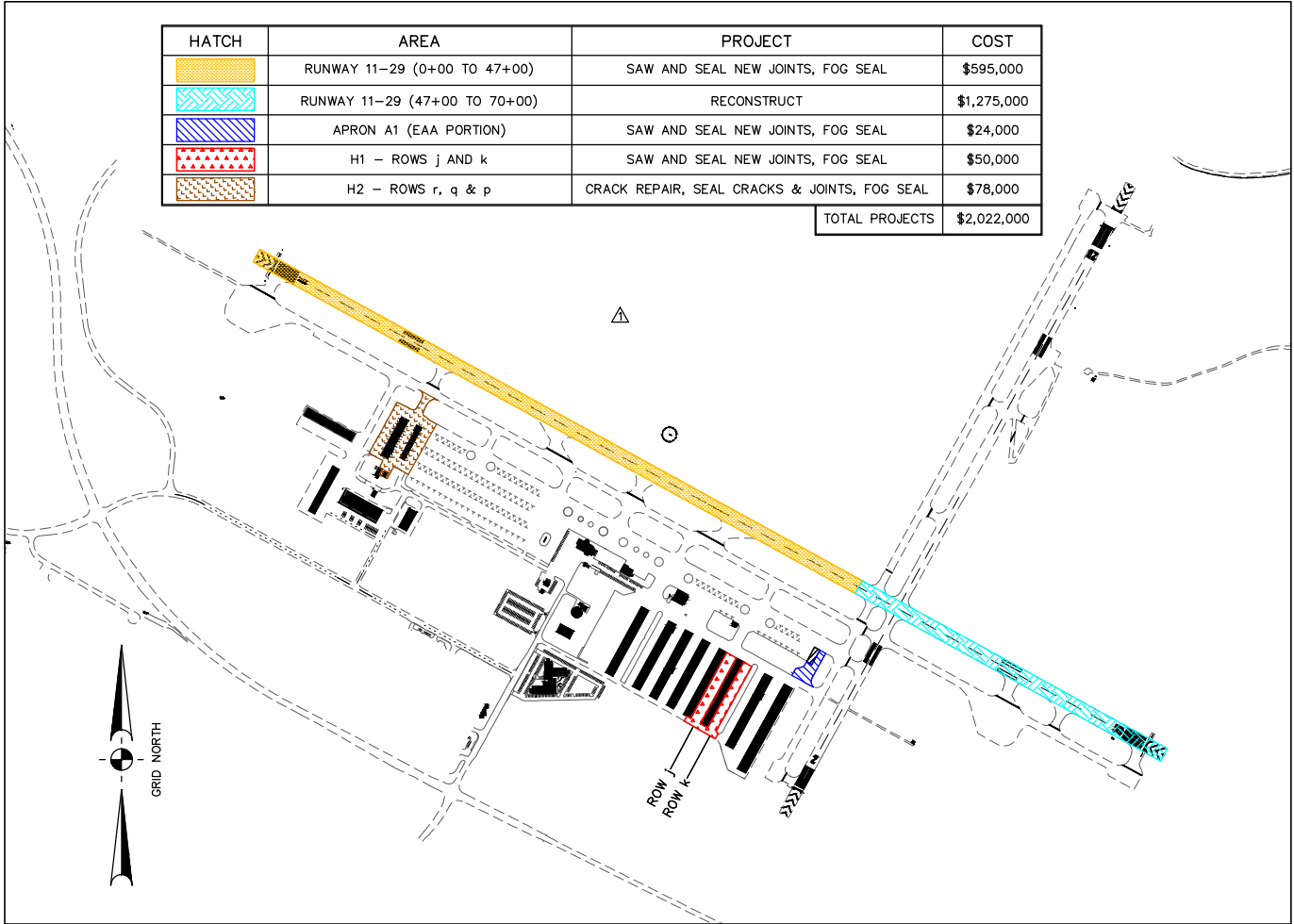
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PLATE NO. 4-3



