

ENGINEERING DISBY



ROSS G. LEPBY

82 0022

Field Book

50% rag paper
32 pages

4⁵/₈" x 7¹/₄"

Keuffel & Esser Co. Morristown, N. J. 07960 Made in U.S.A.

Rosa

CURVE FORMULAS

$$T = R \tan \frac{1}{2} I$$

$$T = \frac{50 \tan \frac{1}{2} I}{\text{Sin. } \frac{1}{2} D}$$

$$\text{Sin. } \frac{1}{2} D = \frac{50}{R}$$

$$\text{Sin. } \frac{1}{2} D = \frac{50 \tan \frac{1}{2} I}{T}$$

$$R = T \cot. \frac{1}{2} I$$

$$R = \frac{50}{\text{Sin. } \frac{1}{2} D}$$

$$E = R \text{ ex. sec } \frac{1}{2} I$$

$$E = T \tan \frac{1}{4} I$$

$$\text{Chord def.} = \frac{\text{chord}^2}{R}$$

$$\text{No. chords} = \frac{I}{D}$$

$$\text{Tan. def.} = \frac{1}{2} \text{ chord def.}$$

The square of any distance, divided by twice the radius, will equal the distance from tangent to curve, very nearly.

To find angle for a given distance and deflection.

Rule 1. Multiply the given distance by .01745 (def. for 1° for 1 ft.) and divide given deflection by the product.

Rule 2. Multiply given deflection by 57.3, and divide the product by the given distance.

To find deflection for a given angle and distance. Multiply the angle by .01745, and the product by the distance.

GENERAL DATA

RIGHT ANGLE TRIANGLES. Square the altitude, divide by twice the base. Add quotient to base for hypotenuse.

Given Base 100, Alt. $10 \cdot 10^2 \div 200 = .5$. $100 + .5 = 100.5$ hyp.

Given Hyp. 100, Alt. $25 \cdot 25^2 \div 200 = 3.125$. $100 - 3.125 = 96.875 = \text{Base}$.

Error in first example, .002; in last, .045.

To find Tons of Rail in one mile of track: multiply weight per yard by 11, and divide by 7.

LEVELING. The correction for curvature and refraction, in feet and decimals of feet is equal to $0.574 d^2$, where d is the distance in miles. The correction for curvature alone is closely, $\frac{1}{2} d^2$. The combined correction is negative.

PROBABLE ERROR. If $d_1, d_2, d_3, \text{ etc.}$ are the discrepancies of various results from the mean, and if $\sum d^2 =$ the sum of the squares of these differences and $n =$ the number of observations, then the probable error of the mean =

$$\pm 0.6745 \sqrt{\frac{\sum d^2}{n(n-1)}}$$

MINUTES IN DECIMALS OF A DEGREE

1'	.0167	11'	.1833	21'	.3500	31'	.5167	41'	.6833	51'	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	.0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8833
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

INCHES IN DECIMALS OF A FOOT

1-16	3-32	$\frac{1}{8}$	3-16	$\frac{1}{4}$	5-16	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729
1	2	3	4	5	6	7	8	9	10	11
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167

LOGAN COCHIE AIRPORT

REPAIRING OF PARKING APRON
+ TAXI-WAY

IF FOUND RETURN TO

COCHE COUNTY SURVEYORS
OFFICE 179 N. MAIN ST
LOGAN UTAH 84321

801-752-9744

PRE-CONST. CONFERENCE
HELD ON THURS. JUNE 10
1982 GLO

- 1- CLOSE RUNWAY WHEN CONST.
BECOMES WITHIN 150
- 2- INFORM FAA ON WEEKLY BASIS
OF PROGRESS
- 3- DENSITY WILL BE A MAJOR INSPECTION
POINT BY F.A.A.
- 4 OIL CONT. ABOUT 6.8 TO 7.0
FOR STABILITY MUST BE
APPROVED ON MIX DESIGN
- 5 NOTIFY AGENCIES OF CONST.
ON AIRPORT FOR INCOMING
PILOTS

TUES. JUNE 22 1982

SCOTT & I ARRIVED @ SITE
@ 8:00 PERSONS HAD THEIR PAVING
CREW HERE & WORKING ITS
HAZY TODAY HIGH ABOUT 92
LOW ABOUT 63 MOSTLY SUNNY
WE PICKED UP THE MEN
FROM PERSONS TESTING @ THE
ROAD SHOP BEFORE WE CAME
OUT.

PERSONS STARTED ON THE
SMALL PATCH OF R.W. USED
AS A T.V. FIRST.

9:10 AM DISPENSING TRUCK BEGAN
LAYING DOWN TACK COAT PAPER
BEGAN SHORTLY AFTER THAT @
9:15 WITH LEVELING COURSE
AFTER LEVELING COURSE
IS INSTALLED A NEW LAYER
OF TACK COAT WILL BE LAYED
THEN THE PETROMAT WILL GO DOWN
THEN 3" ASPHALT.

JUNE 22 1982

WARM & SUNNY

OIL CONTENT IN THE MIX DESIGN WAS FIRST PLACED @ 5.5 IF THERE ARE ANY CHANGES I WILL REFER TO THEM AS THEY OCCURE

SCOTT MARKED OFF THE CUT AIDS ON THE ASPON THIS MORNING

10:30 BEGAN LAYING TACK COAT FOR 3" BITUMINOUS SURFACE COURSE

10:35 BEGAN LAYING PETROMAT (STRESS ABSORBING MEMBRANE) FABRIC

SOME REINFORCEMENT OF THE FABRIC IS OCCURRING WE WILL MAKE THEM SMOOTH IF OUT

11:30 BEGAN LAYING SURFACE COURSE

Completion %	out of Hopper	84.4%
"	1 pass roller	97.5%
"	2 " "	98.3

TEMP 230° F

1982
6/22

JUNE 22, 1982

1/2 HOUR LUNCH I WENT TO THE OFFICE TO GET PARSONS I NEED TO CHECK TONGUE SLIPS # 37674 & 37675 FOR POSSIBLE ERRORS

PARSONS TRUCKS ARE GETTING DELAYED FROM SMITHFIELD WITH

SOME WRINKLES OCCURED IN THE PETROMAT & I MADE THEM CUT THE WRINKLE & LAY IT FLAT

SOME OF PARSONS PEOPLE LEFT @ 4:30 8 PEOPLE STAYED UNTILL JOB WAS DONE FOR THE DAY (8 PEOPLE + TRUCK DRIVERS)