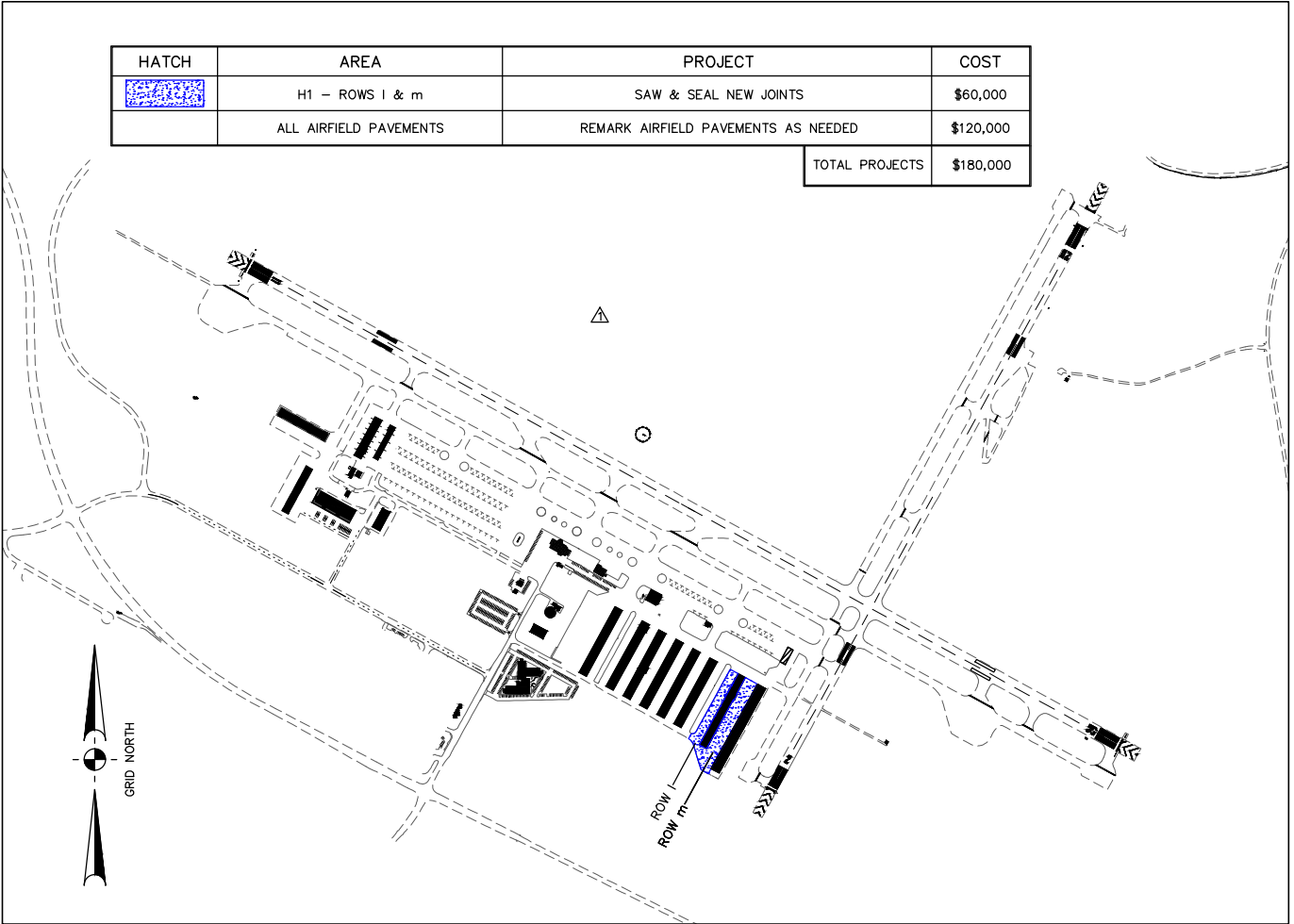
2024 MAINTENANCE AND REHABILITATION SCHEDULE