46 LOADS OF ASPHALT WERE DELIVERED TODAY

TONS FOR SURFACE COURSE
132.6 TONS FOR LEVELING COURSE
5:18 STOP PAVING
5:30 QUIT WORK

2 hrs 15 min

Ray Lacey

JUNE 23 1982

WINDY
SUNNY
80°F +

LAST NIGHT @ 8:15 P.M. THE WIND CAME UP OUT @ THE AIRPORT AND WE STILL HAD PRIVATE AIRCRAFT NOT TIED DOWN SO I CALLED KEITH & HE & I CAME OUT & TIED THEM DOWN I RETURNED HOME @ 9:10 P.M. WITH ABOUT 14 MILES ON MY VEHICLE.

8:00 AM TERRI THURSTON A SUB-CONTRACTOR FOR JBP CAME OUT TO RAISE THE INLET BOXES ON THE PARKING APRON WE GAVE GRADES & GAVE HIM CUT & FILLS ON THE OFFSET NAILS. PARSONS WILL BRIDGE SCREES AROUND INLET BOXES

PARSONS BEGAN TIEING UP THE CUT AREA WITH THE PATROLL & DODER & TRUCKS THEY ALSO FINISHED UP THE RUNWAY OFF-RAMP & BEGAN LAYING FABRIC & PAVING TAXI WAY WITH 1 1/2" ASPHALT

JUNE 23 1982

CORE TESTS ON RUNWAY OFF-RAMP CAME IN THIS MORNING 97%+ COMPACTION. THICKNESS WAS MORE THAN PLANS SHOW.

PARSONS

CONST. EQUIPMENT ON SITE

PAVER	ROLLER
PATROLL	DUMP TRUCKS (HAULING ASPHALT)
BROOM	DUMP TRUCKS (HAULING EXCAVATION)
BULL DOZER	PETROMAT ROLLER
DESIGNING TRUCK (TACK COAT)	1/2 DAY

OIL CONTENT WAS LOWERED OLD WHEN SPOTTY BLEEDING OCCURED ON TAXIWAY. FIRST 2 STRIPS (END 2 STRIPS) IT SEEM TO TAKE CARE OF THE BLEEDING

PITTSBURGH TESTING SAID NEW OIL CONTENT IS 5.6%

TERRI THURSTON CONST. SPENT ALL DAY LONG ON RAISING MANHOLE & INLET BOXES (3 WORKERS)

JUNE 23 1987

WE HAD ONE TRUCK THAT DUMPED
A 1/4 LOAD PREMATURE & HIGH-
CENTERED THE PWER. THE PATROLL
CAME & SMOOTHED IT OUT AFTER
IT WAS COMPACTED IT STILL
LOOKED A LITTLE COARSE SO
I WANTED TO NOTE IT. THERE
WAS ALSO A LITTLE TEAR IN THE
STRESS ABSORBING MEMBRANE
BUT WE MADE THEM REMOVE THE
ASPHALT & RE-RETROMAT THE
TORN SPOT.

PARSONS QUIT PAVING @ 4:45
THE ROLLER QUIT COMPACTING @
5:00 WORK CAME TO A HLT
ABOUT THAT TIME

SCOTT & I LEFT BY
5:00 PM.

1/2 hour

JUNE 24 1982

HOT-CLER

WE BEGAN WORK @ 8:00 AM PAVING
A GRD INTERSECTION LINE BETWEEN
2400 & 1500 @ F.W. STATION 145
WE HAD SOME PROBLEMS IN GRD
BUT WE SEEM TO HAVE SOLVED
THEM.

PARSONS STARTED @ 8:00
ON LAYING THE REST OF THE
TAXIWAY (TRUCK, RETROMAT 1 1/2' OIL)
WHILE THEY DID THAT THE LARGE
ROLLER BROKE DOWN. & THEY
SENT A GUY TO FIX IT.

AT 11:18 PARSONS STARTED
PAVING THE PARKING APRON
(OH SHIT) WE HAD A LUNCH
BREAK THEN WENT BACK TO
WORK

THURSTON CONST. BEGAN
POURING THE CONC. ON THE
MANHOLES & INLET BOXES @
1:15 PM PAVING IS GOING
WELL & THE DOZER IS
EXCAVATING IN THE CUT AREAS

JUNE 29 1982

WE HAVE NOTICED SOME DRAVELING ON THE FINISH COURSE ADJACENT TO THE TAXI-WAY & RUNWAY OFF RAMP. MACK SAID HE WOULD LOOK @ IT. IT PROBABLE NEEDS TO BE RE-ROLLED IF IT WONT. IT WILL HAVE TO BE REPLACED

OIL CONTENT FOR TODAY IS 5.30 DENSITIES ARE COMING IN ABOVE 96% (97 & 98) GOOD.

PERSONS LOADED 1 MORE ROLLER TO THE JOB THEY HAD A LABORER RUN IT

THE 8" PLASTIC PIPE THAT WAS FILLED WITH SAND & PLACED OVER THE TIE DOWNS IS WORKING WELL

I WILL BE LEAVING THE JOB TODAY @ 3:00 PM.

TOMORROW I WONT BE HERE

Ross J. Gray

JUNE 28 1982

HOT & SUNNY
90°+

TODAY PERSONS DIDNT LAY ANY ASPHALT. THEY WORKED THE ENTIRE DAY WORKING ON THE NEW EXCAVATION SPOTS. THAT PRESTON & SCOTT CHANGED LAST FRIDAY. IT WAS A SLOW DAY & SCOTT WAS A REAL DSS. THEY BEGAN @ 8:00 AM & TOOK A 1/2 HOUR LUNCH BREAK. ABOUT 3:30 PM PERSONS RENTED A VIBRATING SHEEPS FOOT FROM TERRY THURSTON TO HELP THEM ON SUB-BASE COMPLETION. THURSTONS CREW FINISHED POURING CONC ON THE MANHOLE & INLET BOXES THEY WERE RAISING. TOMORROW I WILL BE @ THE HOSPITAL ALL DAY FOR A CHECK-UP. I LEFT THE JOB SITE @ 4:10 PM. PERSONS HAD 3 MEN WORKING TODAY

Ross J. Gray 6-28-82

JUNE 30 1982

CLEAR & HOT

PARSONS ARE STILL EXCAVATING OUT THE OLD ASPHALT IN THE CUT AREAS. THEY WILL BE HAULING IN SOME GRANULAR BORROW FOR A LEVELING COURSE, & THEN TOP IT OFF WITH CRUSHED GRAVEL SUB BASE. PARSONS SHOULD BE ALL DAY ON THE HAULING OF ROCK INTO THE CUT AREAS.

LAST NIGHT I TALKED TO MY DAD ABOUT THE GAS SUPPLY LINES, THEY ARE LOCATED ABOUT 8' TO 10' EAST OF THE HANGERS FACING THE PARKING APRON, THEY WILL SEND OUT THEIR SNIPPING DEVICE TO DETECT FOR LEAKS.

PARSONS BEGAN HAULING IN PIT-RUN, & WE ARE TAKING WEIGHT TICKETS FROM THEM.

4 PEOPLE FROM PARSONS ARE AT THE SITE TODAY (+ TRUCK DRIVERS)

@ 3:00 PM A SLIGHT RAIN SHOWER WITH A HIGH WIND COME UP 2 OF THE AIRCRAFT TIED DOWN WERE PICKED UP & SOME SLIGHT DAMAGE WAS SUFFERED TO THE WING SECTIONS OF BOTH AIRCRAFT WE HAD TO GO GET MORE CINDER BLOCKS TO WEIGHT THEM FURTHER I HOPE EVERYTHING GOES OK TONIGHT!!!

MEANWHILE PARSONS ARE HAULING CRUSHED GRAVEL NOW SINCE ABOUT 1:00 PM. THERE PART IS GOING WELL I WISH OURS WERE

WE ALSO MEASURED THE CONC PWD BY TRANSWESTERN TERMINAL THEY WANT TO PAVE IT OVER WITH A 1/2" LEVELING COURSE & A 1" SURFACE COURSE ROUGH MEASUREMENTS & ESTIMATES INDICATE THAT PORTION ONLY GOING WEST TO THE WEST EDGE OF THE TAXI WAY & THE N.W. FENCE CORNER OF TRANSWESTERN'S GATE FENCE ^{SEE} PARSONS GRESSED THE ROLLER

THE PETROLL ALSO FILED
THEM WITH GOS

WE LEFT THE SITE
@ 4:15 PM PERSON WAS
STILL THERE BUT ONLY ROLLING

IT WAS NOT A GOOD

DAY

[Signature] 6-30-82

JULY 1, 1982 COOL-WARM FOGGY

WE BEGAN WORK @ THE AIRPORT
@ 8:00 AM PERSONS AL-BOLL
WAS GRADING (CRUSHED) SURFACE.
DURING THE NIGHT IT RAINED
QUIT HEAVELY, # IVE HAD
QUITE A PUDDLE AROUND THE
INLET BOX @ THE NORTH END
OF THE PARKING APRON, (WE RAISED
IT UP 1.12' SO WE COULD FILL
UP THE HOLE.) PERSONS BOILED
THE WATER OUT, # DUMPED IT
INTO THE STORM SEWER.

RAY IS COMPACTING IN FRONT
OF THE HANGERS WITH A HAND
COMPACTOR. PROBABLY FOR A GOOD
CLEAN JOINT WITH THE HANGER
FLOORS

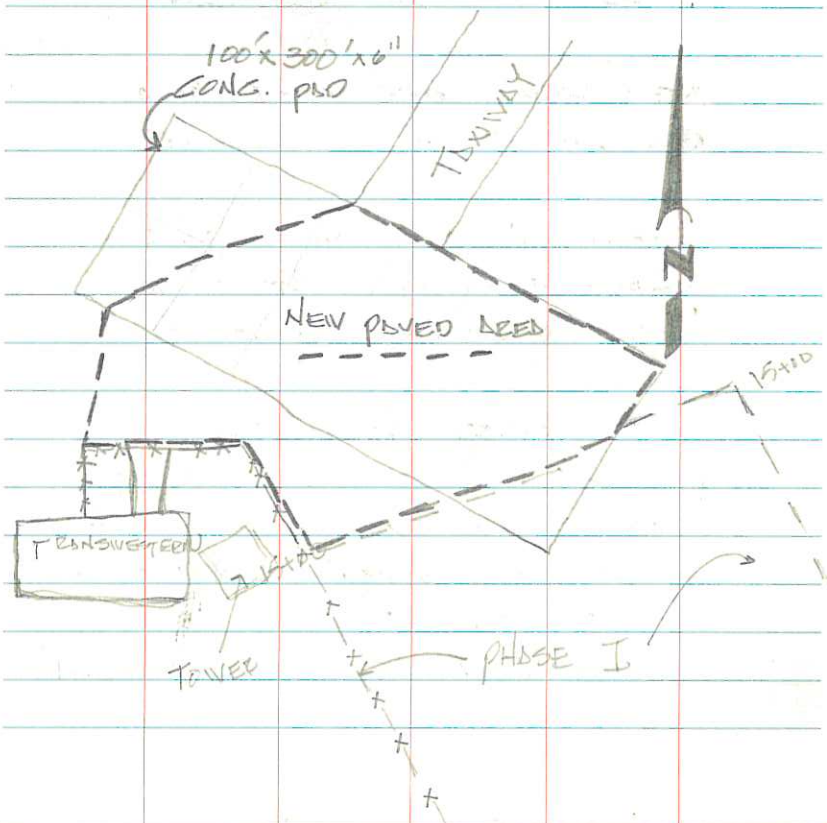
THE AIRPORT IS QUIET TODAY
PERSONS TRUCKS ARE HAULING IN
THE FINISHING LOADS OF CRUSHED,
WE ARE TAKING WEIGHT SLIPS