2025 MAINTENANCE AND REHABILITATION SCHEDULE



2026 MAINTENANCE AND REHABILITATION SCHEDULE



2027 MAINTENANCE AND REHABILITATION SCHEDULE

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ENGINEER OF RECORD

BY DATE
RWB 1/14

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2013 PMP UPDATE

NO. 1

TRUCKEE, CALIFORNIA

TRUCKEE TAHOE AIRPORT

PAVEMENT EVALUATION

REHABILITATION SCHEDULE 2024-2027

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DRAWN BY: DMB

CHK'D BY: RWB

DATE: SEPT. 7, 2011

CONTRACT No. -

PROJECT NO: 40

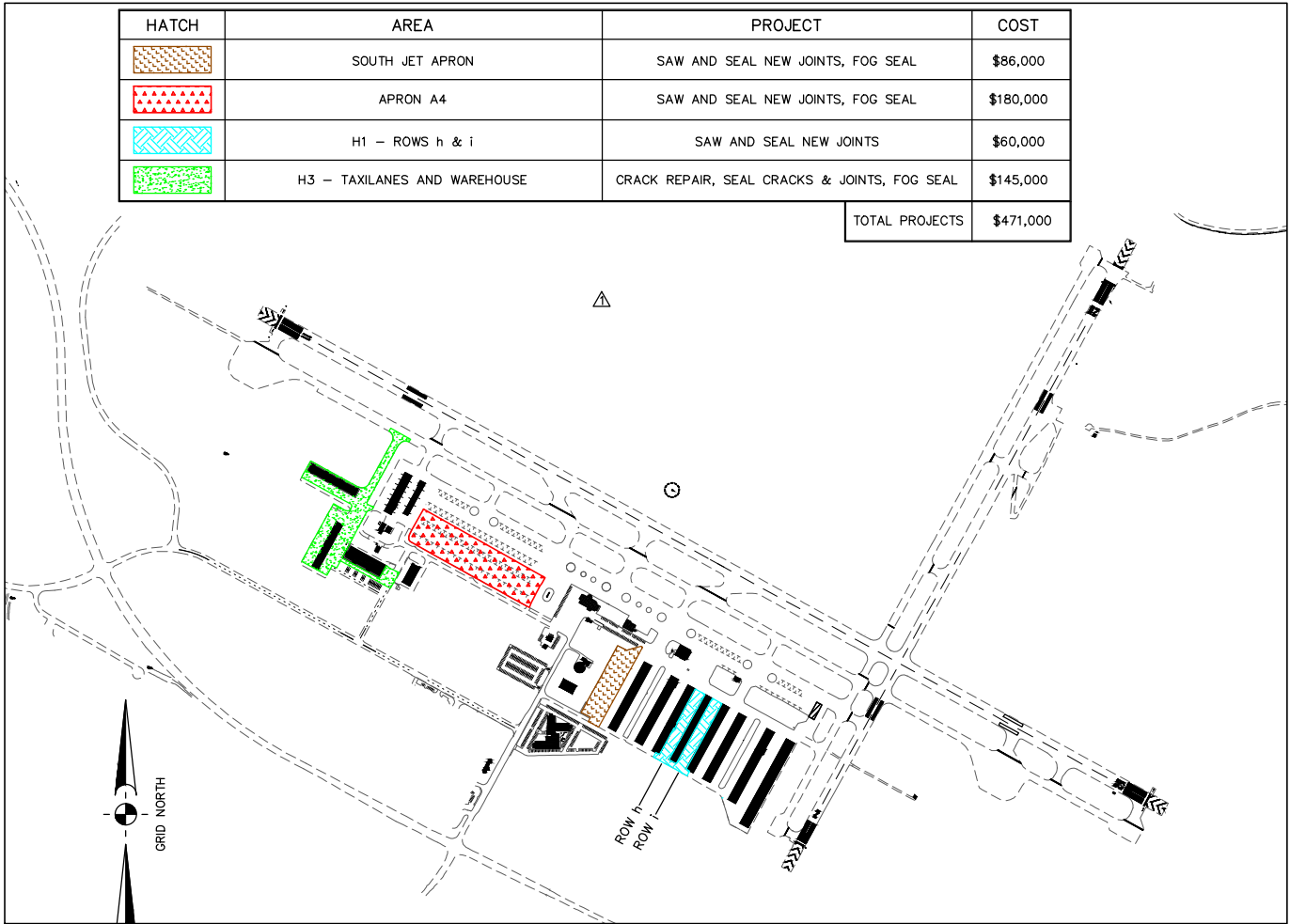
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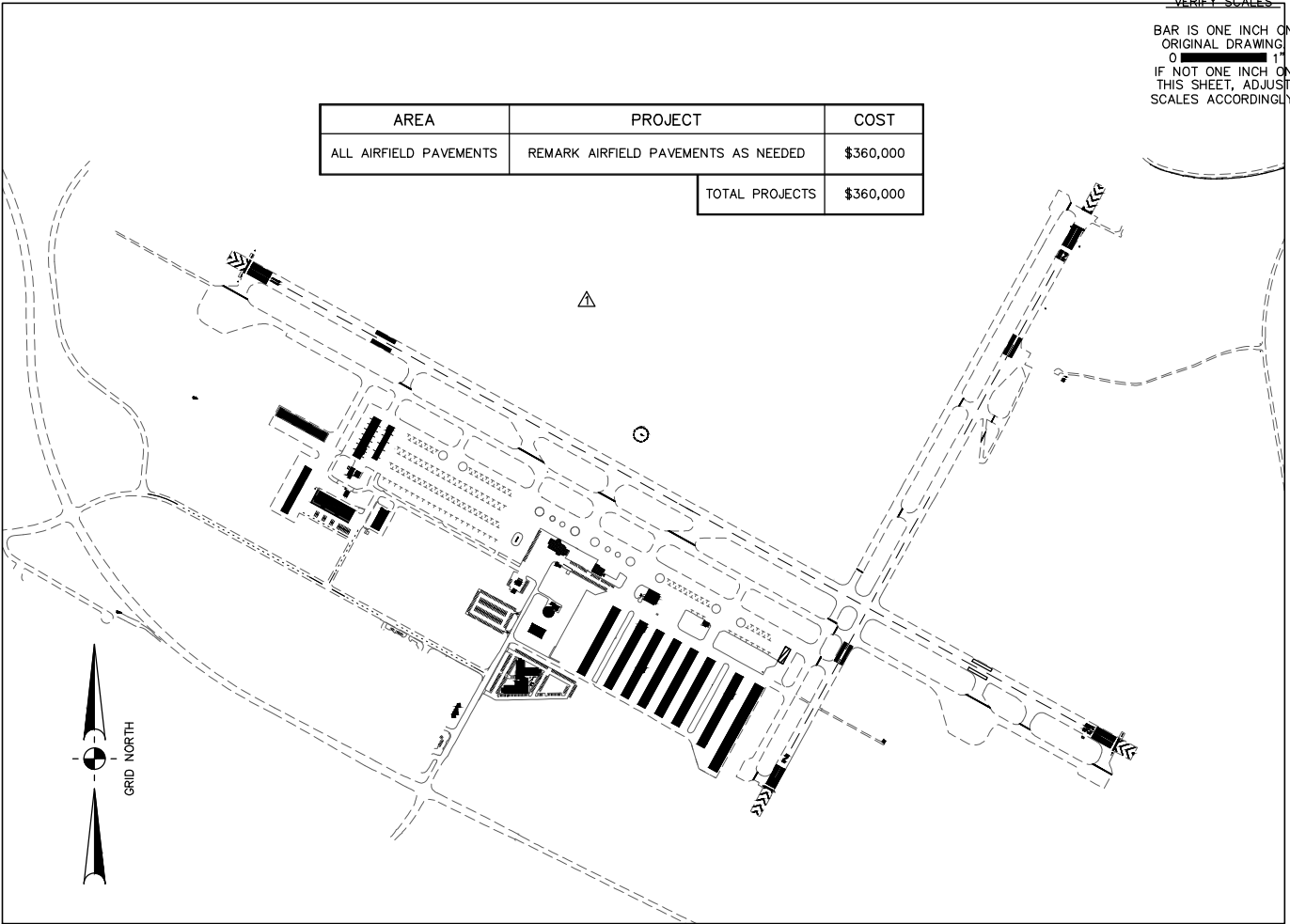
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NUMBER