THE PETROLL, THAT WAS LEFT
EXPOSED ON THE PARKING APRON,
DOESN'T SEEM TO BE SHOWING

ONLY SIGNS OF EXTENSIVE, OR
SIGNIFICANT WEAR

SCOTT & I LEFT THE SITE
TO PICK UP OUR PAY CHECKS
WE WERE GONE 1/2 HR.

THE POWERS TO BE
ARE GOING TO PAVE OVER
THE CONC. PAD SHOWN IN
FIGURE 1-1 BELOW.



PERSONS DID SOME GRADING NEAR
SOME HANGERS (ROLLERS & TRANSWEST)
THEY DIDNT HIT ANY THING

WE SHOT THE TRANSWESTERN
FLOOR & IT IS OLD HIGHER THAN
THE FL. ON THE FIRST STORM SEWER
BUT THAT IS TO SUB-GRADE
& WHEN THE 3\" SURFACE COURSE
WERE IN TROUBLE WE WILL HAVE
TO CUT IT DOWN TOMORROW

WE LEFT THE SITE @ 4:10 PM
PERSONS QUIT @ 4:30 PM

THERE WAS A VERY SLIGHT
RAIN SHOWER BUT IT WASNT
BAD ENOUGH TO HALT WORK

GOOD DAY

Handwritten signature

7-1-82

July 2 1982

PARTLY CLOUDY - WARM

SCOTT & I ARRIVED AT THE AIRPORT @ 8:00 AM. PARSONS HAD STARTED RE-WORKING THE GRADE AROUND THE ROAD CUT AREAS. (BLADING & ROLLING) THEY ALSO HAD THE BROOM GOING SWEEPING THE OLD ASPHALT AROUND THE CUT AREAS.

PARSONS WANTS TO BEGIN PAVING TUESDAY SINCE MONDAY IS A HOLIDAY (JULY 5.)

AT 11:08 AM PARSONS PATROL BEGAN SHAVING OFF THE GRADE IN FRONT OF TRANSWESTERN TO GET THE GRADE RIGHT.

PRESTON CAME OUT W/ AN AERIAL PHOTO OF THE CONC. PAV. WITH THE ADDITIONAL PAVING LIMITS TRANSPICED ON THE PHOTO. THERE IS 6,000⁰⁰ DOLLARS AVAILABLE & THE BID IS A ABOUT 5,700 WE MADE THE DECISION TO GO AHEAD & PAVE IT OVER

PARSONS LEFT THE SITE EARLY TODAY (PM) WE CAME W/ING OUR LITTLE TAILS BEHIND THEM

Parsons 7-2-82

PS.

PARSONS MECHANIC CAME OUT TO FIX THE LAY DOWN MACHINE TODAY HE DID & ITS READY TO GO TUESDAY

WE FIXED ALL THE GRADE PROBLEMS TODAY

GRADE

July 6, 1982

P.C. WARM

PARSONS BEGAN WORK @ 8:00 AM. I ARRIVED @ THE SAME TIME. PARSONS BEGAN SCRAPING UP SOME OF THE OLD ASPHALT BY THE FUEL PUMPS TO THE NORTH INLET BOX. THEY ARE BREAKING IT UP WITH A VIBRATING SHEEPS FOOT (THE ONE THAT THE RENTED FROM TERRY THURSTON)

PARSONS BEGAN PUTTING DOWN OIL @ 8:30 AM. SCOTT & I ARE WATCHING THE OIL SEEM CLOSELY.

CURT (FROM PITTSBURGH TESTING) BEGAN A GRADATION & EXTRACTION SOON AFTER 8:00 BUT THE SAMPLE CAME FROM THE HOPPER INSTEAD OF THE MDTF.

SLOW START WITH THE DISPENSING TRUCK & THE PAVED TORSY.

JULY 6

WHEN WE CUT THE ASPHALT IN FRONT OF THE T. HANGERS WE BROKE UP AN ASPHALT FLOOR RAY SAID HE WOULD FIX IT. WHEN THEY LAD THE STARTED STRIP. WE GOT ALL THE HANGERS OPEN EXCEPT ONE & IT WILL HAVE TO BE DONE LATER. PARSONS COMPLETED THE FIRST PASS OF THE PAVED @ 11:20 AM (NEXT TO THE HANGERS)

WE HAD THEM RAISE THE OIL CONTENT OIL (ONE TENTH) LATER WE GOT THE EXTRACTION RESULTS OF 4.8%. IT SHOULD PICK UP IN THE AFTERNOON. IT HAS IN THE PAST.

SCOTT & I TOOK A 1/2 HOUR LUNCH BREAK @ NOON. PRESTON IS OFF TODAY. PRESTON CAME @ NOON

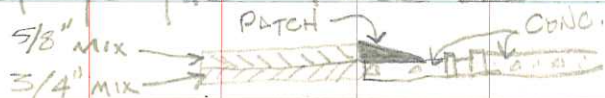
IN FRONT OF THE 2 BIG HANGERS THE NEW ASPHALT GOT A LITTLE THIN (1") SO ALF. ORDERED

JULY 6

SOME 5/8" MIX TO BUILD IT UP. THE THIN SURFACE COURSE IS ON THE FLOW-LINE SEAM OF THE WEST STORM SEWER, SO ON THE EAST SIDE OF THE SEAM THEY WILL LAY ANOTHER 1" TO MATCH THE WEST THEN ADD A 2" MAT ON TOP OF THAT. THIS WILL ALLOW FOR A GOOD BOND & IMPROVED DRAINAGE.

OIL CONT IS COMING UP. SOME BLEEDING IS OCCURRING BUT IT IS VERY SLIGHT

WHEN PERSONS PUT DOWN THE 5/8" MIX IN FRONT OF THE 2 BIG HANGERS I MADE THEM TAPER IT BACK TO THE FLOOR ELEV. ON THE NORTH HANGER. ON THE S HANGER (TRANSWESTERN) THEY WANT TO MAKE A SMALL PATCH TO GET TO THE FLOOR ELEV



WE HAD SOME TERR'S IN THE PERIMETER. WE HAD THEM FIX THEM WORK QUIT @ 5:00 PM THE ROLLER WAS GOING TO WORK TILL 5:30 MOPPING UP SPALL RIDGES. I LEFT THE SITE @ 5:15 PM. 45 MIN CAMP RAY IS STANDING UP BARRICADES & DELINEATORS TO KEEP THE TRAFFIC OFF

FAIR DAY

7-6-80

920.05 TONS WEIGHT

45 MIN

July 7 1982

P.C. WSEM

~~77~~ 90°

I ARRIVED @ THE SITE AT 8:15 AM, AFTER RETURNING THE LE-BOY & COMPASS. SET TO THE OFFICE, SO KEN COULD USE THEM.

PERSONS WERE ALREADY PAVING ON THE 5TH STRIP EAST & THE DENSITIES FROM YESTERDAY ARE 100.3 & 100.5% NOT BAD FOR A BUNCH OF DUMP SHITS.

SCOTT & I ARE GOING TO SET GRADE STAKES (RED HEADS) IN THE AREA NORTH OF THE FUEL PUMPS & AROUND THE LAST INLET BOX.

SCOTT & I LEFT THE AIRPORT @ 10:30 TO GO TO THE 10TH WEST JOB CR 343-11 WE RETURNED @ 11:00 AM.

WE TOOK A 1/2 HOUR LUNCH @ 12:00 N. & PERSONS BEGAN PAVING AGAIN @ 12:40 THEY

7-7-82

ALSO PUT ON A AUTOMATIC SCREEN ON THE OIL SIDE.

THE ONE HANGER ON THE PARKING APRON THAT WE DID NOT OPEN ITS DOORS WAS FIXED TODAY WE HAD TO CUT & FILL SOME RIGHT NEXT TO THE CONC. CLAB FLOOR.

WE GOT SOME BAD READINGS ON DENSITY IN ONE SPOT, SO WE HAD THEM ROLL IT AGAIN & WE GOT 98% THIS TIME ALL IN ALL IT IS ABOVE 96% ON EVERY TEST. (FINAL PRODUCT)

John Williams PASSED ME @ LUNCH & STOPPED TO TALK ME THAT HE WAS NOT PLEASED WITH THE 6" BUMP WE LEFT HIM TO PULL THEIR AIRPLANE OVER I TOLD HIM WE WOULD TAKE CARE OF IT OVER -

JULY 7, 1982

I ALSO SAW TERRY THURTON'S CREW @ LUNCH & I TALKED TO THEM ABOUT THE MANHOLE THAT WAS MISSING A RING THEY SAID IT WOULD HAVE TO BE ORDERED & THAT THEY HAD. PARSONS PAVED OVER THE OLD RING ON THE NEW CONC. & AS A RESULT THEY WILL HAVE TO CUT BACK THE ASPHALT TO MAKE IT LOOK BETTER.

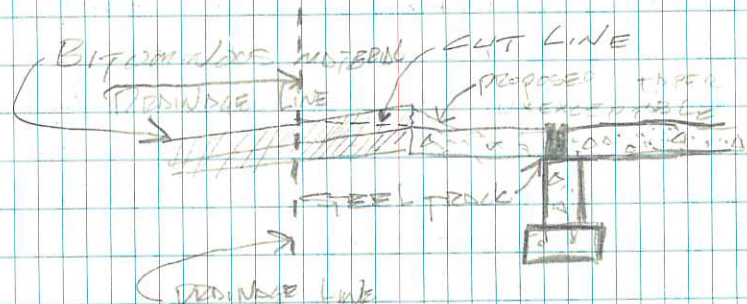
RAY CAME OVER, AND ASKED IF WE COULD PUT IN SOME RED-HEADS (GRADE STAKES) FOR THEM IN THE NORTH EXCAVATION AREA & WE DID.

PARSONS IS STILL PAVING BUT THEY SAID THEY WOULD RUN OUT OF OIL ABOUT 4:00 PM IT COULDN'T COME FAST ENOUGH FOR ME

TRAILS WESTERN WANTED TO KNOW WHY THERE IS A 2" RIDGE OF ASPHALT IN FRONT OF THEIR BIG

7-7-82

SCOTT & I EXPLAINED ABOUT THE DRAINAGE BUT IT DIDN'T SEEM TO SATISFY HIM SO I THINK WE WILL PUT IT OUT & FLET IT TO DRAINAGE LINE



PARSONS HAS CUT SOME MORE PLASTIC PIPE FOR THE TIE DOWNS THIS TIME IT IS A LOT THICKER MATERIAL $3/8$ " TO $1/2$ " WALL WITH 8 " TO 10 " @ THE USED A LOT FINER SAND IN THEM FOR FILL THEY ARE CUT TO 3 " IN DEPTH I LEFT THE SITE @ 4:50 P.M. HOT & DRY TODAY

PARSONS Quit Paving @ 4:50 PM

Reddy July 7-7-82

JULY 8, 1982.