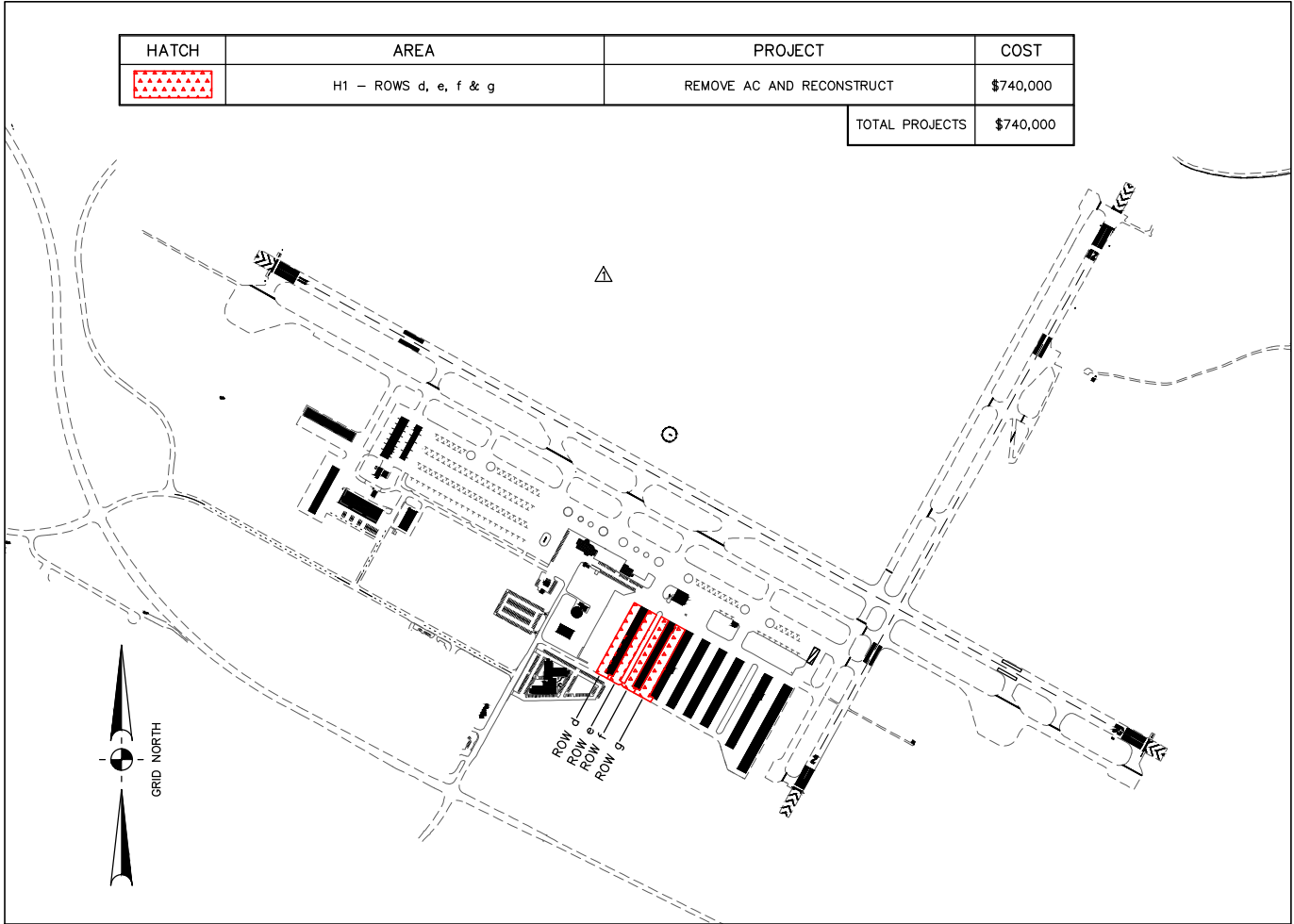
PLATE NO. 4-4



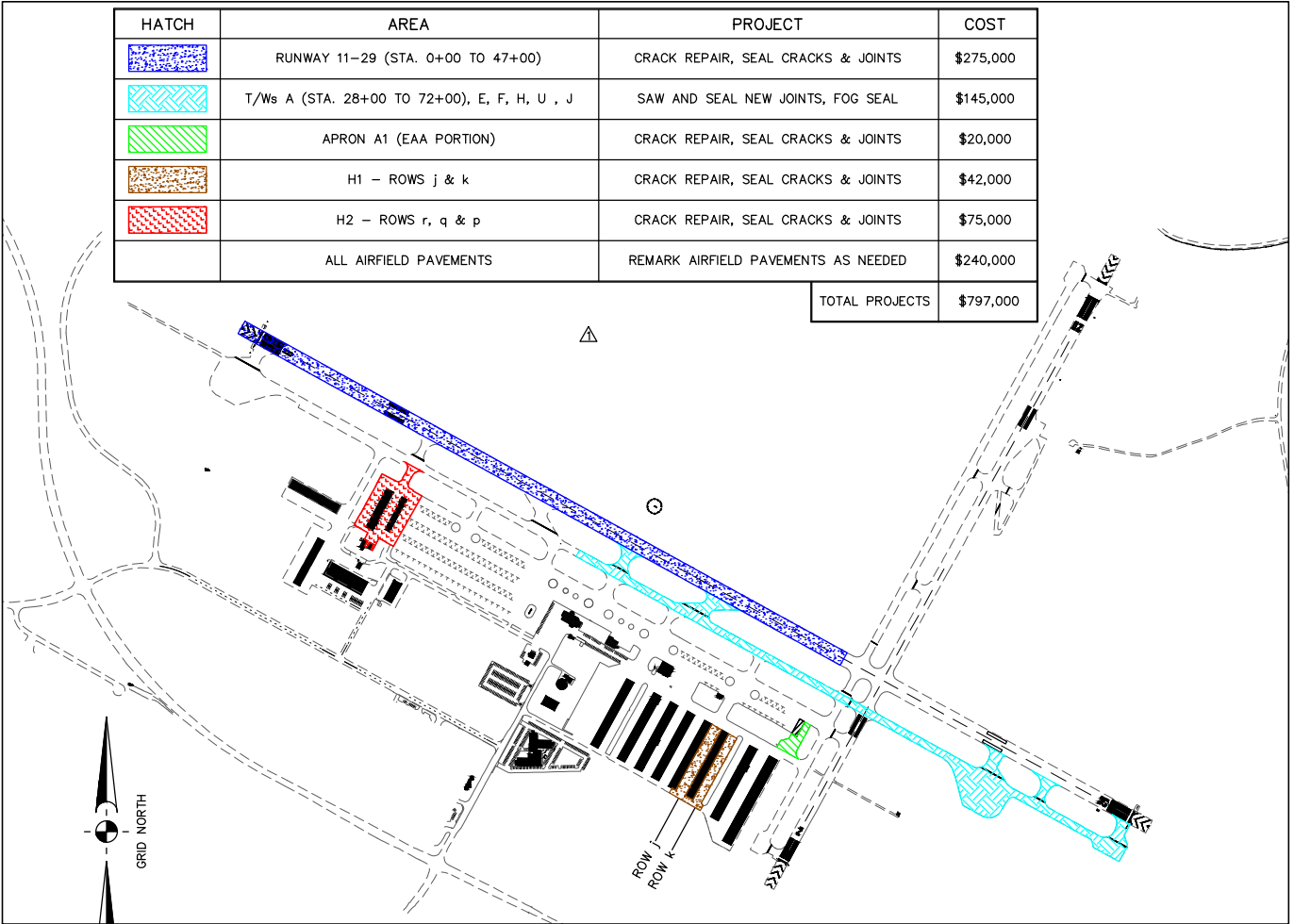
2028 MAINTENANCE AND REHABILITATION SCHEDULE