IT RAINED LAST NIGHT
& WE HAD SEVERAL
PUDDLES IN FRONT OF HUNGER
ROW. WE DECIDED TO ADD
A DRAIN BOX & LOWER
2 OTHERS (2" & 1") THIS
WOULD TAKE CARE OF ALL
PUDDLES EXCEPT 2 WE ARE
GOING TO CUT DOWN A RIDGE
OF ASPHALT THAT IS PREVENTING
DRAINAGE OF ONE PUDDLE &
CUT A SLIGHT CHANNEL FROM THE
OTHER PUDDLE TO AN INLET
BOX THIS SHOULD TAKE
CARE OF THE PROBLEMS

WE ALSO LAYED OUT
A 10' x 12' GRID INTERSECTION
FOR 12' x 30' & SAID IT BUT
WE DECIDED IT WOULDN'T BE
WORTH IT.

SCOTT & I LEFT THE
SITE @ 4:10 & THE
OFFICE @ 4:50
[Signature]

JULY 9 1981

IT RAINED AGAIN LAST NIGHT.
& WE HAD THE SAME PUDDLING
AS WE GOT YESTERDAY SO THE
BOOTH SWEEP ALL THE WATER
OFF. WE SHOULD HAVE IT TAKEN
CARE OF BY LATE NEXT WEEK.
SCOTT & I PAVED IN
SOME RED HEADS TODAY ON 50'
INTERVALS IN THE NORTH CUT
AREAS HOPEFULLY THIS WILL
ALLOW FOR BETTER CONTROL
& DRAINAGE.

PARSONS IS OVERLAYING
THE FIRST 2 STRIPS (EAST)
ON THE PARKING APRON TO
ALLOW FOR BETTER DRAINAGE
PARSONS IS PLANNING ON
WORKING TOMORROW (SATURDAY)
TO FINISH GRADING THE NORTH
PORTION OF THE APRON

SCOTT & I WILL TAKE
A 1/2 HOUR LUNCH @ Noon

AFTER LUNCH SCOTT & I

✱

7-9-82

TOOK SOME WEIGHT TICKETS
FROM THE TRUCKS HAULING
CRUSHED GRAVEL. PARSONS
HAS FILLED UP THE HOLE
@ THE NORTH END VERY WELL.
IT REALLY LOOKS GOOD.

THEY TOOK THE SHEEPS
FOOT & THE DOZER BACK
@ 1:00 PM TODAY.

THE LAST EXTRACTION TEST.
CAME OUT @ 5.2% OIL CONT.
IT LOOKS A LOT RICHER TODAY.
THE MAN FROM PITTSBURGH TEST.
LEFT AT 1:20 PM. FOR THE
WEEKEND.

SCOTT & I ARE LAYING
A 25' GRID ON THE OLD OIL
USING A BIG SPIKE (NAIL).
WE HAVE WARNED WESTWIND
ABOUT ANY POSSIBLE DANGER
TO AIRCRAFT. WE WILL BARRICADE
OFF THE AREA TONIGHT.

SCOTT & I LEFT THE SITE
@ 5:00 PM. PARSONS QUIT @
4:30
7-9-82

July 12, 1982

CLEAR SKY

COOL WARM HOT

M N A

I BEGAN WORK @ 6:45 TODAY.
SCOTT & I WERE PUTTING IN THAT
25' GRID W/ SPIKES IN FRONT OF
WESTWIND AND FURTHER NORTH
SO WE COULD KEEP AHEAD
OF PARSONS PAVING CREW.

PARSONS WORKED LAST SATURDAY
DOING SOME FINISH GRADING. THEY
QUIT ABOUT NOON. THE WATER
TRUCK & ROLLER STAYED LATER
TO FINISH IT OUT.

ACCORDING TO A GOOD GUESS
PARSONS SHOULD BE DONE
PAVING BY THIS FRIDAY.
THEN ALL THAT REMAINS
IS SOME GENERAL CLEAN UP.

PARSONS BEGAN PAVING @
9:30 AM ON LEVELING COURSE
IN FRONT OF WEST WIND THEN CAME
THE GUIDANCE COURSE.

SCOTT & I TOOK A 1 HOUR
LUNCH TODAY. PARSONS SPENT

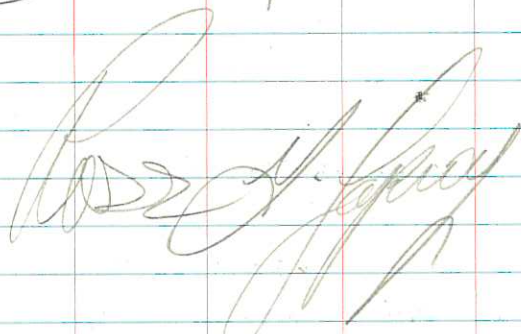
7-12-82

THE AFTER NOON PAVING TO
15400 IT TOOK ALL DAY
PERSONS CREW WAS
OUT & REPOURED THE
INLET BOXES

WESTWIND & TRANSWESTERN
BOUL BITTERED TODAY

I FILLED UP ALL THE
CORE SAMPLE HOLES TODAY

WE LEFT THE SITE
@ 4:33 PM



7-12-82

July 13, 1982

Cool & cloudy
65° F.

SCOTT & I ARRIVED @ THE SITE
@ 7:30 AM. WE BEGAN WORK
BY TAKING GAGES ON THE KREEP
EAST OF THE NORTH INLET
BOX WE MARKED OUT A PERIMETER
LINE TO MATCH ASPHALT

TRANSWESTERN HAS AN AUDIENCE
WITH THE COMMISSION TODAY ON
SECURING SOME ADDITIONAL FUNDS
FOR OVERLAYMENT OF KREEP
N.W. OF THEIR BUILDING

WE DON'T KNOW HOW IT WILL

GO.
PERSONS BEGAN PAVING
@ 8:00 AM.

WHEN PERSONS BEGAN PAVING
NEXT TO THE CONC. PAD THEY
FIRST MATCHED THE CONC. ELEV.
THEN THEY WILL OVERLAY TO
1 1/2"

CHARLY CALETON CAME OUT
TO THE SITE THIS MORNING
(COUNTY COMMISSIONER) BUT HE STAYED

7-13-82

IN HIS TRUCK & DIDN'T
SAY ANYTHING I CAN'T WAIT
TO HEAR ALL THE PERILS
THAT ARE GOING ON OUT
HERE & PRESTON WILL
BELIEVE HIM. I WENT
ABOUT INSPECTING AS I
ALWAYS DO.

PARSONS IS HAVING
A HARD TIME WITH THE
TRUCKS KEEPING UP WITH
THE POWER

I SPRAYED SOME WATER
ON THE AREA IN FRONT OF
WEST WIND IT SEEMED TO
DRAIN WELL EXCEPT FOR
ONE SIDE. SLT SAID
HE WOULD FIX IT.

I JUST SAW PARSONS
WILFULLY DESTROY A BLUE TOPPIER
ON 24' GRID WHEN I CONFRONTED
THEM ABOUT IT. THE SLT

QUOTE: ("THEIR ONLY CONVERSATION
PIECES" ^{was} QUOTE IF IT DOESN'T
DESCRIBE IT'S NOT MY FAULT.

7-13-82

PARSONS GOT THEIR AUTOMATIC
SCREEN WORKING TODAY @
10:30 AM UP TILL NOW IT
WAS ALL MANUAL
THE WEATHER IS THREATENING
A RAIN SHOWER TODAY IT
IS COOL & BREEZY (68°F,
15 mph wind) NO RAIN HAS
FALLEN YET. I WILL LOG IT
IF IT DOES.

OIL CONTENT FOR
THIS MORNING IS 5.24% I
PREDICTED 5.2%. THE SAMPLE
WAS TAKEN FROM THE CROWN
OF THE MLI.

THEY HAD A TEAR IN THE
PETROPOINT AT 120' E OF THE
PHILLIPS 66 SIGN @ WEST
WIND. I MADE THEM PATCH
IT & THEY WEREN'T TOO
HAPPY.

OVER →
THIS AFTERNOON'S OIL CONTENT IS
5.3%

7-13-82

4.4

TODAY IS NOT A GOOD DAY !! THERE WAS A HUMP OF ASPHALT NEAR A INLET BOX PERSONS DIDNT WANT TO DO ANYTHING WITH IT SCOTT WAS TOO LAZY TO HELP ALL HE WANTED TO DO WAS GET INTO A ARGUMENT THERE WERE SEVERAL ARGUMENTS ABOUT THE MATTER BUT AFTER SEVERAL HOURS WE TOOK MOST OF THE HUMP OUT ALTHOUGH IF THEY WOULD HAVE RAKED IT LIKE I WANTED THEM TO IT WOULD BE NOT BETTER. BUT I GUESS IT IS GOOD ENOUGH THE REST OF THE DAY WENT SMOOTH I LEFT THE SITE @ 4:40 PM



7-13-82

JULY 14, 1982 CLEAR HOT

93° F.

TODAY I ARRIVED @ THE SITE @ 7:15 AM. PERSONS BEGAN LAYING ASPHALT @ 8:00 THIS MORNING'S OIL CONTENT WAS 5.6% BOY IS IT GREASY.

SCOTT WENT FOR AN AIRPLANE RIDE & BOY DID IT PISS PRESTON OFF

JOHN WILLIAMS CAME OUT AND TALKED ABOUT THE AIRPORT HANGER I TOLD HIM I WOULD HAVE IT FIXED.

I TOOK 20 MIN FOR LUNCH @ NOON.

AFTER LUNCH WE STARTED USING 5/8" MIX TO FILLET TO THE EXISTING ASPHALT SO NO TESTS WERE RUN IN THE AFTERNOON

PERSONS FINISHED THE APRON @ 1:50 PM THEN THEY STARTED THE CONC. PAD IN FRONT OF TENS WESTERN

7-14-82

THEY FINISHED THE PAD
@ 4:00 PM TRANSWESTERN
LOADED ONLY 1 FLIGHT ON
THE APRON.

DAVE GIBERT FROM
THE FAA CAME OUT FROM
DENVER TO SEE US END
THE PROJECT (STA 1500 & 2100 E)
HE WAS VERY PLEASED
WITH THE JOB WE DID

PITTSBURGH TESTING
TOOK SOME CORE SAMPLES
FROM THE APRON THESE WERE
LAVED YESTERDAY WE WON'T
KNOW THE RESULTS UNTILL
THE END OF THE WEEK

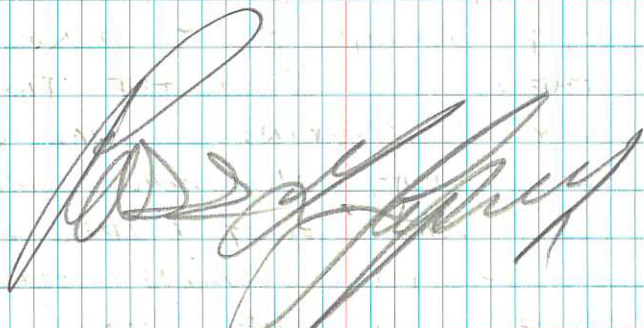
AT 4:05 PERSONS BEGAN
PATCHING BEHIND THE INLET
MANHOLE THAT WERE LOWERED
TO HELP DRAINAGE

I LEFT THE SITE @
4:30 PM & THE OFFICE
@ 5:00 PM ALL OF THE
DRIVING IS DONE NOW EXCEPT
FOR SOME TOUCH-UPS

IT HAS BEEN A GOOD
JOB

TOMORROW WE WILL BE IN
& OUT TALKING UP WEIGHT SLIPS
& MUDYRE SOME GRADE
FIXING IN FRONT OF MILLERS
HANGER BUT FOR THE
MOST PART WE ARE

DONE!!