2029 MAINTENANCE AND REHABILITATION SCHEDULE




2030 MAINTENANCE AND REHABILITATION SCHEDULE



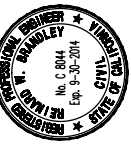
2031 MAINTENANCE AND REHABILITATION SCHEDULE

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REVISIONS
NO. DATE BY DATE
1 2013 PMP UPDATE RDB RMB 1/14



TRUCKEE, CALIFORNIA

TRUCKEE TAHOE AIRPORT

PAVEMENT EVALUATION

REHABILITATION SCHEDULE 2028-2031

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CHK'D BY: RWB
DATE: SEPT. 7, 2011
CONTRACT No. -
PROJECT NO: 40.
DWG FILE: MAINTENANCE SCHEDULE
DRAWING SCALE: 1"=600'

SHEET NUMBER
PLATE NO. 4-5

TABLE NO. 4-2 (2013 PMMP Update)
TRUCKEE TAHOE AIRPORT
MAINTENANCE AND REHABILITATION SCHEDULE

Required for Deep Seated Distress							
Estimated - Surface Distress							
Year	Element	Station	2011 PCI	2013 PCI	Recommended Rehabilitation		Estimated Construction Cost
					Code	Description	
2014	Apron A4	All	37-40	23	D	Remove AC and Reconstruct	\$ 1,356,000
						2014 Total Cost	\$ 1,356,000
2015	South Jet Apron	All	55	30	A	Remove and Reconstruct	\$ 845,000
	H1 - Rows l & m	All	55-61	38-50	D	Remove AC and Reconstruct	\$ 867,000
	Runway 2-20	0+00 to 46+00	75	53-75	F	Saw & Seal New Joints - Supplemental	\$ 225,000
	Taxiway G, V, P, Q	All	77	55-70	F	Saw and Seal New Joints - Supplemental	\$ 200,000
	H1 - Taxilane R	All	59	45	G	Crack Repair, Seal Cracks	\$ 60,000
	All Airfield Pavements	All				Remark Airfield Pavements as Needed	\$ 253,000
						2015 Total Cost	\$ 2,450,000
2016	R/W 2-20 Blast Pads	All	42	34-40	D	Remove AC and Reconstruct	\$ 142,000
	R/W 11-29 East Blast Pad	All	55	38	D	Remove AC and Reconstruct	\$ 82,000
	T/Ws A, E, F, H, U, J	28+00 to 72+00	51	38-57	B	Rehabilitate - Reconstruct	\$ 2,008,000
						2016 Total Cost	\$ 2,232,000
2017	Runway 11-29	47+00 to 70+00	80-85	86	F	Saw & Seal New Joints - Supplemental	\$ 155,000
	H1 - Rows h & i	All	55-61	52-57	D	Remove AC and Reconstruct	\$ 390,000
	All Airfield Pavements	All				Remark Airfield Pavements as Needed	\$ 250,000
						2017 Total Cost	\$ 795,000
2018	H1 - Rows d, e, f, and g	All	63-75	65-73	G	Crack Repair, Seal Cracks & Joints	\$ 75,000
	H3 - Taxilanes and Warehouse Area	All	83	77	G, H	Crack Repair, Seal Cracks & Joints, Fog Seal	\$ 136,000
						2018 Total Cost	\$ 211,000
2019	H1 - Taxilane R	All	59	45	A	Reconstruct	\$ 885,000
	T/Ws A, B, C, D	0+00 to 28+00	51	41-46	G	Crack Repair, Seal Cracks	\$ 48,000
	All Airfield Pavements	All				Remark Airfield Pavements as Needed	\$ 340,000
						2019 Total Cost	\$ 1,273,000
2020	Apron A3	All	37-40	95	D	Remove AC and Reconstruct	\$ 1,207,000
	H2 - Rows r, q, p	All	35	90	F	Saw and Seal New Joints - Supplemental	\$ 60,000
						2020 Total Cost	\$ 1,267,000

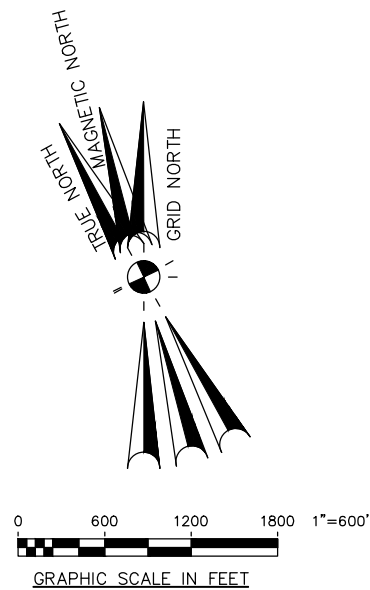
TABLE NO. 4-2 (2013 PMMP Update)
TRUCKEE TAHOE AIRPORT
MAINTENANCE AND REHABILITATION SCHEDULE

Required for Deep Seated Distress							
Estimated - Surface Distress							
Year	Element	Station	2011 PCI	2013 PCI	Recommended Rehabilitation		Estimated Construction Cost
					Code	Description	
2021	All Airfield Pavements	All				Remark Airfield Pavements as Needed	\$ 380,000
						2021 Total Cost	\$ 380,000
2022	Runway 2-20	All	75	53-75	C	Add Rock, Pulverize, Recompact + 3" AC	\$ 1,970,000
	Taxiway G, V, P, Q	All	55	55-70	C	Add Rock, Pulverize, Recompact + 3" AC	\$ 1,480,000
	Runway 11-29	47+00 to 70+00	80-85	86	G	Crack Repair, Seal Cracks & Joints	\$ 156,000
						2022 Total Cost	\$ 3,606,000
2023	Apron A1	All	45	95	A	Remove and Reconstruct	\$ 1,590,000
	H3 - Taxilanes and Warehouse Area	All	83	77	G	Crack Repair, Seal Cracks & Joints	\$ 94,000
	All Airfield Pavements	All				Remark Airfield Pavements as Needed	\$ 150,000
						2023 Total Cost	\$ 1,834,000
2024	T/Ws A, B, C, D	0+00 to 28+00	51	41-46	B	Rehabilitate - Reconstruct	\$ 1,330,000
	H1 - Rows d, e, f, and g	All	63-75	65-73	G, H	Crack Repair, Seal Cracks & Joints, Fog Seal	\$ 95,000
						2024 Total Cost	\$ 1,425,000
2025	Apron A2	All	40	95	A	Remove and Reconstruct	\$ 1,465,000
	All Airfield Pavements	All				Remark Airfield Pavements as Needed	\$ 340,000
						2025 Total Cost	\$ 1,805,000
2026	Runway 11-29	0+00 to 47+00	50	95	F, H	Saw and Seal New Joints, Fog Seal	\$ 595,000
	Runway 11-29	47+00 to 70+00	80-85	86	A or E	Reconstruct	\$ 1,275,000
	Apron A1 (EAA Portion)	EAA Apron		100	F, H	Saw and Seal New Joints, Fog Seal	\$ 24,000
	H1 - Rows j and k	All	55-84	95	F, H	Saw and Seal New Joints, Fog Seal	\$ 50,000
	H2 - Rows r, q, p	All	35	90	G, H	Crack Repair, Seal Cracks & Joints, Fog Seal	\$ 78,000
						2026 Total Cost	\$ 2,022,000
2027	H1 - Rows l and m	All	55-58	38-50	F	Saw & Seal New Joints	\$ 60,000
	All Airfield Pavements	All				Remark Airfield Pavements as Needed	\$ 120,000
						2027 Total Cost	\$ 180,000