7-14-82

JULY 21, 1982

PERSONS BEGAN PREPARING
FOR THE FOG SEAL
@ 8:00 AM. THIS MORNING
THEY PLACED #30 LB
FELT OVER INLET BOXES
& MANHOLES THEY USED
PAPER PLATES FOR THE
TIE DOWNS. THE DISPENSING
TRUCK ARRIVED @ 8:45
& BEGAN ON THE RUNWAY
OFF RAMP @ 9:15 AM
THEN HE DID THE TAXI-
WAY & PARKING APRON W/
THE ADDITIONAL CONC PAD.

THEY QUIT WORK @
2:30 PM. PERSONS THEN
MOVED ALL THE PLATES
BACK THAT THEY MOVED
THIS MORNING. THEY ALSO
TIED THEM DOWN.

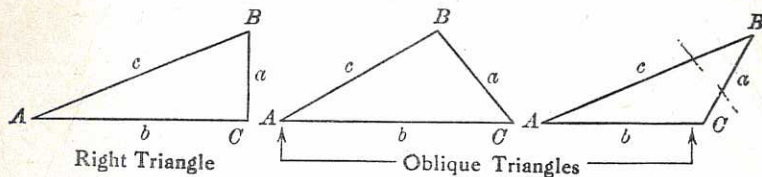
PERSONS WILL SWEEP
ALICE II SO ALL THE
ROCKS WILL BE GONE

[Signature] 7/21/82

OIL CONTENT

DATE	AM	PM	AV. %	OK
6-22	5.02	5.56	5.29	✓
6-23	5.32	5.62 5.43	5.46	✓
6-24	5.24	4.81 5.00	5.02	✓
7-4	4.52 5.19	5.58	5.10	✓
7-7	5.10	5.51	5.30	* ✓
7-8	5.38	5.21	5.30	✓
7-9	5.20	—	5.20	✓
7-12	5.03	5.34	5.19	✓
7-13	5.24	5.30	5.27	✓
7-14	5.60	—	5.60	—
JULY 15	NO TEST	USE	5.60	✓

TRIGONOMETRIC FORMULAS



Right Triangle

Oblique Triangles

Solution of Right Triangles

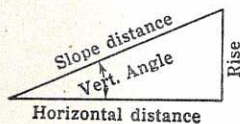
For Angle A . $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{b}$, $\operatorname{cosec} = \frac{c}{a}$

Given	Required	Formulas
a, b	A, B, c	$\tan A = \frac{a}{b} = \cot B$, $c = \sqrt{a^2 + b^2} = a \sqrt{1 + \frac{b^2}{a^2}}$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B$, $b = \sqrt{(c+a)(c-a)} = c \sqrt{1 - \frac{a^2}{c^2}}$
A, a	B, b, c	$B = 90^\circ - A$, $b = a \cot A$, $c = \frac{a}{\sin A}$
A, b	B, a, c	$B = 90^\circ - A$, $a = b \tan A$, $c = \frac{b}{\cos A}$
A, c	B, a, b	$B = 90^\circ - A$, $a = c \sin A$, $b = c \cos A$

Solution of Oblique Triangles

Given	Required	Formulas
A, B, a	b, c, C	$b = \frac{a \sin B}{\sin A}$, $C = 180^\circ - (A + B)$, $c = \frac{a \sin C}{\sin A}$
A, a, b	B, c, C	$\sin B = \frac{b \sin A}{a}$, $C = 180^\circ - (A + B)$, $c = \frac{a \sin C}{\sin A}$
a, b, C	A, B, c	$A + B = 180^\circ - C$, $\tan \frac{1}{2}(A - B) = \frac{(a - b) \tan \frac{1}{2}(A + B)}{a + b}$ $c = \frac{a \sin C}{\sin A}$
a, b, c	A, B, C	$s = \frac{a + b + c}{2}$, $\sin \frac{1}{2}A = \sqrt{\frac{(s - b)(s - c)}{bc}}$ $\sin \frac{1}{2}B = \sqrt{\frac{(s - a)(s - c)}{ac}}$, $C = 180^\circ - (A + B)$
a, b, c	Area	$s = \frac{a + b + c}{2}$, $\text{area} = \sqrt{s(s - a)(s - b)(s - c)}$
A, b, c	Area	$\text{area} = \frac{bc \sin A}{2}$
A, B, C, a	Area	$\text{area} = \frac{a^2 \sin B \sin C}{2 \sin A}$

REDUCTION TO HORIZONTAL



Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = $5^\circ 10'$. Since $\cos 5^\circ 10' = .9959$, horizontal distance = $319.4 \times .9959 = 318.09$ ft.

Horizontal distance also = Slope distance minus slope distance times (1 - cosine of vertical angle). With the same figures as in the preceding example, the following result is obtained. $\cos 5^\circ 10' = .9959$. $1 - .9959 = .0041$. $319.4 \times .0041 = 1.31$. $319.4 - 1.31 = 318.09$ ft.

When the rise is known, the horizontal distance is approximately the slope distance less the square of the rise divided by twice the slope distance. Thus: rise = 14 ft., slope distance = 302.6 ft. Horizontal distance = $302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$ ft.