TABLE NO. 4-2 (2013 PMMP Update)
TRUCKEE TAHOE AIRPORT
MAINTENANCE AND REHABILITATION SCHEDULE

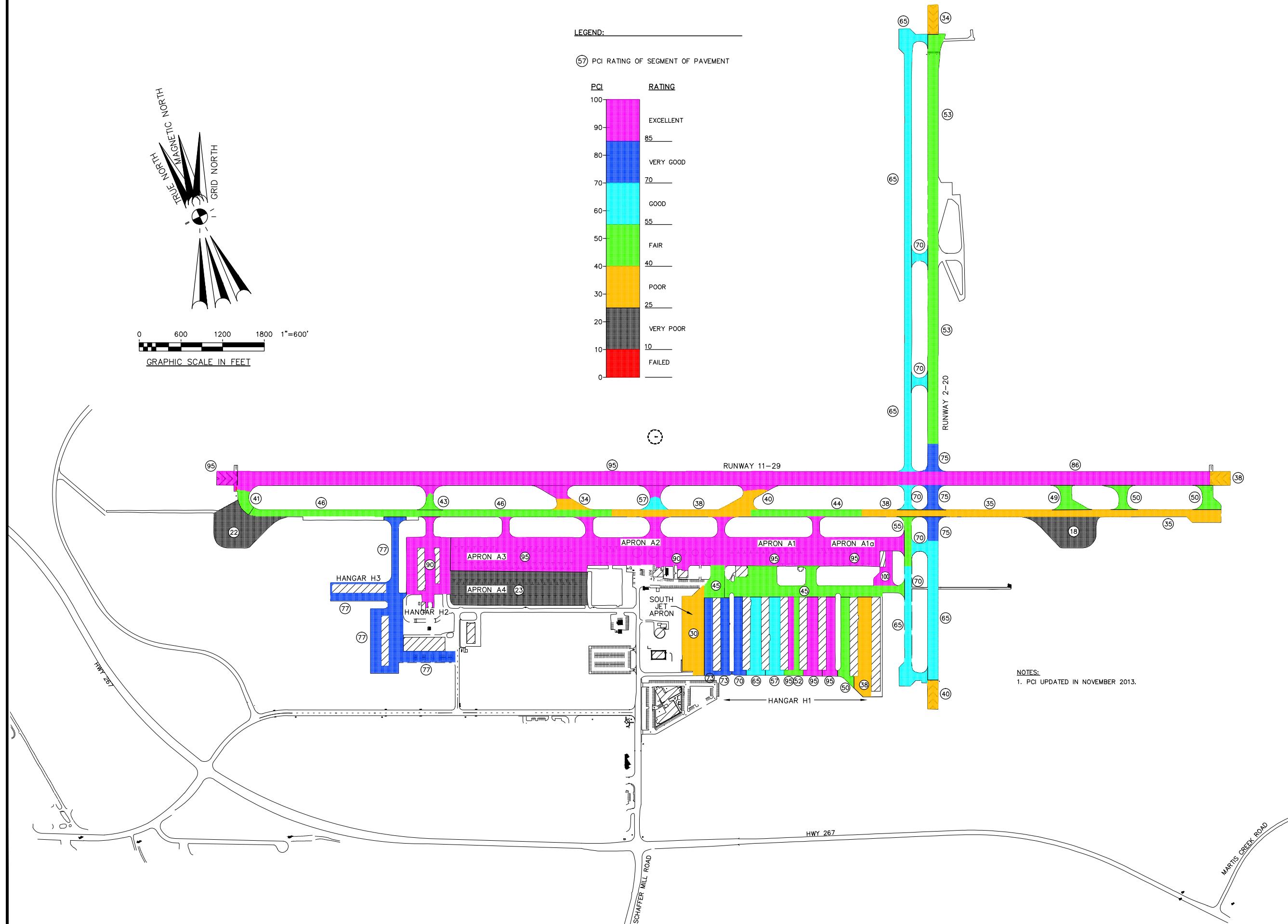
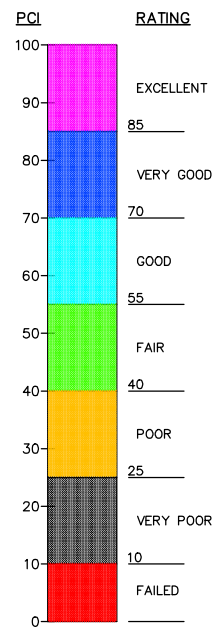
Required for Deep Seated Distress
Estimated - Surface Distress

Year	Element	Station	2011 PCI	2013 PCI	Recommended Rehabilitation		Estimated Construction Cost
					Code	Description	
2028	South Jet Apron	All	55	30	F, H	Saw and Seal New Joints, Fog Seal	\$ 86,000
	Apron A4	All	37-40	23	F, H	Saw and Seal New Joints, Fog Seal	\$ 180,000
	H1 - Rows h and i	All	57-61	52-57	F	Saw and Seal New Joints	\$ 60,000
	H3 - Taxilanes and Warehouse Area	All	83	77	G, H	Crack Repair, Seal Cracks & Joints, Fog Seal	\$ 145,000
						2028 Total Cost	\$ 471,000
2029	All Airfield Pavements	All				Remark Airfield Pavements as Needed	\$ 360,000
						2029 Total Cost	\$ 360,000
2030	H1 - Rows d, e, f, and g	All	63-75	65-73	D	Remove AC and Reconstruct	\$ 740,000
						2030 Total Cost	\$ 740,000
2031	Runway 11-29	0+00 to 47+00	50	95	G	Crack Repair, Seal Cracks & Joints	\$ 275,000
	T/Ws A, E, F, H, U, J	28+00 to 72+00	51	38-57	F, H	Saw and Seal New Joints, Fog Seal	\$ 145,000
	Apron A1 (EAA Portion)	EAA Apron		100	G	Crack Repair, Seal Cracks & Joints	\$ 20,000
	H1 - Rows j and k	All	55-84	95	G	Crack Repair, Seal Cracks & Joints	\$ 42,000
	H2 - Rows r, q, p	All	35	90	G	Crack Repair, Seal Cracks & Joints	\$ 75,000
	All Airfield Pavements	All				Remark Airfield Pavements as Needed	\$ 240,000
						2031 Total Cost	\$ 797,000



LEGEND:

(57) PCI RATING OF SEGMENT OF PAVEMENT



NOTES:
1. PCI UPDATED IN NOVEMBER 2013.

TRUCKEE TAHOE AIRPORT

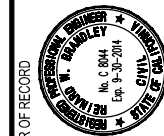
TRUCKEE, CALIFORNIA

PAVEMENT EVALUATION

2013 SURFACE DISTRESS
PAVEMENT CONDITION INDEX (PCI)

DESIGN BY: DB
DRAWN BY: DB
CHKD BY: RWB
DATE: JAN. 30, 2014
CONTRACT No. -
PROJECT NO: 40,04-13
DWG FILE: PLATE 6
DRAWING SCALE: 1"=300'

SHEET NUMBER
PLATE NO. 2-1a



ENGINEER OF RECORD

REVISIONS

NO.

TRUCKEE TAHOE AIRPORT

TRUCKEE, CALIFORNIA

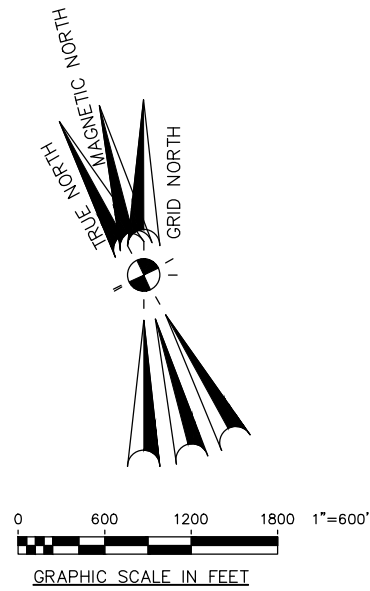
PAVEMENT EVALUATION

2013 SURFACE DISTRESS
PAVEMENT CONDITION INDEX (PCI)

DESIGN BY: DB
DRAWN BY: DB
CHKD BY: RWB
DATE: JAN. 30, 2014
CONTRACT No. -
PROJECT NO: 40,04-13
DWG FILE: PLATE 6
DRAWING SCALE: 1"=300'

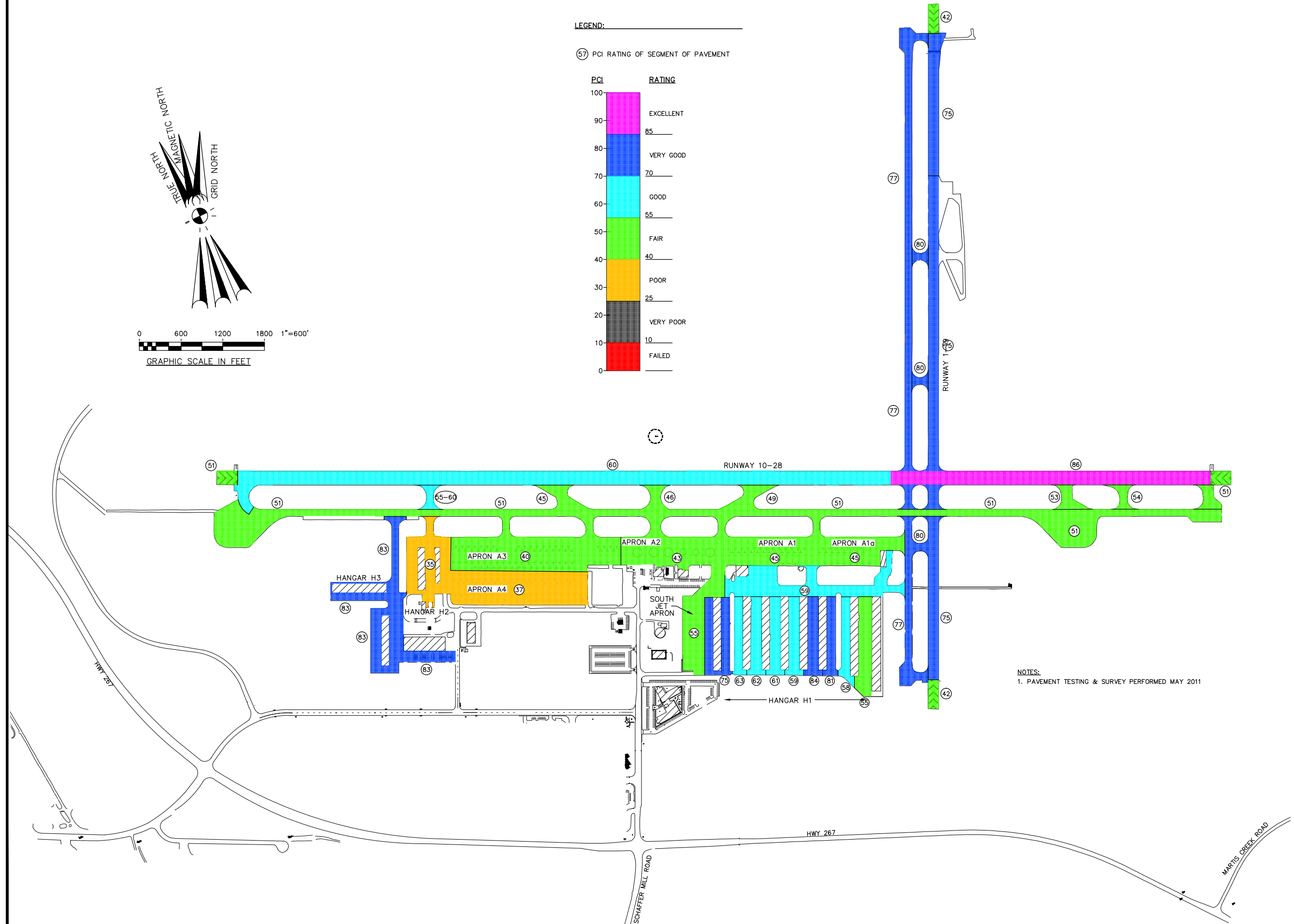
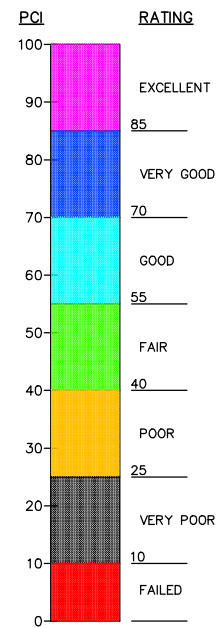
SHEET NUMBER
PLATE NO. 2-1a

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LEGEND:

(57) PCI RATING OF SEGMENT OF PAVEMENT



NOTES:
1. PAVEMENT TESTING & SURVEY PERFORMED MAY 2011

TRUCKEE TAHOE AIRPORT		PAVEMENT EVALUATION	
TRUCKEE, CALIFORNIA		2011 SURFACE DISTRESS PAVEMENT CONDITION INDEX (PCI)	
DESIGN BY: RWB	DRAWN BY: KRC	CHKD BY: RWB	DATE: SEPT. 28, 2011
PROJECT NO. 40.12		DWG FILE: PLATE 6	
DRAWING SCALE: 1"=200'		DRAWING SCALE: 1"=200'	
SHEET		NUMBER	
PLATE NO. 2-1b			

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